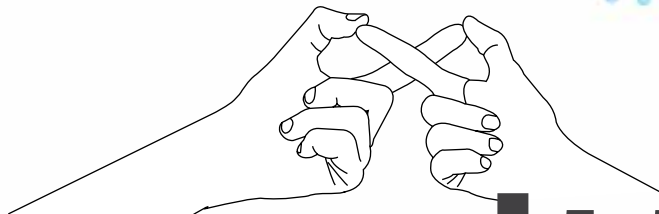




ANNUAL  
REPORT

18-19



# committed

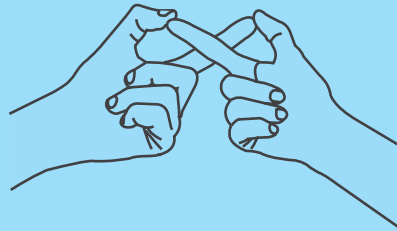


HINDUSTAN ZINC LIMITED

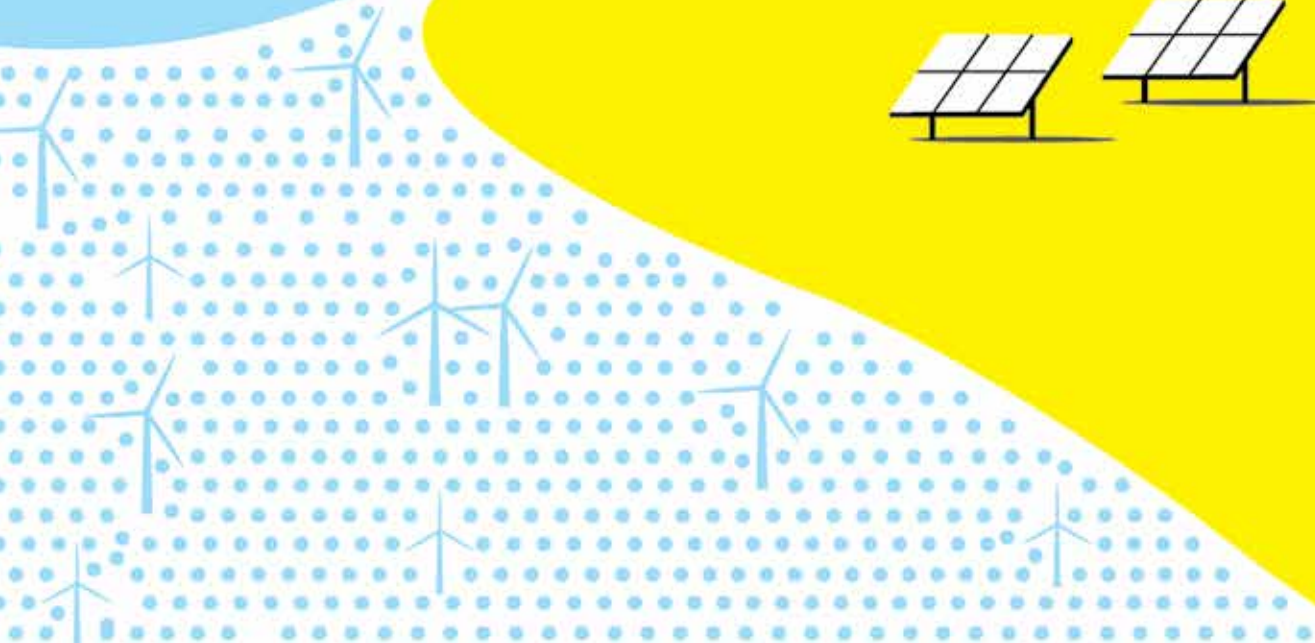
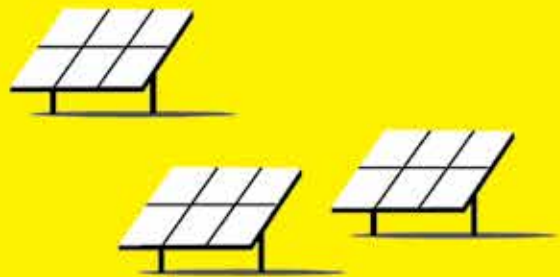


**vedanta**

transforming elements



*We are committed. The infinity sign implies our commitment that is forever... to excellence, to safety, to inclusive growth, to innovation, to a sustainable way of living.*





# committed

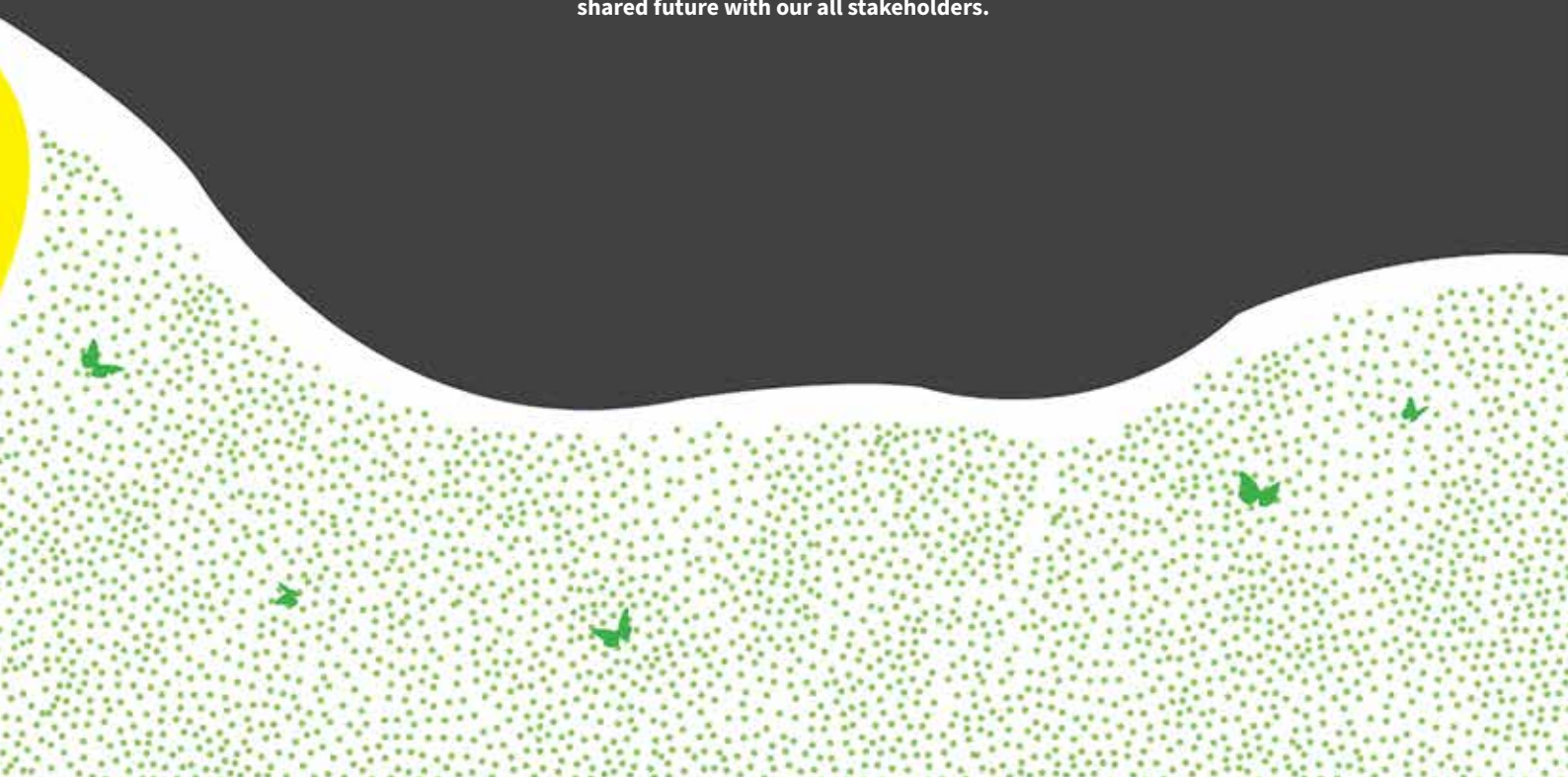
*“commitment is what transforms a promise into reality.”*

*– Abraham Lincoln*

Commitment is the path of unrelenting pursuit and determination that leads to a better future. We at Hindustan Zinc are committed to optimise the value of our assets, the safety of our people, protect the environment and enhance the progress of our communities & nation. We are committed to organically growing our business and achieve excellence in our operations. We do this by systematically identifying opportunities to improve scale & efficiency, using appropriate technology to do things safer, better & smarter and challenging the status quo. In this endeavour, we are supported by a corporate culture that promotes entrepreneurial spirit, nurtures innovation and values continuous improvement.

In the age of the Fourth Industrial Revolution, climate change and rising income inequality, we stand committed to a holistic approach that secures inclusive growth, raises productivity and preserves scarce natural resources to de-risk our business.

**We dedicate our Annual Report to our commitment to build a shared future with our all stakeholders.**



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### Forward-looking statements

In this Annual Report, we have disclosed forward-looking information to enable investors to comprehend our prospects and take investment decisions. This report and other statements - written and oral - that we periodically make, contain forward-looking statements that set out anticipated results based on the management's plans and assumptions. We have tried wherever possible to identify such statements by using words such as 'anticipate', 'estimate', 'expects', 'projects', 'intends', 'plans', 'believes', and words of similar substance in connection with any discussion of future performance. We cannot guarantee that these forward-looking statements will be realised, although we believe we have been prudent in assumptions. The achievements of results are subject to risks, uncertainties and even inaccurate assumptions. Should known or unknown risks or uncertainties materialise, or should underlying assumptions prove inaccurate, actual results could vary materially from those anticipated, estimated, or projected. Readers should keep this in mind. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

## vision

To be the world's largest and most admired zinc, lead and silver company



## mission

Enhance stakeholder value through exploration, innovation, operational excellence, safety and sustainability. Be the lowest cost producer. Maintain market leadership and enhance customer delight.

## values



**excellence:** Our primary focus is delivering value of the highest standard to our stakeholders. We are constantly motivated on improving our costs and improving our quality of production in each of our businesses through a culture of best practice benchmarking.



**entrepreneurship:** Our people are our most important assets. We actively encourage their development and support them in pursuing their goals.



**innovation:** We embrace a conducive environment for encouraging innovation that leads to a zero-harm environment and exemplifying optimal utilisation of natural resources, improved efficiencies and recoveries of by-products.



**integrity:** We place utmost importance to engaging ethically and transparently with all our stakeholders, taking accountability of our actions to maintain the highest standards of professionalism and complying with international policies and procedures.



**trust:** We actively foster a culture of mutual trust in our interactions with our stakeholders and encourage an open dialogue which ensures mutual respect.



**respect:** We lay consistent emphasis on Human Rights, respect the principle of free, prior, informed consent, while our engagements with stakeholders give local communities the opportunity to voice their opinions and concerns.



**care:** As we continue to grow, we are committed to the triple bottom line of people, planet and prosperity to create a sustainable future in a zero harm environment for our communities.



## committed to highest safety standards

Health and safety of our workforce is our highest priority. However, our 5-year track-record of LTIFR reduction was blemished this year with a spate of accidents, each preventable in hindsight. Our transition to underground mining and increase in our projects has necessitated a rethink of our safety practices.

“I commit to devote at least a third of my time to **enhance our safety culture and practices.**”

- Mr. Sunil Duggal  
(Chief Safety Officer and CEO)

We are re-engineering our ‘Aarohan’ safety journey in line with the increasing complexity of our operations. Increasingly, we are deepening our safety engagement with contractors as they are more vulnerable to unsafe acts due to their limited exposure to safety practices. We started conducting sustainability studies at our tailing dams in FY 2018 in consultation with leading global experts to re-assess the structural integrity. In light of the recent high impact failures of tailing dams in Brazil, as a proactive measure, we have decided to build all our future tailing dams as dry tailing to de-risk from dam failures.



## committed to preserve the environment

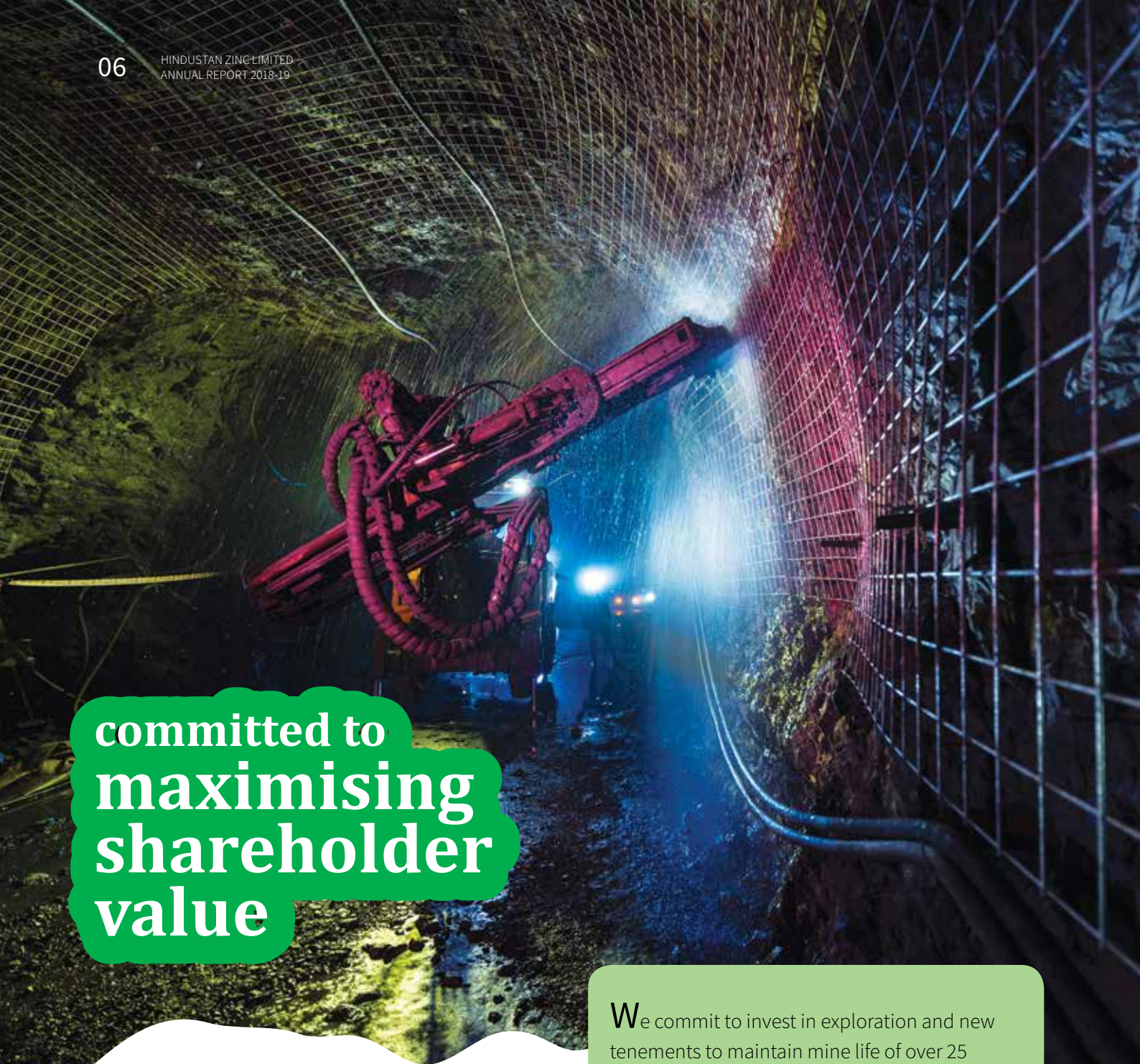
Our efforts at reduction in land footprint, water conservation, renewable energy and waste-to-wealth have won us accolades in ESG\*. We are the only mining company from India to be included in the RobecoSAM Sustainability Yearbook 2019 and the winners of CII-ITC Corporate Excellence Award.

We **ranked first globally in environment** in metals & mining sector in Dow Jones Sustainability Index 2018.

\*ESG stands for Environment, Social and Governance

Our efforts at reducing environmental footprint are leading us to utilise ~two-thirds of our tailings in void management of our underground mines. Enhancing recoveries from slags and residues generated in our smelters is a priority and is achieved by setting up fumer and ancillary plants. We are now trebling our sewage treatment plant capacity to 60 MLD, thereby treating over half of Udaipur city's sewage and helping in reduction of fresh water usage. Zero liquid discharge in our mines & smelters and setting-up of dry tailing facilities reaffirm our commitment to sustainability





**committed to  
maximising  
shareholder  
value**

In the last 6 years, we doubled our market capitalisation and increased our mined-metal volumes from underground mines by over 500%. We are now positioned as the largest\* metal company and among the top 25\* overall in India.

Our shareholders earned **an average return of 25%\*\*** per annum in the last three years.

**DIVIDEND YIELD**



**RoCE**

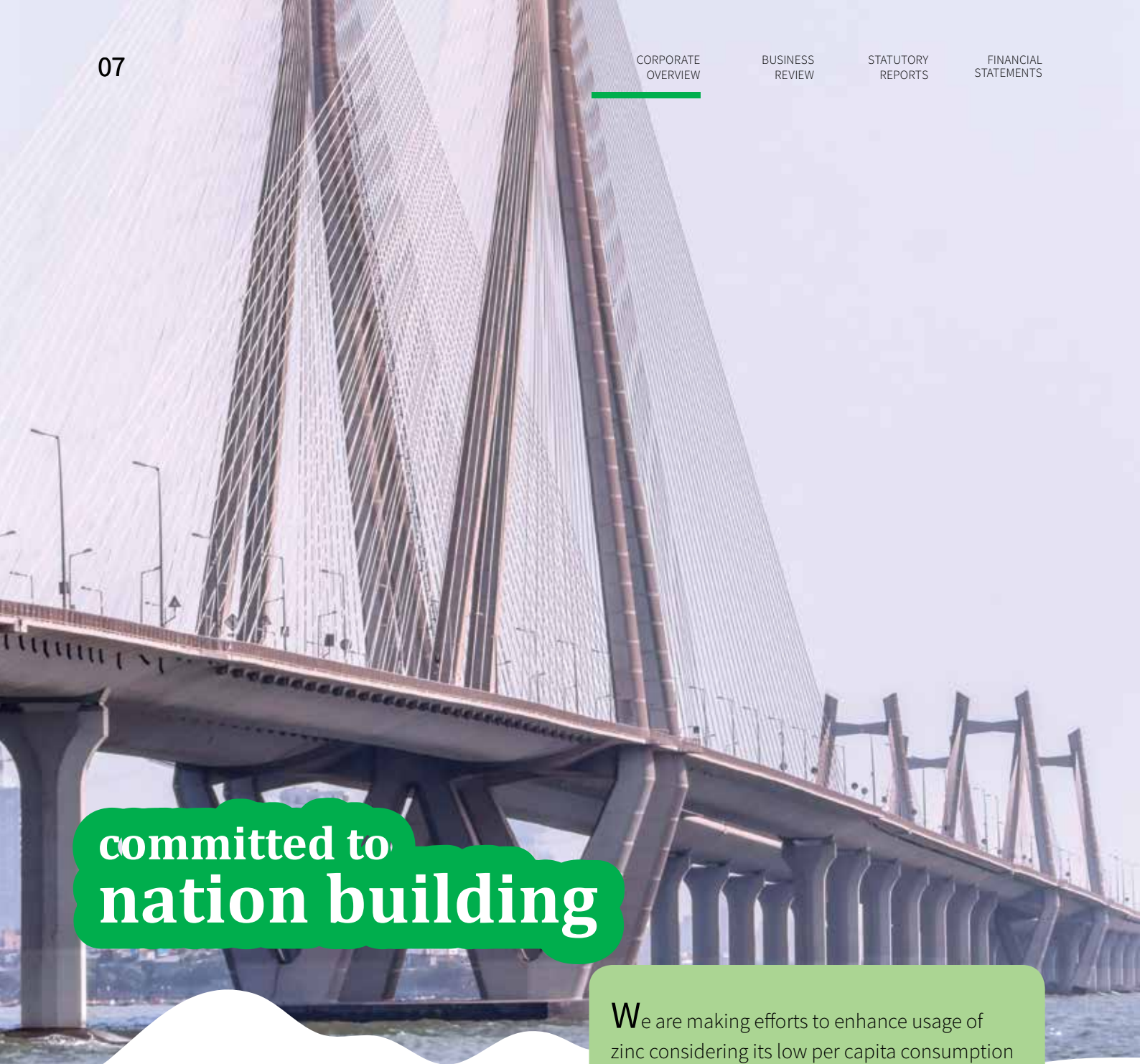


\*by market capitalization  
\*\*from April 01, 2016 to March 31, 2019

We commit to invest in exploration and new tenements to maintain mine life of over 25 years and grow our production organically for long-term business sustainability. We will reach 1.2 million tonne per annum of mined metal capacity in this year and are planning for 1.35 million tonne per annum. High IRR mining project investments will preserve and enhance shareholder value - a key priority for us.







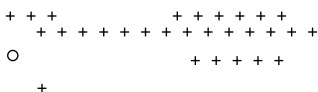
# committed to nation building

Supporting Government's 'Make in India' initiative, we saved \$614 million in foreign exchange through export earnings in FY 2019, while contributing significantly to the country's import elimination as an integrated domestic producer. Our social initiatives impact over 500,000 lives in the state of Rajasthan supporting employability and livelihood enhancement.

Contributed ₹ **11,563 Crore\*** (56% of revenue) to Government Treasury in 2018-19.



\*through royalties, taxes & dividends



We are making efforts to enhance usage of zinc considering its low per capita consumption and its impact on the longevity and safety of the nation's infrastructure; we plan to progressively increase the production of value-added zinc products from current 18% to 50%. Our increasing footprint of renewable energy also contributes to the nation's power sufficiency. We target to be among Top 5 silver producers in the world in the next three years, putting the country on the world map and reducing imports.





## committed to embrace technology

We are in the final phase of creating 'Mines of the future' via digitalisation and analytics to drive safer operations and higher productivity. We continue to invest significantly in best-in-class technologies in our beneficiation and smelting process with a goal of progressively improving metal recovery & throughput and optimising resource consumption.

**Digitisation, innovation and use of disruptive technologies** will take our ore to metal ratio from **81% to 90%** in the next three years.

Sindesar Khurd mine will be fully digitalised in FY 2020 leading to 10%-15% productivity gain driven by digital tracking and real-time dashboards. We are investing in fuming process to recover metals from waste. We have partnered with global experts to implement cutting-edge analytics to track and improve ore to mined metal recoveries. Project 'Sarathi' would optimise end-to-end logistic value chain via real-time movement tracking of key input and intermediate materials.



## committed to inclusive growth of our communities

We recognise that our true license to operate is granted by the communities around our operations. In the last two years, our CSR investment has grown 2.6x to ₹ 130 Crore, dedicated towards socio-economic well-being of people around us.

We are among the top 10 CSR spenders in India and impact over **500,000 lives** annually.



We will continue to focus on core social impact areas with a goal to double the number of lives impacted in the next 3 years. Our skill development programs aim to create ~1000 new job opportunities for the communities' youth. Through 'Zinc Football' initiative, we are identifying and nurturing young talent at the grassroots level with a goal to bring them to the national stage. In a first in mining industry, we have created a framework for making jobs open for Persons with Disabilities and 50+ roles will now open for hiring. We are activating a long term water security strategy for people in our operating areas.



# chairman's message

*committed to excellence*



We reached important milestones in the financial year 2019 as our underground mines touched a production run-rate of a million tonnes per annum overcoming the planned closure of open-cast mining operation.

## Dear Shareholders,

I am delighted to join your Company's Board as Chairman and take forward Hindustan Zinc's vision to become the largest and most admired zinc-lead & silver producer. On behalf of the Board, I thank Mr. Agnivesh Agarwal for his outstanding leadership over last 13 years where he oversaw the stupendous growth and seamless and successful transition from a predominantly open-cast mining to a fully underground mining company. His guidance will be truly missed by the Board and the management team.

**As one of the largest producers of zinc, lead and silver in the world, Hindustan Zinc is well positioned to reduce India's dependence on imports and take on the mantle of creating a sustainable metal value chain.** We are continuously looking for opportunities to do things better and smarter to achieve excellence in enhancing safety & environment, developing cutting edge operational expertise, increasing productivity & profitability and most importantly, improving lives of people.

**We reached important milestones in the financial year 2019 as our underground mines touched a production run-rate of a million tonnes per annum overcoming the planned closure of open-cast mining operation.** This milestone has been achieved by creating three world-class underground mines and by putting two legacy mines on a path of modernisation to augment capacity. From an underground ore production of about 2.5 million MT at the time of starting our expansion plan in FY 2013, we have produced 13.8 million MT of ore in FY 2019. During the same time, we have ramped up our mined metal production from underground mines at a fairly consistent annual growth rate of 33%. This, I believe, is world-class performance by any yardstick.

**We have delivered strong financial performance** with EBITDA of ₹ 10,747 Crore and have returned cash to shareholders through dividends of ₹ 10,188 Crore or ₹ 20 per share implying a dividend yield of 7% based on average share price during the year. During the year, we contributed ₹ 11,563 Crore to the Government treasury through royalties, taxes and dividends.

**Value maximisation remains at the core of our business strategy.** Our operations are globally recognised for their competitiveness in terms of cost of production and scale. We are maintaining our mine lifespan of 25+ years even at higher

We are of the firm belief that our license to operate comes not only from the Government but also from our communities. To this end, we are working in 189 villages across our operations and focusing on areas that are of national importance. It is important for us that our programs are interconnected so as to impact every aspect in the lives of beneficiaries.

level of production and yielded shareholder return of 13,206% (33% CAGR) since the divestment of the Company in 2002. This has been achieved by maximising value at each of our units through economies of scale along with optimisation of resources and processes. Our strategy remains focused around increasing use of technology and partnerships with global experts to increase productivity and cost efficiency as well as sustainability of operations.

**People are our greatest asset and engaging & empowering them is our continuous quest.** We have already created structures to delegate decision making and ownership all the way down within the organisation. The next challenge was to re-tool employees for efficient decision making and motivate them to achieve the objectives of higher productivity and efficiency. In this context, we have begun the process of company-wide digitalisation. Digitalisation is now ubiquitous in all our human resource practices and there is a greater scope for digitalisation to be used for efficient decision making from real-time information, deeper understanding of data and greater transparency. I am pleased to say that we are on our way towards achieving it.

**Safety, health and environment is our top most priority.** Despite safety being our core value and focus of ongoing efforts, our safety performance has unfortunately deteriorated during the year with seven fatalities. We are deeply anguished by these accidents and our prayers & thoughts are with affected families. We are determined to eliminate such accidents and have intensified our work, amongst employees and contractors alike, to reinforce the goal of zero harm through a culture of working safely and engaged global specialists to address specific areas that needed immediate attention. While we have improved our lost-time injury frequency rate (LTIFR) from 0.85 in FY 2014 to 0.27 in FY 2018, LTIFR during the current year spurted to 0.64. We are committed to re-double our efforts in our quest towards zero harm and zero fatality.

**I am pleased to inform of various accolades in the environment space.** Hindustan Zinc was ranked 5<sup>th</sup> in overall sustainability (11<sup>th</sup> in 2017) and 1<sup>st</sup> in environment category (3<sup>rd</sup> in 2017), by the Dow Jones Sustainability Index (DJSI) 2018 in the Metal & Mining sector on a worldwide basis. DJSI is the global sustainability benchmark and our ranking reflects our sustained

efforts in this area. Our performance is underpinned by technological developments towards increasing usage of waste water, continuous reduction in carbon & land footprint and minimisation of waste generation. We have established yearly targets for energy and water efficiency as well as stay committed to reduce absolute greenhouse gas emissions in a systematic manner over the next several years.

**Social development is non-negotiable for us.** We are of the firm belief that our license to operate comes not only from the Government but also from our communities. To this end, we are working in 189 villages across our operations and focusing on areas that are of national importance such as education, women's empowerment, health & water, agriculture, sports and community development with an emphasis on inclusion of the marginalised and on grassroots development. It is important for us that our programs are interconnected so as to impact every aspect in the lives of beneficiaries. During the year, we put in place MEAL (monitoring, evaluation, accountability and learning) systems to improve transparency in CSR projects - a step forward to strengthen governance. Our total investment in CSR activities has increased by 42% to ₹ 130 Crore for the year benefitting 500,000 beneficiaries.

**I firmly believe that mining industry has an important role to play** considering the requirement of metals for infrastructure and societal development. We are working with the Government to establish a policy framework that is conducive to increase private sector participation in the country's growth. We are a responsible mining company and our commitment to operating a sustainable business will continue to make a positive difference in the lives of employees, business partners and communities in Rajasthan and India.

I am honoured to be given the opportunity of being Chairman of this esteemed organisation and look forward to contributing in its next phase of growth.

Sincerely,

Kiran Agarwal  
Chairman

# ceo speak

*committed to deliver*



## Dear Shareholders,

**I am delighted by the all-round improvement in performance of our underground mines.** Rampura Agucha has accelerated from 2.0 million MT a year ago to 3.3 million MT exiting the year at 4.0 million MT per annum run rate. Sindesar Khurd has been consistently delivering over 5.0 million MT run-rate with improving silver production. We have achieved record decline development in Sindesar Khurd, which will help in opening new blocks to sustain production going forward. With substantial improvement in infrastructure, Zawar mines are now at a run-rate of about 3.0 million MT from 2.2 million MT production in the previous year. At Rajpura Dariba mine, where we are upgrading the existing shaft and carrying out major infrastructure enhancements, ore production crossed 1.0 million MT and exited the year at a rate of 1.3 million MT. Kayad continues to operate at its rated capacity of 1.2 million MT. We are confident of reaching the design mined metal production capacity of 1.2 million MT in FY 2020.

**It is gratifying to see our underground mines deliver mined metal of 936 kt, a growth of 29%,** almost matching last year's aggregate mined metal production due to planned closure of open-cast operations.

**Once again, lead and silver production were at an all-time high of 198 kt and 679 MT respectively.** Lead and silver production were up 18% and 22% from previous year on the back of higher lead in ore, retrofitting of pyro metallurgical smelter to consume lead mined metal stocks and better silver grades. Zinc metal production fell by 12% during the year to 696 kt on account of lower availability of zinc mined metal for most part of the year as underground mines ramped up to fill the vacuum caused by planned closure of open-cast operations.

**I am pleased to inform that Hindustan Zinc is now the 9<sup>th</sup> largest producer of silver in the world,** up from 10<sup>th</sup> last year and 13<sup>th</sup> the year before, as per Thomson Reuters - Silver Institute. We are one of the fastest growing silver producers globally and with higher mine production and enhanced recoveries, we are targeting to be among top 5 global silver producers in the next 3 years.

**Fundamentals of zinc market continue to be robust.** Exchange stocks at 5 days of global consumption is the lowest since 2007. Zinc consumption has increased by 1.5 million MT in the last 6 years to over 14.3 million MT and expected to grow as China stimulates its economy to counter ongoing trade dispute. On the mine-side, supply has been stagnant at about 13 million MT since 2012 as new projects are coming in much slower than anticipated. We firmly believe that zinc has strong fundamentals as metal inventories will continue to remain low and market is not expected to reach balance for another 2 years, supporting an optimistic outlook for zinc price.

**We are now reaching the end of first phase of mine expansion to 1.2 million MT of mined metal, setting the foundation for future production growth.** Capital mine development across mines was a record 43 km, 12% higher from previous year. New mills were commissioned at Sindesar Khurd and Zawar making these locations self-sufficient. Paste fill capacity at Sindesar Khurd and Rampura Agucha have been doubled to enable faster filling of stopes and higher production. A paste filling plant at Zawar is under construction to enhance production and metal recovery. Rampura Agucha started hauling material from an innovative mid-shaft loading during the year, even as full shaft will become operational by Q2 FY 2020. Sindesar Khurd shaft was commissioned towards the end of the year and ore hauling is expected to start in the first quarter of the current year - both these shafts will significantly increase ore hauling capacity. Most importantly, our mines are now almost liberated of ventilation issues for lifetime as new ventilation systems were commissioned. Further, we have added higher capacity equipment at mines for higher productivity.

It is gratifying to see our underground mines deliver mined metal of 936 kt, a growth of 29% almost matching last year's aggregate mined metal production due to planned closure of open-cast operations.

**Digital transformation of mine is a business imperative for us with safety being the key driver.** Improving safety, productivity, maximising OEE and centralised monitoring are key pillars of the Digital Mine program we are currently pursuing. Sindesar Khurd Mine is leading the digitalisation journey and we are targeting to bring all our other mining operations to the same level. An integrated collaboration centre at Udaipur is under development to give a real time view of all our operations including mining, milling, smelting, CPPs and other functions. We are embracing the digital way of working to make our operations more productive and sustainable.

**We are addressing high risk activities in a structured way to make our operations safer.** To step up safety across the entire organisation, two major programs were started during the year. First, we have conceived a Safety Innovation Cell to integrate technology and safety to reduce high risk situations involving man-machine interactions and manual practices through engineering based solutions. Second, we have inducted 'Fatality & Serious incident Prevention Plan' as part of Aarohan, our umbrella safety program to address top five high risk areas of fall of ground, man-machine interaction, electric safety, fire and mine inrush. Through these initiatives, we are confident of reaching our goal of zero harm.

**We have conducted stability tests across our three tailing dams** with the help of global experts in addition to comprehensive internal audits by cross functional teams and recommendations from these are being addressed on a priority basis. Further, I would like to mention our efforts towards backfill at all our mines which will significantly reduce quantum of tailings flowing into dams as well as dry stack tailing plant at Zawar for better stability and water conservation.

**We continue to accelerate our sustainability efforts.** Renewable power is important for us in the context of our energy intensive operations. In continuation of our efforts to add solar power in waste land at our sites, 22 MW solar plant over a waste

dump in Rampura Agucha became operational during the year taking our total solar capacity to 39 MW. Our renewable energy portfolio stands at 347 MW which provides reduction of over 730,000 MT of CO<sub>2</sub> per annum and we plan to increase it further. To address water scarcity, we are trebling our sewage treatment plant capacity in Udaipur to 60 MLD by June 2019 treating over half of Udaipur city's sewage and enhancing our water security through treated water while reducing fresh water usage.

**Gainful utilisation of waste** through paste filling plants for backfill of mines has made our mines more sustainable. Through technology interventions, bulk of our smelter and CPP waste is now gainfully utilised by cement industry and in highway construction. The impact of these efforts in reducing our environment and land footprint is enormous.

**I am excited about our future growth prospects** as we expect to complete the massive underground mine expansion plan announced in early 2013 by the middle of the current financial year, quadrupling our mined metal production capacity to 1.2 million MT per annum during this period. Consequently, both mined metal and finished metal production in FY 2020 will likely be significantly higher than last year and expected to be about 1.0 million MT each. Further, we will further rationalise our cost structure to yield sub-\$1000 per MT zinc cost of production in the current year.

I congratulate our employees in achieving excellent results in operations as well as in projects through their persistence and dedication. I would also like to thank all our stakeholders for placing their trust in us and also our regulators for their constant support and guidance.

Sincerely,

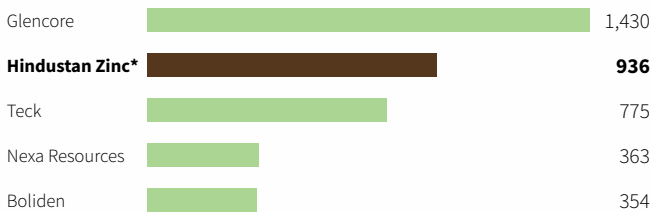
Sunil Duggal  
CEO

# committed to growth

## HINDUSTAN ZINC IS THE SECOND LARGEST ZINC-LEAD MINER AND FOURTH LARGEST ZINC-LEAD SMELTER GLOBALLY

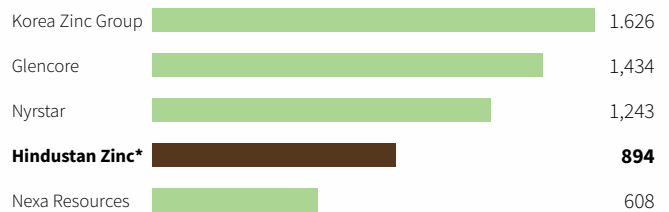
### LEADING ZINC - LEAD MINERS

(Mined metal production in '000 MT)



### LEADING ZINC - LEAD SMELTERS

(Metal production in '000 MT)

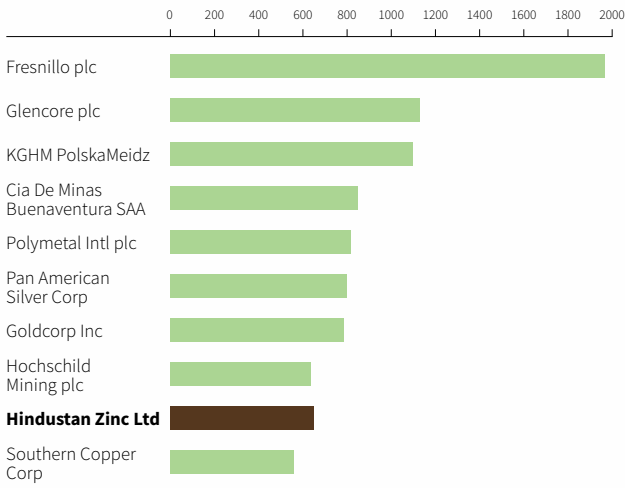


\* FY 2019 figures | Source: Wood Mackenzie Production Rankings Q4 2018; Company data for Hindustan Zinc

## WE ARE AMONG THE TOP 10 AND THE FASTEST GROWING SILVER PRODUCERS GLOBALLY

### TOP 10 SILVER PRODUCING COMPANIES IN CY 2018

Silver in MT

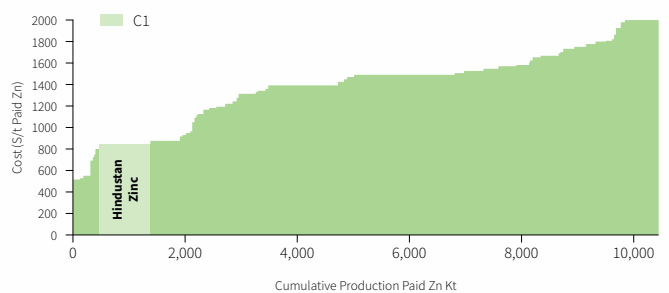


Source: GFMS, Thomson Reuters

## WE ARE AMONG THE LOWEST COST PRODUCERS OF ZINC GLOBALLY WITH COST OF PRODUCTION (FROM ORE TO REFINED METAL) IN THE FIRST QUARTILE OF GLOBAL COST CURVE

### 2019 ZINC COST CURVE, RANKED BY C1, COMPOSITE COST

Grouped by Company in S/t (WM2019 Q1 - All Mines)



Source: Wood Mackenzie Ltd 2019



# key awards & accolades

## SUSTAINABILITY AND ESG

- 5<sup>th</sup> rank globally (2016-17: 11<sup>th</sup>) by the Dow Jones Sustainability Index under Metal and Mining sector, with a ranking of 1<sup>st</sup> (2016-17: 3<sup>rd</sup>) globally in Environment
- CII ITC Sustainability award 2018 for Corporate Excellence, CSR and Environment Excellence
- India Sustainability Leadership Award 2018 by World Sustainability Congress in the categories of Sustainable Business of the Year and Sustainability Disclosure Leadership
- Featured in RobecoSAM Sustainability Year Book 2019 for the second consecutive year – the only Metals & Mining company from India
- Included as member in 'FTSE4Good Emerging Index' for the first time
- 'Best CSR Collective Action Leadership Award' for Community Development Programs by India CSR Leadership Summit
- Ranked all India 9<sup>th</sup> in IIM-U 'Responsible Business Ratings'

## OPERATIONAL AND BUSINESS EXCELLENCE

- Best Award for Risk Management - Sustainability by ICICI Lombard and CNBC-TV18
- Central Research & Development Laboratory received '5<sup>th</sup> CII Environmental Best Practices Award 2018' for Best Environmental Practices 2018 for 'Innovative Environmental Project'
- Chanderiya Smelting Complex received 'Leaders Award in Mega Large Business – Metals Sector' and 'Safety Excellence Award 2018' by 'Frost & Sullivan TERI – Sustainability 4.0' for its Sustainable Business Practices and Safety Initiatives
- Dun & Bradstreet Corporate Award 2018 in 'Non-Ferrous & Precious Metals' category for 'Champions of Change' in transformation of the country
- Project Development Innovation of the Year award for 22 MW Agucha Solar Project at the 9<sup>th</sup> Annual Edition of RE-ASSETS India 2019



# business model

## *future-proofing operations*

**We produce refined zinc, lead and silver metal through our fully integrated operations** comprising of mines, smelters, captive power plants and refineries. Our refined metal products are sold primarily in India and 'surplus' production is exported all over the world.

**Our strategy is to maintain a portfolio of mines with long life and low cost** that can remain viable through various stages of the demand-supply cycle. Forward integration with smelting and refining adds further value. Capital allocation aims to maximise shareholders' return by prioritising mining, followed by smelting and low-cost & reliable captive power. We are now working on obtaining additional mining tenements for our next phase of growth. Adoption of advanced technologies, continuous man-machine productivity drive, higher metal recoveries from smelters and initiatives around wealth creation from waste have kept cost in control despite complexity of underground mining and increasing commodity prices.

**Our exploration objective is to maintain mine life of over 25 years.** To achieve this objective, we have an aggressive exploration program in its mining licenses focusing on delineating and upgrading reserve & resource in and around the existing deposits.

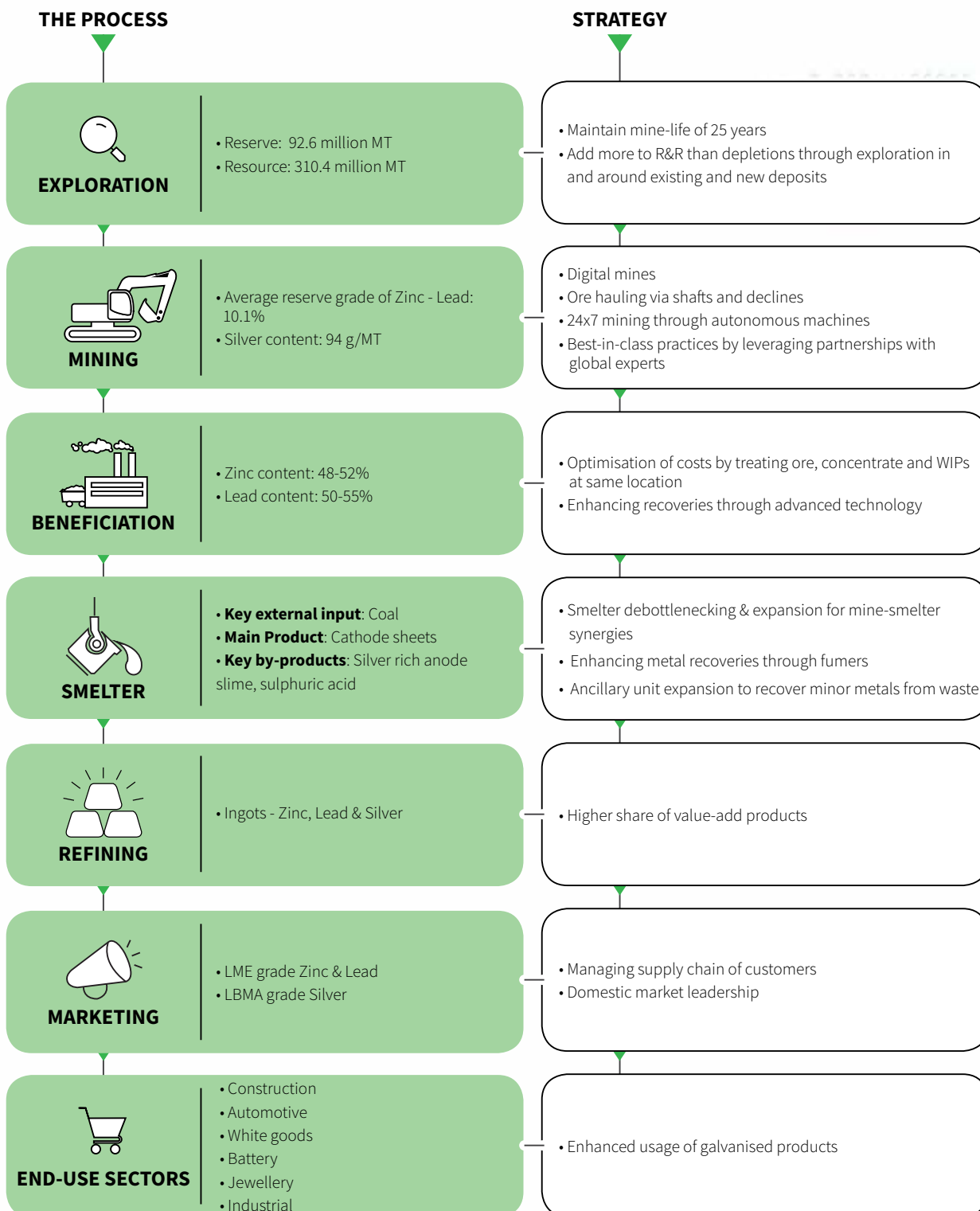
We continue to increase our product portfolio through development of more value added products to serve our customers.

**We create long-term value for our shareholders, local communities and partners** through efficient use of natural resources, production of metals that are required for development and contribution to society through CSR funds, taxes, royalties and dividends.



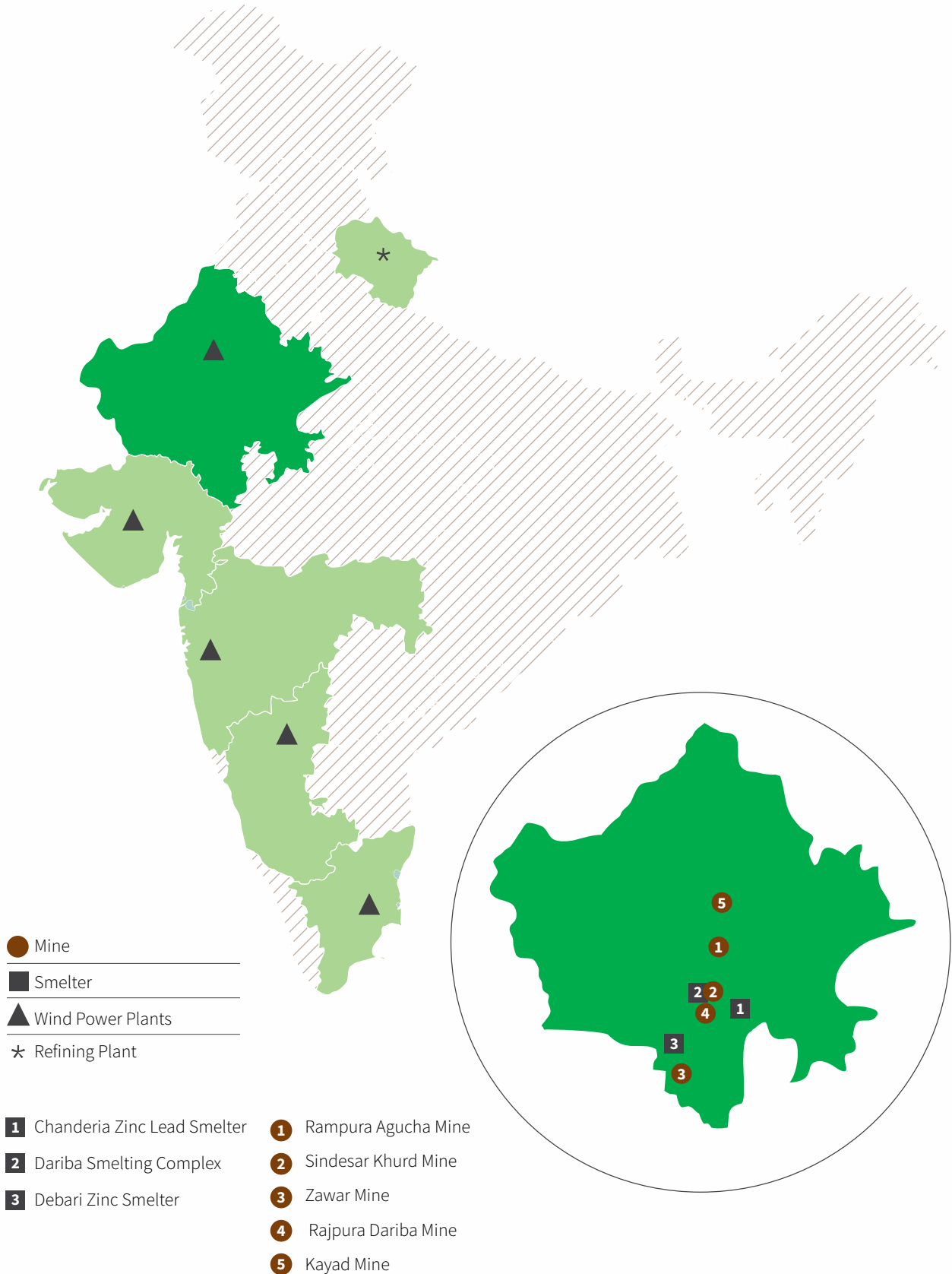
Adoption of advanced technologies, continuous man-machine productivity drive, higher metal recoveries and initiatives around wealth creation from waste have kept cost in control despite complexity of underground mining and increasing commodity prices.

**BUSINESS VALUE CHAIN**



# operational assets

*world class portfolio*



**RAMPURA AGUCHA MINE**Reserve: **35.3 million MT**Resource: **55.0 million MT**Reserve Grade Zn: **13.6%**Reserve Grade Pb: **1.8%****SINDE SAR KHURD MINE**Reserve: **32.5 million MT**Resource: **81.1 million MT**Reserve Grade Zn: **4.1%**Reserve Grade Pb: **3.2%****ZAWAR MINING COMPLEX**Reserve: **10.1 million MT**Resource: **95.4 million MT**Reserve Grade Zn: **3.4%**Reserve Grade Pb: **1.8%**Captive Power Plant: **80 MW****RAJPURA DARIBA MINE**Reserve: **10.2 million MT**Resource: **47.7 million MT**Reserve Grade Zn: **5.1%**Reserve Grade Pb: **1.8%****KAYAD MINE**Reserve: **4.5 million MT**Resource: **3.2 million MT**Reserve Grade Zn: **5.4%**Reserve Grade Pb: **0.9%****R & R SUMMARY**

	Tonnage		Grade	
	million MT	Zn (%)	Pb (%)	(Ag) (g/t)
Reserve	92.6	7.8	2.3	94
Mineral Resource – Measured & Indicated	91.4	7.5	2.0	72
Mineral Resource – Inferred	219.0	5.3	2.3	67

**CHANDERIYA LEAD-ZINC SMELTER**Pyro-metallurgical Zinc Smelter: **105,000 tpa\***Pyro-metallurgical Lead Smelter: **85,000 tpa**Hydro-metallurgical Zinc Smelter: **453,000 tpa**Captive Power Plant: **234 MW**

\*retrofitted to produce lead also

**DARIBA SMELTING COMPLEX**Hydrometallurgical Zinc Smelter: **234,000 tpa**Lead Smelter: **120,000 tpa**Captive Power Plant: **160 MW****ZINC SMELTER DEBARI**Hydrometallurgical Zinc Smelter: **88,000 tpa****(tpa = MT per annum)****WIND POWER PLANTS BY STATE (MW)**Rajasthan: **88.8**Gujarat: **88.8**Maharashtra: **25.5**Karnataka: **49.4**Tamil Nadu: **21.0****SMELTING AND POWER SUMMARY**Zinc Smelting: **880,000 tpa**Lead Smelting: **205,000 tpa**Silver Refining: **800 tpa**Captive Power: **474 MW**Wind Power: **273.54 MW**Solar Power: **38.9 MW**WHRB Power: **34.4 MW****Notes**

*Additional facilities in Pantnagar, in the state of Uttarakhand, for processing and refining of zinc, lead and silver which does not add to our overall smelting capacity*



# financial highlights

*robust performance*

## REVENUE FROM OPERATIONS (net of excise duty) (including other operating income) (₹ in Crore)

<b>FY 2019</b>	<b>21,118</b>
FY 2018	22,082
FY 2017	17,273
FY 2016	14,181
FY 2015	14,789

Revenue from operations stood at \$3.053 billion (exchange rate as on 29<sup>th</sup> March, 2019)

## PBDIT\* (Profit before Depreciation, Interest & Tax) (₹ in Crore)

<b>FY 2019</b>	<b>12,452</b>
FY 2018	14,226
FY 2017	12,213
FY 2016	9,385
FY 2015	10,237

## PAT (Profit after Tax) (₹ in Crore)

<b>FY 2019</b>	<b>7,956</b>
FY 2018	9,276
FY 2017	8,316
FY 2016	8,175
FY 2015	8,177

## EPS (Earnings per Share) (₹ per share)

<b>FY 2019</b>	<b>18.83</b>
FY 2018	21.95
FY 2017	19.68
FY 2016	19.35
FY 2015	19.35

## DPS (Dividend per Share) (₹ per share)

<b>FY 2019</b>	<b>20.00</b>
FY 2018	8.00
FY 2017	29.40
FY 2016	27.80
FY 2015	4.40

## NET WORTH (₹ in Crore)

<b>FY 2019</b>	<b>33,605</b>
FY 2018	35,932
FY 2017	30,805
FY 2016	37,385
FY 2015	44,621

## CASH & EQUIVALENTS\*\* (₹ in Crore)

<b>FY 2019</b>	<b>16,952</b>
FY 2018	20,395***
FY 2017	16,065***
FY 2016	35,272***
FY 2015	30,898

\* includes Other Income and Extraordinary Income

\*\*includes Cash & Cash Equivalents and Current Investments

\*\*\* net of dividend account balance and temporary borrowings

# operational highlights

*transitioned to underground mining*

## MINED METAL (MT)

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zinc	774,330	744,271	755,964	773,015	728,498
Lead	112,752	144,653	151,020	174,368	207,190
<b>Total</b>	<b>887,082</b>	<b>888,924</b>	<b>906,984</b>	<b>947,383</b>	<b>935,688</b>

## TOTAL REFINED METAL\* (MT)

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Zinc	733,803	758,938	671,988	791,461	696,283
Lead	134,898	151,576	144,294	175,193	204,372
Silver	368	459	480	594	713

\*Includes Captive Consumption



# board of directors



**MRS. KIRAN AGARWAL**  
**Chairman**

Mrs. Kiran Agarwal was appointed on the Board with effect from March 02, 2019. She has done Journalism, from London School of Journalism. She is an avid reader, prolific writer and a woman of many facets. Her love for reading inspired her to write a series of books catering to Indian ethos.

She has been actively involved with her family business and sharing her acumen on various business developments in the family and in setting up of Nand Ghar, an institution for the underprivileged where children get their wings to fly high, under right guidance and value based education.

She is also on the Board of Agarwal Galvanising Private Limited and Trustee of Vedanta Foundation.



**MR. NAVIN AGARWAL**  
**Director**

Mr. Navin Agarwal is the Executive Chairman of Vedanta Ltd. and Executive Vice Chairman of Vedanta Resources Plc. He has been with the Vedanta group since its founding and has extensive experience in the natural resources industry.

Mr. Agarwal plays a key role in the strategic and governance framework of the Vedanta Group and provides leadership for its long-term planning, business development and capital planning. He has been instrumental in the growth of the group through global organic projects as well as acquisitions. He is passionate about developing leadership talent for the group by identifying and nurturing future leaders.



**MR. SUNIL DUGGAL**  
**CEO & Whole-time Director**

Mr. Sunil Duggal was appointed as CEO & Whole-time Director on October 01, 2015.

Mr. Duggal is a result oriented professional with over 35 years of experience of leading high performance teams and more than 21 years in leadership positions. He is known for his passion for excellence in operations and focus on safety.

He has an electrical engineering degree from Thapar Institute of Engineering & Technology, Patiala.

Mr. Duggal has been honoured with Rajiv Gandhi Award for Environment Excellence. He is also the Vice Chairman of International Zinc Association; President of India Lead Zinc Development Association; Chairman of Skill Council for Mining sector; President in Federation of India Mineral Industries.





**MR. A. R.  
NARAYANASWAMY**  
Director

Mr. Narayanaswamy is on the Board since March 2009. He is a member of the Institute of Chartered Accountants of India and has an extensive industry experience. He is also on the Board of, Sterlite Technologies Ltd, Sterlite Grid 1 Ltd., Bharat Aluminium Company Ltd., Sterlite Power Grid Ventures Ltd, Sterlite Grid 2 Ltd., Vizag General Cargo Berth Pvt. Ltd. and IBIS Systems & Solutions Pvt Ltd.



**MS. REENA SINHA PURI**  
Director

Ms. Reena Sinha Puri was appointed on the Board with effect from December 29, 2016. She is an officer of the Indian Revenue Service. Currently, she is Joint Secretary and Financial Advisor in the Ministry of Mines and has held various positions in the Income Tax Department and was seconded to the Tax Department of Government of Botswana. She completed her Bachelor and Masters in Political Science from Punjab University, Bachelor of Law from Delhi University and Masters in Public Policy from National University of Singapore.

She is also on the Board of Bharat Aluminium Company Ltd., Coal India Ltd. and Northern Coalfields Ltd.



**MS. FARIDA M NAIK**  
Director

Ms. Farida M Naik was appointed on the Board on March 14, 2017. She is currently a Director in Ministry of Mines, Government of India. She has held various positions in different ministries and departments of Central Government, which includes her last stint as Joint Director of National Book Trust.

She is an alumna of Sophia College, Mumbai from where she graduated in Psychology.



**MR. ARUN L. TODARWAL**  
Director

Mr. Tadarwal is on the Board since March 2015. He is a member of the Institute of Chartered Accountants of India and has extensive experience in Taxation, Statutory Audits, Due Diligences, Arbitrations and Joint Ventures. He is also on the Board of Sterlite Technologies Ltd., Anuh Pharma Ltd., SREI Mutual Fund Trust Pvt. Ltd., Welspun India Ltd., Welspun Global Brands Ltd., Sterlite Grid 1 Ltd., Sterlite Grid 2 Ltd. Lakecity Ventures Pvt. Ltd., Sterlite Power Transmission Ltd and PTC Cables Pvt. Ltd.



# management team



**Bottom Row (left to right):** Kavita Singh, Arun Vijaykumar, Amitabh Gupta, Sunil Duggal, Swayam Saurabh, Laxman Shekhawat, Neelima Khetan

**Top Row (left to right):** Barun Gorain, Rajinder Singh Ahuja, Sujal Shah, Balwant Singh Rathore, Rajendra Dashora, Scott Caithness (behind), Praveen Jain, Sharad Gargiya (behind), Vinod Wagh, Rajesh Kundu (behind)

## MR. SUNIL DUGGAL

**Chief Executive Officer**

With Hindustan Zinc from: Aug 16, 2010

Industry Experience: 36 years

Previous Companies: Ambuja Cement and Cement Corporation of India

## MR. L. S. SHEKHAWAT

**Director - Operations**

With Hindustan Zinc from: Oct 20, 1990

Industry Experience: 29 years

## MR. AMITABH GUPTA

**Director - Commercial & CEO - Fertilizer**

With Hindustan Zinc from: Nov 23, 2011

Industry Experience: 31 years

Previous Companies: Ranbaxy Lab, Cargill India, TeleTech India (Bharti Group) and Moser Baer Solar

**MR. SWAYAM SAURABH****Chief Financial Officer (Acting)**

With Hindustan Zinc from: Jan 03, 2019

Industry Experience: 18 years

Previous Companies: L&T, Asian Paints, Philips APAC

**MS. KAVITA SINGH****Chief People Officer**

With Hindustan Zinc from: Dec 27, 2018

Industry Experience: 17 years

Previous Companies: A P Moller Maersk, ICICI Prudential, TATA AIG

**MR. ARUN VIJAYAKUMAR****Director - Projects**

With Hindustan Zinc from: Nov 19, 2018

Industry Experience: 24 years

Previous Companies: Reliance Industries Limited

**MR. SCOTT CAITHNESS****Director - Exploration**

With Hindustan Zinc from: Nov 02, 2015

Industry Experience: 36 years

Previous Companies: Indian Pacific Resources, Indophil Resources

**MR. VINOD WAGH****Head - Smelter**

With Hindustan Zinc from: Feb 22, 2015

Industry Experience: 24 years

Previous Companies: Sterlite Copper

**MR. RAJENDRA PRASAD DASHORA****Head of Mining**

With Hindustan Zinc from: June 16, 2012

Industry Experience: 33 years

Previous Companies: HZL and Jindal Saw Ltd.

**MR. PRAVEEN KUMAR JAIN****Director - Dariba SBU**

With Hindustan Zinc from: Apr 27, 1988

Industry Experience: 32 years

Previous Companies: Nepal Metal Company Ltd., Nepal

**MR. SUJAL SHAH****Director - Agucha SBU**

With Hindustan Zinc from: Apr 01, 2019

Industry Experience: 27 years

Previous Companies: HZL, Egyptian Sponge Iron and Steel Company, M/s Saudi Iron & Steel Co. (HADEED), Saudi Arabia, M/S ESSAR STEEL, Hazira Complex, India

**MR. BALWANT SINGH RATHORE****Director - Zawar SBU**

With Hindustan Zinc from: July 26, 1992

Industry Experience: 30 years

Previous Companies: Coal India Ltd.

**MR. RAJESH KUNDU****Head - Technical Cell & Business Excellence**

With Hindustan Zinc from: Jan 18, 2007

Industry Experience: 28 years

Previous Companies: Usha Martin Ltd., Ranchi

**MR. SHARAD KUMAR GARGIYA****Chief Commercial Officer**

With Hindustan Zinc from: Jul 03, 2018

Industry Experience: 21 years

Previous Companies: KCM

**MS. NEELIMA KHETAN****Vice President - CSR**

With Hindustan Zinc from: Nov 16, 2015

Industry Experience: 34 years

Previous Companies: Coca- Cola

**MR. BARUN KUMAR GORAIN****Chief Technology & Innovation**

With Hindustan Zinc from: Mar 05, 2018

Industry Experience: 25 years

Previous Companies: Barric Gold Corporation

**MR. HARSHA SHETTY** (not in picture)**Chief Marketing officer**

With Hindustan Zinc from: Feb 06, 2019

Industry Experience: 16 years

**MR. V. JAYARAMAN** (not in picture)**Vice President - Power**

With Hindustan Zinc from: Apr 07, 2006

Industry Experience: 21 years

**MR. RAJINDER SINGH AHUJA****Head - HSE**

With Hindustan Zinc from: Nov 01, 2003

Industry Experience: 21 years

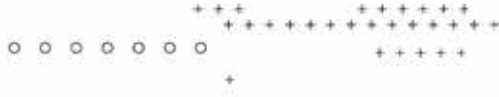
Previous Companies: Aditya Cement



# industry review

*depleting stocks, positive price outlook*





## zinc

The financial year saw moderation in base metals prices with zinc falling by 10% to end the year at an average of \$2,743 per MT. In line with demand-supply fundamentals, zinc price should improve as metal stocks at exchanges are at an all-time low and expected to continue to remain in deficit. Zinc price has already starting trending up on the back of slower than expected supply growth and steady demand.

### PRICES

	FY 2019	FY 2018	% change
Average zinc LME cash settlement prices US\$/t	2,743	3,057	-10%
Average lead LME cash settlement prices US\$/t	2,121	2,379	-11%
Average silver prices US\$/ounce	15.4	16.9	-9%

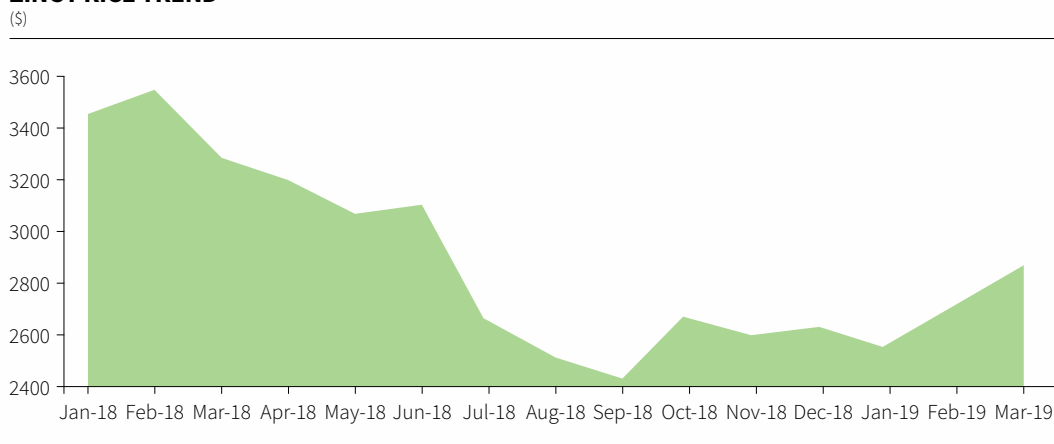
### FY 2019 REVIEW

The financial year started on a positive demand outlook with manufacturing expanding in all major economies, increasing Chinese galvanising capacity and expected boost to the US economy from tax cuts. However, investor sentiments turned negative after President Trump announced import tariffs on aluminium, steel and Chinese goods leading to fear of an imminent trade war moderating global economic growth outlook. The subsequent stock in-flows into LME warehouses led to concerns about zinc market moving into surplus bringing zinc price down from February 2018 peak of \$3,618 per MT to average \$3,112 in Q1 FY 2019. The trade war escalated with China imposing import tariffs on US goods leading to further risk-off selling in zinc in Q2 FY 2019 leading to zinc price touching \$2400 level.

As the year progressed, the tightness in Chinese refined output due to weak production from environmental crackdown became visible leading to substantial decline in Chinese stocks and consequent increase in imports into China. The second half of the year witnessed decline in global exchange stocks to its lowest level since 2007 and rise in zinc premiums primarily due to decline in global smelter production and prolonged imports by China even as global mine supply crept up which resulted in spot Treatment Charges (TCs) rising to over \$200 per MT.

In the final quarter of the financial year, zinc prices moved up sharply due to lower than expected production from new mining projects and production disruptions from floods in Australia as well as apparent easing of trade tension bringing investor interest back in zinc.

### ZINC PRICE TREND



Source: Fast Markets



## OUTLOOK

Zinc market fundamentals remain robust with global zinc consumption expected to grow by 1.5% to 14.5 million MT in CY 2019 while smelter supply will increase to 14 million MT and mine supply will likely be 13.9 million MT.

## ZINC DEMAND - SUPPLY

Zinc Global Balance in KT	CY 2017	CY 2018	CY 2019 E	CY 2020 E
Mine Production	12,635	12,953	13,941	15,075
Smelter Production	13,520	13,183	14,027	14,849
Consumption	14,232	14,322	14,531	14,801

Source: Wood Mackenzie

In CY 2019, the concentrate market is estimated to be in modest surplus due to improvement in mine supplies, mostly from New Century, Gamsburg and Lady Loretta mine projects. The metal output from China is expected to rebound after falling off 3% in prior year as smelters have been making necessary investments to become environmentally compliant and recovering much of the lost production levels. Still, since the full capacities are not expected to be back online, global refined metal market will remain in deficit while concentrate market may be in balance or mild surplus.

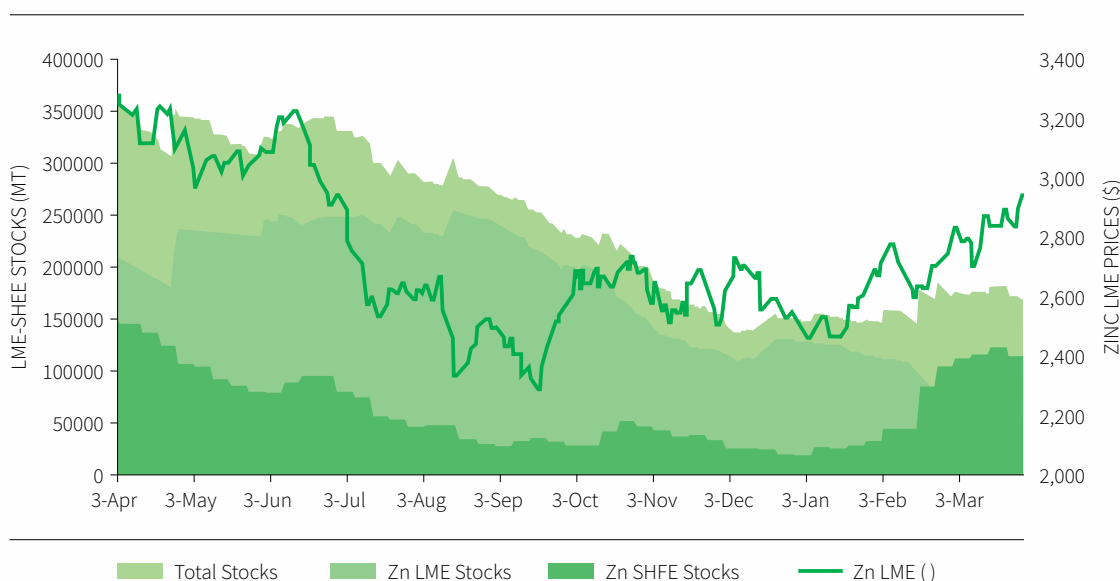
Global macroeconomic trends have given diverse signals to the market. The uncertainty from international trade dispute, increasing protectionism, slowdown in manufacturing activity, volatility in financial markets together with the negative impact of a stronger dollar and higher interest rates in emerging and developed markets are combining to undermine the pace of global growth.

The modest growth in 2019 consumption will be mainly coming from China and India. Zinc consumption growth in China will be supported by increasing investment in infrastructure in central & western parts of the country and recent measures to stimulate demand in the automotive, household appliance and other sectors. Major inroads have been made in the Belt and Road initiative by China in the South-Asian subcontinent which should lead to consumption in this region. The zinc demand in the US will benefit from continued expansion in manufacturing sector. However, consumption growth rate is estimated to be low in US, Europe and Japan due to weak demand, trade tensions and slowdown in automotive sector.

Trade talks will have a significant bearing on investor sentiment and consequently on metal prices. Against a backdrop of a fundamentally tight zinc metal market, a resolution of trade crisis could fuel a surge in metal prices.

## REFINED METAL STOCKS

### LME SHFE ZINC STOCKS & LME PRICE



Source: Fast Markets

## INDIA DEMAND OUTLOOK

India is hopeful of taking the second slot in global steel output after China within this year. The Indian Government has also taken steps to encourage secondary steel producers to boost performance. Growing in conjunction with the primary steel sector, the secondary steel sector holds enormous potential for growth and opportunities in the country.

Steel demand in India remains strong with increase to the tune of 6.5% CAGR till 2030, as per Ministry of Steel. Indian zinc demand will also mirror this growth trajectory on the back of growth in major end-use sectors, i.e., automotive, construction & Infrastructure and railways. The Government's plan to spend \$1.5 trillion on infrastructure over the next decade will provide a long-term boost to Indian steel & zinc demand and will support the country's post-fabrication and continuous galvanizers. This thrust will come in the form of new & upgraded railway stations, new airports, road projects, smart cities, electrification projects, investment in transmission corridors, etc. together with increased usage of galvanised steel in automotive, construction and infrastructure to narrow the gap in per capita zinc consumption.

The Government also envisions 300 million MT of steel capacity for the country by 2025 against the current capacity of about 100 million MT.

Further, with the massive success of the IBC code along with the NCLT in debt resolution process for the steel sector during the year, manufacturing activity is expected to pick up smoothly over the current financial year given the enhanced activity in the infrastructure space.

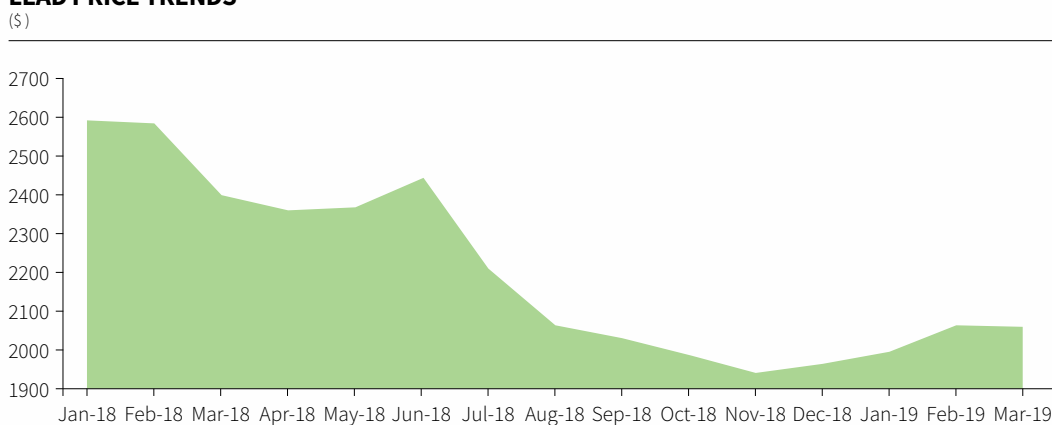
Hindustan Zinc is the largest zinc producer in India with a 79% market share in FY 2019. About 70-75% of its refined zinc production is sold in the Indian market, primarily to steel companies, with the rest being exported to countries in Asia and the Middle East to increase the customer portfolio in Special High Grade and value added products. The Company also produces zinc for use in die-casting alloys, brass, oxides and chemicals and has successfully launched and supplied Electro-plating galvanizing (EPG) and Hindustan Zinc Die-casting Alloy (HZDA) products. The Company is focusing on increasing the supply of value added products to 25% of total zinc metal sales in FY 2020, up from 16% in FY 2019.

## lead

### FY 2019 REVIEW

Similar to zinc and other base metals, lead prices were volatile during the year, rising and falling in response to developments in international trade dispute between the US and its trading partners. Lead price dropped from about \$2,397 at the beginning to April 2018 to below \$1,950 per MT per during the year and ended the year at \$2054. The average lead price was \$2,121 per MT during the year, down 11% from a year ago. Fundamentally, lead was in a favourable position with stocks dropping to record lows and supply was in check. The squeeze in Chinese supply due to stricter environmental regulations pushed price up briefly. However, lead price tracked the US dollar for the most part, with price falling as dollar appreciated.

### LEAD PRICE TRENDS



Source: Fast Markets

### OUTLOOK

The supply of lead concentrate is expected to increase in 2019, though at a slower than expected pace, and there is sufficient un-utilised smelting capacity which can absorb it. The demand is expected to increase by 2% primarily from growth in Asia, especially China where Government announced stimulus to incentivise consumption in rural areas, even as demand from e-bikes has saturated.

### INDIA LEAD OUTLOOK

India consumes about 1.1 million MT of lead including primary and secondary lead. The main use for lead in India is lead acid batteries used mainly in automotive and telecom sectors. Hindustan Zinc has a 57% market share of domestic primary lead consumption and has delivered much higher growth than the market growth rate of about 3% in FY 2019. Demand for lead is expected to

### LEAD DEMAND - SUPPLY

Lead Global Balance in KT	CY 2017	CY 2018	CY 2019 E	CY 2020 E
Mine Production	5,281	5,217	5,489	5,675
Production at primary smelters	5,705	5,769	5,997	6,062
Production at secondary refineries	6,696	6,938	7,179	7,389
Refined Lead production	12,402	12,707	13,176	13,451
Consumption	12,681	12,935	13,207	13,429

Source: Wood Mackenzie

The largest sector of lead demand is automotive batteries. This decade may well mark the point at which electric vehicles (EVs) truly become commonplace. Governments worldwide have increasingly focused on promoting EVs and EVs still use lead batteries. The key difference is that EVs use smaller lead batteries than regular internal combustion engine (ICE) vehicles. Thus, lead consumption for batteries is reduced, but not fully substantiated, by EVs.

increase by 1-2% in the current financial year and Hindustan Zinc is poised to expand its supply base to more end-users tapping the growth driven by growing production in the automobile sector.



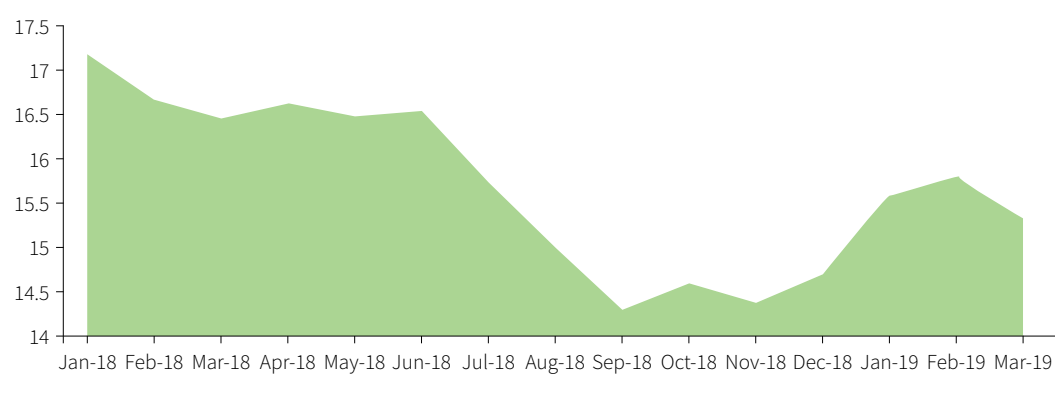
## silver

The silver price averaged \$15.4 per oz in FY 2019 declining by 9% from a year ago in challenging environment led by strengthening of US dollar. Preliminary estimates point towards a minor 0.3% increase in total supply in 2018 whereas demand contracted by 3% due primarily from lower demand from investors. A slowing Chinese economy, coupled with rising U.S. interest rates, an equity market bull-run and global trade tensions affected the price performance across many markets, including gold and silver. The demand for silver in jewellery remained essentially flat as mood remained soft in India and China. Industrial applications, which account for about 60% of total demand, fell slightly by 2% due to contraction in demand from photovoltaic sector as China reduced solar subsidies.

Silver price is likely to strengthen in 2019 to a 7% increase over the 2018 average price as per Market Focus due to ease in trade tensions and US Federal reserve not raising interest rates.

### SILVER PRICE TRENDS

(\$)



Source: LBMA

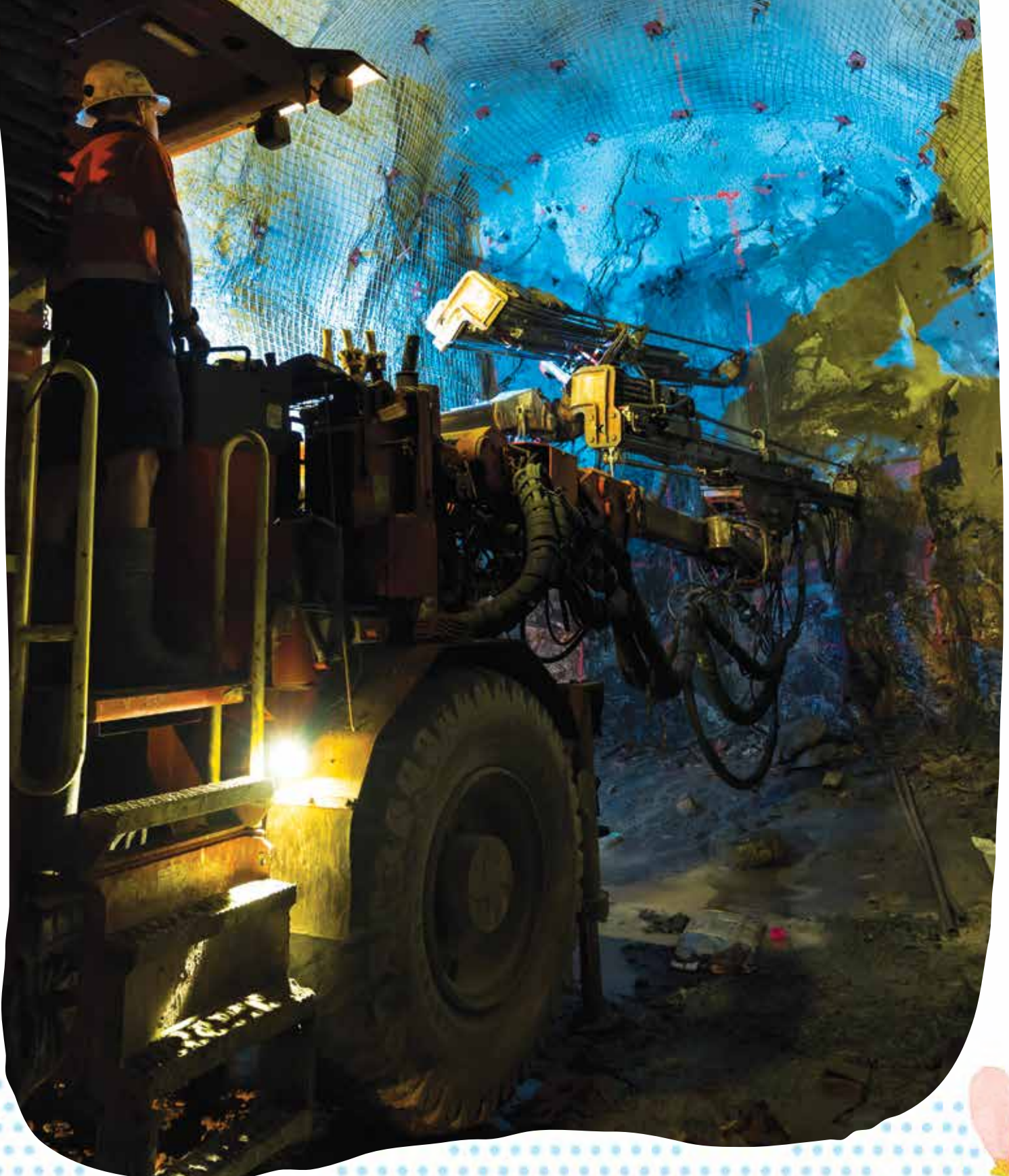
### SILVER - DEMAND SUPPLY

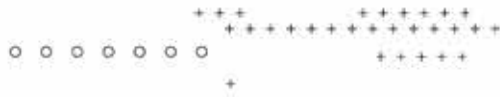
	CY 2017	CY 2018	CY 2019 E	CY 2020 E
Mine production, Moz	832.8	839.3	862.8	890.2
Total demand, Moz	953.3	970.5	988.9	988.2
Market balance, Moz	45.5	33.9	49.5	81.2

Source: Metal Focus

# operations

*mining our potential*





## mines

We are pleased to inform that our underground mines set a scorching pace of growth, increasing 29% in mined metal terms and 27% in ore terms. With this thrust, we are at the last of our mine expansion plan to take our mined metal production capacity to 1.2 million MT per annum.

### PERFORMANCE IN FY 2019

('000 MT)	Ore Mined		Zinc				Lead			
			Feed Grade (%)		Mined Metal		Feed Grade (%)		Mined Metal	
	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018
<b>1. Underground</b>										
Rampura Agucha Mine (RAM - UG)	3,330	2,079	11.77	11.06	358	228	1.65	1.52	35	23
Sindesar Khurd Mine (SKM)	5,311	4,500	3.75	3.94	174	163	2.40	2.09	109	84
Rajpura Dariba Mine (RDM)	1,080	896	5.04	4.78	44	37	1.21	1.10	9	7
Zawar Mine (ZM)	2,865	2,176	2.36	2.48	55	40	1.97	1.99	45	31
Kayad Mine (KM)	1,200	1,200	8.16	8.67	98	101	1.10	1.16	10	11
<b>Subtotal</b>	<b>13,786</b>	<b>10,851</b>	<b>5.85</b>	<b>5.67</b>	<b>729</b>	<b>569</b>	<b>1.89</b>	<b>1.78</b>	<b>207</b>	<b>156</b>
<b>2. Ram Open Cast</b>	0	1,763	0	11.80	0	204	0	1.69	0	19
<b>Grand Total</b>	<b>13,786</b>	<b>12,614</b>	<b>5.85</b>	<b>6.56</b>	<b>729</b>	<b>773</b>	<b>1.89</b>	<b>1.77</b>	<b>207</b>	<b>174</b>

During 2019, the Company transitioned to fully underground operations. Ore production was 13.8 million MT in FY 2019, an increase of 9% from a year ago, driven by 27% increase in ore production from underground mines. Mined metal production from underground mine was 936 kt in FY 2019, 29% higher from a year ago on account of higher ore production and better grades, even as the closure of open-cast operations in March 2018 caused total mined metal production to remain marginally down y-o-y.

### MINING IN HZL - AN OVERVIEW

Mine	Underground Mining Method	Reserve & Resource (mn MT)
RAM	Long hole stoping with paste filling	90.3
SKM	Long hole stoping with paste filling	113.6
RDM	Blast hole stoping with hydraulic filling	57.9
ZM	Blast hole open stoping	105.5
KM	Long hole open stoping with CRF	7.7



## RAMPURA AGUCHA MINE

The Rampura Agucha Mine (RAM) is one of the largest zinc-lead mines in the world with a production of 392 kt of mined metal in FY 2019. The RAM deposit has ore reserve and resource of 90.3 million MT with total metal content of 14.5%, which has been proven upto 1200m depth from surface. The orebody was mined via open-pit route upto a depth of 400 m till March 2018 and a new underground mine has been developed over the last several years, which has now reached a depth of 640m from surface while decline development is continuing below 710m depth from surface.

RAM has deployed world-class mining partners and equipment to achieve the planned ramp up of mine development & ore production. The underground mine is being developed with a vision of reaching 5.0 million MT per annum of ore in the next couple of years. The mine has ramped up from 0.4 million MT per annum in FY 2015 to 3.3 million MT in FY 2019. Correspondingly, mine development ramped up from 8.5 km in FY 2015 to 25 km in FY 2019. Both ore production and mine development are expected to show high growth in FY 2020.

### PROJECT UPDATE

The project work for establishing major infrastructure to increase capacity to 5.0 million MT per annum is progressing well. Two ventilation shafts (North and South) each with diameter of 7.5 m and 450m depth are in operation. The main hoisting shaft of 7.5 m diameter has been sunk and furnished to its final depth of 950 m and

winders, skip loading & surface conveyors have been installed, while off-shaft development activities to commission underground crushing and conveying system is under progress. During the year, the main shaft was equipped with mid-shaft hoisting for early ore and waste, while full commissioning of main shaft is expected in September 2019.

For safe and sustainable extraction of ore, the Company has established paste fill and underhand mining method which will use mine tailings to fill stopes after ore extraction. During the year, the second paste fill plant was also commissioned to support ore production of up to 5.0 million MT per annum.

### INFRASTRUCTURE UPGRADATION AND MINE IMPROVEMENT INITIATIVES

The mine has introduced state-of-the-art information and communication system and is consistently upgrading to advanced automation system. Surface control room has been established to monitor all underground activities and enhancing productivity. The technological and improvement initiatives taken in mine include:

- Deployment of automated drill jumbos, high capacity 21T Load Haul Dump (LHD) equipment and 60/65T Low Profile Dump Trucks (LPDTs)
- Remote controlled LHD with video camera
- Installation of online load scanner for measurement and productivity of LPDTs



- Underground traffic management via radios for better communication with mobile vehicles
- Man-less underground dewatering and pumping system and SCADA dashboard remotely connected to control room
- Single point control for ventilation fans
- Integration of fuel management system with SAP leading to reduction of waiting time at diesel pumps, real time filling detail and complete automation
- Automatic washing system for HEMM and LMVs
- Scanner for mine development and stope cavity monitoring

### SAFETY AND SUSTAINABILITY INITIATIVES

The mine has a fully equipped Rescue Recovery and Refresher Training Centre to support any emergencies. Safety, training and environmental related infrastructure established at mine includes simulator for training, refuse chamber, underground ambulance, fatigue monitoring system on equipment, water mist arrangements

for stope dust suppression and 100% recycling of underground water, etc.

Also for sustainability and developing skilled workforce, the mine has put in place many structured initiatives such as 'Mining Academy', to alleviate the shortage of skilled mining personnel in the country.

### AWARDS AND RECOGNITION

During the year, RAM received several awards including:

- Winner of 1<sup>st</sup> All India Mines Safety, Cleanliness & Silicosis Awareness Week 2018
- 1<sup>st</sup> rank in the 29<sup>th</sup> Mines Environment and Mineral Conservation Week 2018-19 in categories of overall performance, afforestation, sustainability development and waste dump management
- Bhamashah Award by Rajasthan Government for CSR activity

## KAYAD MINE

Kayad Mine (KM) is the newest mine of the Company producing 108 kt of mined metal in FY 2019. Kayad deposit has 7.7 million MT of reserve with 10.4% total metal content. From its commencement in June 2014, the mine ramped up to its full potential of 1.2 million MT of ore production in FY 2018.

The mine is accessed through a single decline from surface portal to the top of the orebody and split in two declines 75 metres below surface, which is appropriate for the shallow depth of Kayad deposit and for the production capacity of 1.2 million MT.

### INFRASTRUCTURE UPGRADATION AND TECHNOLOGY IMPROVEMENT INITIATIVES

During the year, KM carried out several improvement initiatives including:

- Volumetric load scanner integrated with SAP system to book ore production and to improve fill factor of LPDTs
- System to optimize cycle time of LPDTs
- Auto washing facility to optimize maintenance practices leading to increased availability of equipment
- Underground one-way traffic to enhance productivity and reduced traffic congestion
- Direct mixing of Cement Rock Fill in stopes to speed up the rate of back filling
- Dedicated scrap yard to improve 5S and segregation of scrap material
- High capacity LHD (21T) and LPDT (65T) introduced in the fleet
- Digital auto cut-off nitrogen inflation system to avoid manual intervention while filling air
- Auto lube dispensing system to minimize spillage of lube oil and improve productivity

### SAFETY AND SUSTAINABILITY INITIATIVES

- Installation of high mast LED lights at surface to improve illumination as per IFC standard
- Developed world class parking yards for LMV, LHD & LPDT and close circuit pedestrian path to reduce man-machine interaction
- CCTV camera network for better surveillance of mine area from security control room
- Fixed reflective flags on LMVs to improve visibility in underground
- Best haul road maintenance practices such as deployment of road grader on daily basis, effective drainage system throughout the decline, water sprinkling with specialty chemical, proper illumination on the road and fixed cat's eyes along grade line in decline
- Development of green belt in mine area
- Commissioning of continuous ambient air quality monitoring system

### AWARDS AND RECOGNITIONS

- Gold award in the 18<sup>th</sup> Annual Greentech Environment Award by Greentech Foundation, New Delhi.
- 5S Certificate from QCFI jointly with Union of Japanese Scientists & Engineers
- 1<sup>st</sup> rank in the 29<sup>th</sup> Mine Environment and Mineral Conservation Week in the categories of Reclamation & Rehabilitation, Plant & Machinery and PC Operator



## SINDESAR KHURD MINE

Sindesar Khurd Mine (SKM) is a world-class silver rich mine with state-of-the-art infrastructure and best-in class mechanisation. The mine produced 283 kt of mined metal in FY 2019, up from 247 kt in FY 2018. As a result of on-going volume ramp-up and higher recoveries, the mine has achieved a production run-rate of 5.3 million MT of ore during FY 2019, as compared to 4.5 million MT of ore in FY 2018. The silver in ore during the year increased to 128 parts per million.

SKM started operations in 2006 and has seen several phases of expansions from 0.3 million MT to its current capacity of 6.0 million MT of ore, making it the largest underground mine in India. Its reserve & resource grade is 6.2%. SKM consists of multiple standalone deposits, or auxiliary lenses leading to three standalone production centres at present. The mine is currently producing from the main lens, with 3.5 million MT per annum capacity & SKA2 and SKA6 lenses with total capacity of 2.5 million MT per annum. SKM's expansion has significantly contributed to the Company's integrated lead and silver production.

### PROJECT UPDATE

Significant milestones were achieved in the deployment of underground shaft at SKM with the commissioning of skip & waste hoisting during the year and material handling system during the year, leading to full deployment of underground shaft having capacity of 3.75 million MT.

During the year, SKM received environment clearance to produce 6.0 million MT of ore and 6.5 million MT of ore beneficiation. The two existing beneficiation plants at SKM are operating at 4.7 million MT per annum while a third beneficiation plant of 1.5 million MT per annum was commissioned during the year taking the total beneficiation capacity 6.2 million MT per annum.



## AWARDS

- '5 Star Rating' by Ministry of Mines, Government of India
- Bala Gulshan Tandon Excellence Award 2017-18 for best overall performance in sustainable development from Federation of Indian Mineral Industries

## INFRASTRUCTURE UPGRADATION AND MINE IMPROVEMENT INITIATIVES

- Autonomous drill rigs have been deployed with the highest level of instrumentation which can drill holes in autonomous mode and are being utilized along with tele-remote loaders in shift changeover hours
- Bigger Blasts using up to 17 MT explosive were performed which have enhanced the stope productivity significantly
- Under "Digital Mine" project, the 'SKA6 section' of the mine has been fully converted to Wi-Fi section leading to online monitoring of health and performance of production equipment
- Wireless sensors in autonomous drill rigs to reduce its downtime
- Optimine and Certiq enabled machines leading to data collection related to health & performance of production equipment, operator skill and efficiency.
- Cable bolting rig for mechanised cable bolting of strata reducing human labour and enhancing safety
- Safescape Ladder tubes were introduced in mine for establishing secondary outlet from levels leading to mechanized furnishing of man passes, reducing man hours
- Remote operated Jumbo for drilling of bigger boulders remotely in stopes with enhanced safety
- Achieved record rate of decline development as well as benchmark performance of paste fill plant during the year

## SAFETY AND SUSTAINABILITY INITIATIVES

- Mobile foam unit equipped with high performance jetting gun with throwing range of 35m and variable flow rate, to mitigate the major risk of fire in underground mines due to large fleet of diesel operated equipment
- Pond deepening of 5.32 lakh m<sup>3</sup> initiated in nine nearby villages to improve water table of surrounding villages
- Construction of pond of capacity 1.25 lac m<sup>3</sup> to collect the water from tailing dam and pump it to SKM for reuse in beneficiation plants
- Installation of piezometers to monitor water level on embankment of tailing dam to take proactive action to use the ground water for ore beneficiation
- Installation of Inclinator to monitor the displacement or movement of tailing dam wall slopes in X & Y direction in real time and take proactive action to avoid any slope failure

## RAJPURA-DARIBA MINES

Rajpura Dariba Mine (RDM) is an underground lead-zinc mine with reserve & resource grade of 8.5% and is one of our oldest mines where mining operations began in 1983. The mine entered the 1 million MT club during the year and produced 53 kt of mined metal in FY 2019 as compared to 44 kt in FY 2018.

Presently, the mine is accessed via decline and main shaft. As RDM orebody also allows for multiple production centres, the mine is poised to produce at the capacity of 2.0 million MT per annum of ore in the future with new level of mechanization & automation. Mine has achieved highest truck filling hours and exploration drilling resulting in its readiness for expansion.

During the year, RDM received Environment Clearance by the Ministry of Environment, Forest & Climate Change to increase ore production from 0.9 to 1.08 million MT per annum and regulatory approval for further expansion to 2.0 million MT per annum is under process.

### INFRASTRUCTURE UPGRADATION AND MINE IMPROVEMENT INITIATIVES

- Commenced project work for surface workshop and paste fill plant
- Introduction of double boom jumbos and electro-hydraulic production drills to improve development and drilling rate
- Replacement of small size equipment with bigger 17 MT LHD and 30 MT LPDTs for higher productivity
- Commissioned high capacity ventilation fan and new raises to augment ventilation capacity of mine for East Lode and North Lode respectively
- New service equipment introduced including grader, diesel browser, personal carriers and scissor-lifters to achieve higher production targets
- A monitoring system in form of a load scanner installed at ramp portal thereby minimizing carry back and reducing hauling cost
- New services line installed through surface boreholes to improve compressed air and water flow

### SAFETY AND SUSTAINABILITY INITIATIVES

- Installation of fire extinguisher in each manhole in underground
- Construction of pedestrian walkway to reduce man-machine interaction
- Installation of proximity sensors in all surface dumper as well as in the fencing gates at auxiliary and main shaft
- Enhanced CCTV camera installations for better monitoring
- Conversion of all manual Auto Fire Suppression Systems to Automatic Mode in machines used in mine support activities
- Emergency system in the scissor lift carriers
- Introduction and installation of bend tubes in all gate end boxes in underground to deal with internal fire or heat in case of emergency

## AWARDS

- Overall winner of 49<sup>th</sup> All India Rescue & Recovery Competition

## ZAWAR MINES

Zawar Mines (ZM) are a group of four mines namely Mochia, Balaria, Zawar Mala and Baroi with average zinc-lead R&R grade of 6.9%. These are heritage mines where R&R have been regularly added. During the year, the mine produced 99 kt of mined metal from an ore production of 2.9 million MT as compared to 71 kt of mined metal from 2.2 million MT of ore in FY 2018.

Ore production capacity at ZM is planned to progressively increase to 4.8 million MT per annum by FY 2021 and the vision is 8.0 million MT per annum based on R&R potential. On completion of the ongoing expansion, ZM will become a significant contributor to the Company's output.

During the year, mine development was ramped-up to 35 km with production commencing via the large declines at Mochia and Baroi using 60 MT LPDTs.

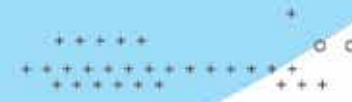
### INFRASTRUCTURE UPGRADATION AND MINE IMPROVEMENT INITIATIVES

The following were the main developments in expansion project:

- New beneficiation mill with capacity of 2.0 million MT per annum was commissioned
- Major infrastructure development including ventilation fans, primary crushers, workshops, parking plaza are in progress along with residential & industrial civil infrastructure development
- Raise borers have been deployed for long ventilation raises for ventilation capacity augmentation
- 100 km of underground exploration and 60 km of surface exploration were carried out for converting resource to reserve and finding additional resource in lateral and depth extension
- High speed mobile carrier rig for underground exploration are now being used for faster exploration

### SAFETY AND SUSTAINABILITY INITIATIVES

- Conducted mining mate skill upgradation training program
- Backfill plant at Mochia and Zawarmala mines is under construction
- The Company's first dry stacking filter plant at tailing dam is under construction which will reduce the risk of dam failure and also reduce environment footprint through water and land optimisation



## smelters

Hindustan Zinc is the fourth largest producer of zinc and lead metal globally with a smelting capacity of 1.08 million MT per annum. We are debottlenecking our smelters to maintain our fully integrated operations as our mines ramp up production.

### SMELTING AT HZL –AN OVERVIEW

Metal	Process	Technology	Smelter	Capacity (MT per annum)	
Zinc	Hydrometallurgy	Outokumpu roast-leach-electro winning	Chanderiya	453,000	
			Dariba	234,000	
			Debari	88,000	
	Pyrometallurgy	Imperial smelting	Chanderiya	105,000	
			<b>Total</b>	<b>880,000</b>	
Lead	Pyrometallurgy	Imperial smelting	Chanderiya	35,000	
			Ausmelt Top Submerged Lance	Chanderiya	50,000
			SKS, bottom blowing	Dariba	120,000
			<b>Total</b>	<b>205,000</b>	
Zinc & Lead			<b>Grand Total</b>	<b>1,085,000</b>	

Chanderiya Lead-Zinc Smelter (CLZS) is one of the largest zinc-lead smelting complexes in the world. Its current metal production capacity is 643,000 MT per annum including 558,000 MT per annum of zinc and 85,000 MT per annum of lead.

The zinc smelter at Dariba Smelting Complex (DSC) was commissioned in March 2010 and has a capacity of 234,000 MT per annum. In July 2011, a lead smelter was commissioned which has been debottlenecked to 120,000 MT per annum.

Zinc Smelter at Debari (ZSD) was commissioned in the year 1968 with an initial production capacity of 18,000 MT per annum. Over the years, ZSD has expanded manifolds to the current capacity of 88,000 MT per annum. ZSD also supplies surplus zinc oxide, an intermediate product, to the Company's other zinc smelters.

The smelting complexes are certified for Integrated Management System (IMS) comprising of the Quality Management System (ISO 9001:2015), Environmental Management System (ISO 14001:2015) and Occupational Health and Safety Management System (OHSAS 18001:2007).

The silver refinery at Pantnagar in the state of Uttarakhand has been upgraded to produce 800 MT per annum and will process residue and work-in-progress material from smelters at Dariba and Chanderiya. Silver produced at Pantnagar is LBMA certified.

The Company also has facilities at Pantnagar for processing and refining of zinc and lead cathodes manufactured at its Rajasthan

smelters as well as for nationwide distribution of finished goods, making it a centralised finished good centre for its customers. These facilities do not add to the overall smelting capacity.

Zinc refinery at Haridwar in Uttarakhand and zinc smelter at Vishakhapatnam in Andhra Pradesh are currently non-operational.





## PERFORMANCE IN FY 2019

	Chanderiya Lead-Zinc Smelter (CLZS)	Zinc Smelter Debari (ZSD)	Dariba Smelting Complex (DSC)	Total
Refined Zinc (MT)	4,24,803	67,968	2,03,512	<b>6,96,283</b>
FY 2018 (MT)	4,97,049	76,979	2,17,433	7,91,461
Refined Lead (MT)	85,916		1,11,922	<b>1,97,838</b>
FY 2018 (MT)	72,450		95,797	1,68,247
Sulphuric Acid (MT)	5,52,660	2,53,362	4,77,217	<b>12,83,239</b>
FY 2018 (MT)	6,15,409	2,75,741	5,12,945	14,04,095

In FY 2019, the Company produced 894,121 MT of zinc-lead metal as compared to 959,708 MT in FY 2018. The decrease was driven by lower availability of mined metal during the year. Zinc production at 696,283 MT was lower by 12% y-o-y due to higher lead ratio in ore. Integrated lead production was a record 1,97,838 MT, higher by 18% driven by higher lead mined metal production and retrofitting of pyro metallurgical smelter to produce more lead.

## PROJECT UPDATE

As part of the ongoing capacity expansion, Smelters are undergoing debottlenecking to achieve capacity of 1.3 million MT per annum over three phases, of which Phase I is complete taking smelting capacity to 1.08 million MT per annum. In Phase I, the increase in zinc production capacity is mainly by increasing cell house productivity and roaster throughput. Lead production capacity was increased by improving the reliability of SKS furnace. Phase II is under progress and nearing completion which will increase production capacity to 1.12 million MT per annum. Phase II involves addition of new cells in zinc smelter and additional lead refining capacity at CLZS increasing zinc and lead capacity by 15 kt per annum each. Additional zinc metal capacity of 18 kt per annum will be provided by overall improvement in cell house performance through new system for anode washing and upgradation of leaching and purification circuit to make the system robust to cater to a wide range of concentrate with better operational efficiency. In Phase III, a Jumbo cell house with leaching & purification circuit and power plant are planned, which will increase smelting capacity to 1.3 million MT per annum, equivalent to 1.35 million MT per annum mined metal capacity.

## KEY SAFETY AND SUSTAINABILITY INITIATIVES

### SAFETY INNOVATION CELL

In line with Zero Harm vision, a Safety Innovation Cell was formed this year to identify engineering solutions for high risk activities, minimizing manual activities in material handling and digitisation. Initiatives to eliminate man machine interaction, safe hot metal handling and safe operation in remote area are under implementation.

### IMPROVING ENVIRONMENT PERFORMANCE OF DARIBA LEAD SMELTER

SKS fume dust leaching system was modified with a new process to control the off-gas dust composition and bleed off the

impurities. This has led to reduction in waste generation like dust inventory and improvement in off-gas system reliability as well as equipment life.

### REDUCING ENVIRONMENTAL FOOTPRINT

To reduce our environment footprint, a zero liquid discharge plant has been ordered at ZSD and CLZS, which will also reduce fresh water intake by 5%; a facility to produce sodium sulphate from RO reject is under construction at DSC and will be operational in first half of FY 2020; and trials for usage of Jarosite in cement plants were done successfully, which on commercialisation will help also reduce cost of production.

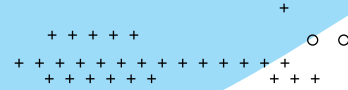
### FUMER PROJECT TO RECOVER METAL LOST IN ZINC RESIDUE

The Company's first zinc Fumer project with a waste processing capacity of 160,000 MT per annum is expected to commission in FY 2020. The Fumer will lead to annual recovery of valuable metals including 32 MT of silver and 6,200 MT of zinc and lead from zinc residue, which otherwise would be wasted in jarofix. This is also an environment initiative to move towards the goal of zero solid waste and saving 1 hectare of land per annum.



### SECOND ANCILLARY PLANT TO AUGMENT 'WASTE TO WEALTH'

After successful operation of 'waste to wealth' ancillary plant at DSC, a new ancillary unit has commenced construction at CLZS to treat all smelting process residue including work-in-progress material like zinc oxide, copper dross, purification cake, antimony dust and cadmium sponge and is expected to be commissioned in the second half of FY 2020. The plant is expected to generate a cost saving in the range of ₹ 50-75 Crore per annum by producing value added products which will be fed back of our mines and smelters.



### PROCESS TECHNOLOGY UPGRADATION IN LEACHING PLANT AT CLZS

Our conversion process in leaching plants allows impurities to recycle back into the system and loss of zinc metal in Jarosite with 3% zinc content. Through use of internal resources involving no additional equipment, leaching plant in one hydro-metallurgical smelter was modified by eliminating weak acid leaching and incorporating a process called Jarosite acid wash. This results in improved quality of zinc sulphate purified solution with extremely low impurity level and reduction in total zinc lost through Jarosite cake.

Post this modification, current efficiency in cell house of smelter has improved to around 90% from 88% and total zinc loss in Jarosite is reduced to around 2.5% leading to saving of about ₹ 22 Crore per annum at current LME level. With further improvements in automation for finer control of process parameters, current efficiency of upto 92% can be achieved which will lead to additional savings.

This same process improvement is planned to be replicated at other smelters and total potential savings from this initiative will be more than ₹ 65 Crore per annum.



### KEY OPERATIONAL INITIATIVES

#### RETROFITTING OF PYRO METALLURGICAL SMELTER TO PRODUCE ONLY LEAD

Typically, Pyro metallurgical based ISF smelter are designed to produce both zinc and lead metal during processing. This leads to higher cost of production as well as production of lower grade of zinc product. With the objective of enabling pyro metallurgical smelter to have the flexibility of processing both zinc and lead concentrate together or only lead concentrate, the smelter was retrofitted. The plant will now be used primarily to produce lead metal considering higher lead ratio in ore and increasing capacity at hydrometallurgical zinc smelters.

#### DEBOTTLENECKING OF ZINC SMELTER

During the year, several initiatives were undertaken to improve operational efficiencies as well to support debottlenecking of smelters including:

- Increasing campaign life of roaster and acid plant to 350-days running time by changing acid plant catalyst and upgrading cooling system
- Improve power consumption of zinc smelters by upgrading magnesium removal circuit in leaching system to allow for treatment of high magnesium containing concentrate
- Increase current efficiency in all cell houses by putting three stage purification in all jumbo hydrometallurgical plants

### AWARDS AND RECOGNITION

- CLZS received '**Leaders Award in Mega Large Business – Metals Sector**' by 'Frost & Sullivan TERI – Sustainability 4.0' for its **Sustainable Business Practices**
- DSC received the 12<sup>th</sup> 'National Award for Excellence in Water Management' under '**Within the Fence**' Category
- DSC received CII-ITC Sustainability Awards 2018 for **Excellence in Environment Management** Award
- Frost and Sullivan Award 2018 for **Sustainability and safety excellence** to CLZS
- **Varksh Vardhan Award** by Forest Dept. for planting 60,000 Saplings at CLZS

**“Celebrating Failures”** Conference was organized at Chanderiya in May 2018 under the leadership of COO-Smelters. The objective of this first-ever-of-its-kind conference at Hindustan Zinc was to foster an organization culture where fear of failure shall never deteriorate the spirit of innovation and stand as hindrance in the path to success. The event saw participation by location heads, unit heads and function heads from different locations who shared their failure experiences and associated learnings over the previous year.

## exploration

**Our objective is to maintain metal production for over 25 years. To achieve this objective, the Company has an aggressive exploration program focusing on delineating and upgrading Reserve and Resource (R&R) in and around our existing deposits.**

The exploration team consists of 30 geologists, geophysicists and analysts responsible for designing and executing exploration programs complemented by outsourced service providers. Technology adoption and innovations play a key role in enhancing exploration success. In FY 2019, the Company implemented the latest technologies including:

- The DIAS-32 surface induced polarization geophysical technique which is based on common reference voltage and real time noise rejection for mapping of lithology, alteration and ore bodies in 3D space
- Borehole electromagnetic geophysical surveying (BHEM) which provides 3D information on conductors within a range of ~200m around a borehole axis. It is used to identify any off-hole conductors which may represent mineralization missed during drilling
- Motorized directional drilling (MDD) has been intensively used to enable more targets to be tested more efficiently at less cost. This technique involves drilling 'leg' holes at depth off a mother hole with technical innovation now enabling up to five legs from a single mother hole

Exploration success in FY 2019 added to Hindustan Zinc's R&R providing opportunities for extended mine life and production growth. All the Company's deposits remain 'open' and exploration identified a number of new targets on mining leases having potential to increase R&R over the next 12 months. Across all the sites, the Company increased its surface drilling to 181 km and completed 26 km of underground drilling during the year to assist in upgrading Resource to Reserve.

In line with previous years, the Mineral Resource is reported on an exclusive basis to the Ore Reserve and all statements have been independently audited by SRK (UK).

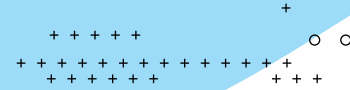
On an exclusive basis, the Company's Reserve at the end of FY 2019 totaled 92.6 million MT and Resource totaled 310.4 million MT. Total contained metal in Ore Reserve is 7.3 million MT of zinc, 2.1 million MT of lead and 279 million ounces of silver and the Mineral Resource contains 18.5 million MT of zinc, 6.8 million MT of lead and 685 million ounces of silver. At current mining rates, the R&R underpins metal production for more than 25 years.

### ORE RESERVE AND MINERAL RESOURCE (R&R) AS ON MARCH 31, 2019

Mine	Reserve				Resource (Measured & Indicated)				Resource (Inferred)				Total R&R Million MT	Total Metal Million MT
	Million MT	Zn %	Pb %	Ag g/t	Million MT	Zn %	Pb %	Ag g/t	Million MT	Zn %	Pb %	Ag g/t		
Rampura Agucha	35.3	13.6	1.8	63	19.5	14.8	2.0	58	35.6	9.7	2.6	72	90.3	13.1
Rajpura Dariba	10.2	5.1	1.8	51	21.8	7.2	2.1	74	25.8	6.6	1.9	90	57.9	4.9
Sindesar Khurd	32.5	4.1	3.2	171	23.6	4.4	2.2	108	57.5	3.6	1.9	89	113.6	7.1
Bamnia Kalan	0.0	0.0	0.0	0	5.2	4.5	1.5	67	22.8	3.5	1.5	46	27.9	1.5
Zawar	10.1	3.4	1.8	31	20.1	4.7	1.7	40	75.2	4.6	2.7	48	105.5	7.3
Kayad	4.5	5.4	0.9	18	1.2	19.6	3.0	62	2.1	3.5	8.1	24	7.7	0.8
<b>Total</b>	<b>92.6</b>	<b>7.8</b>	<b>2.3</b>	<b>94</b>	<b>91.4</b>	<b>7.5</b>	<b>2.0</b>	<b>72</b>	<b>219.0</b>	<b>5.3</b>	<b>2.3</b>	<b>67</b>	<b>403.0</b>	<b>34.6</b>

Mineral resources reported exclusive of ore reserves, reported at variable cut-off grade per mineral asset.





## business excellence

**With the vision of becoming global benchmarking organization, Business Excellence strategically integrates excellence into various aspects of the business through latest technology, benchmarking, innovation and asset optimization.**

Key projects carried out the year include:

### VALUE-ADDED PRODUCTS

Business Excellence with marketing team successfully developed customized alloys for various segments of customers. Further, the team has conducted technical workshops to sensitise usage of different value added products.

### RECOVERY

Initiated study completed to recover minor metals at various stages of value chain by using advanced technologies like PRO mixed Chloride, Albion Process and Torbed EBR (Extended Bed Reactor).

### INVENTORY

To optimise and liquidate the assets in the form of R&M spares, the team has successfully reduced the order-as-required inventory level by 9% and averted purchase orders worth ₹95 Cr by standardising and aggregating spares requirements. Initiatives such as Vendor Managed Inventory are under implementation and expected to structurally optimize overall working capital.

### RELIABILITY

Reliability Centered Maintenance (RCM) project initiated in 2017 to improve system reliability and avoid redundant maintenance, which led to several improvement opportunities resulting in breakdown reduction by up to 5% across zinc smelter roasters and mills.

### CAPACITY UTILISATION

A detailed study concluded that roaster throughput can be improved with oxygen enriched air. The Wind-box Oxygen Lancing (WOL) Technology is being implemented at roasters, which will further improve the throughput by 10%.

### INNOVATION

Conducted feasibility study of ore transportation through pumps, which will be one of its kind in mining industry.

### RELIABILITY CENTRED MAINTENANCE – CRAFTING THE MAINTENANCE

Asset reliability is one of the key factors that ensures business objectives are achieved. To bring the company performance to the next level in asset maintenance and reliability, RCM concept has been introduced. RCM is all about designing maintenance process to improve system reliability and avoid redundant maintenance. This initiative has significantly contributed during the year with improved productivity and resulted in 50% reduction in unplanned stoppages and 65% improvement in Mean Time Between Failures (MTBF) across roasters and beneficiation plants.

#### Drying Tower System Failure Reduction at Roasters

Drying tower dries wet SO<sub>2</sub> gas with concentrated sulphuric acid through counter flow between the two fluids. RCM analysis was conducted in this system as it was experiencing repeated failures. On carefully understanding its system interaction, it was concluded that the tank level and bearing capacity was forcing the system to behave non-linearly. Both the variables were identified and corrected to maintain system's reliability. These actions have tackled its failures and have resulted in a two-fold increase in the MTBF.

#### Calcine Drum Cooler - Cooling Water System at Roasters

Calcine cooling system was experiencing repeated failure of water leakages. Detailed RCM analysis was conducted, and it was proposed to install a closed loop cooling water circuit to maintain the water quality. As a result, failure was reduced to zero and expected drum cooler life by more than two times.



**ASSET OPTIMISATION (AO)**

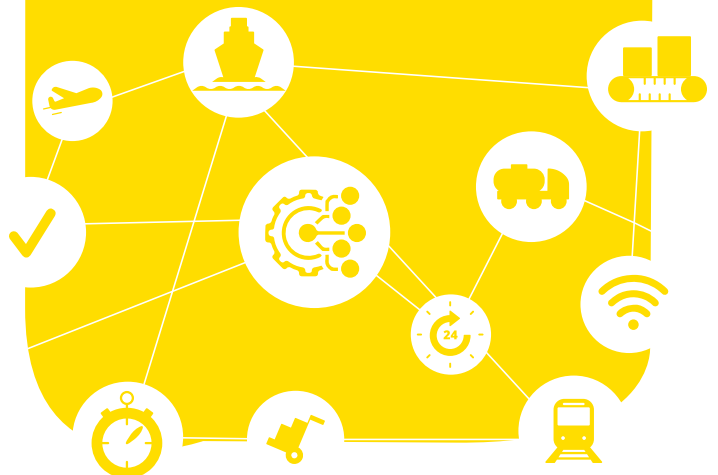
“Continual improvement towards operational excellence”- With Overall Equipment Effectiveness improvement as core objective, the AO initiative has played pivotal role in business performance improvement by involving people in focussed improvement projects and Kaizen initiatives. The year saw 35% rise in focussed improvement projects resulting in 87% rise in the annualised saving over last year. There is rise of 22% Kaizen numbers involving nearly 12,000 employees including business partners.



**Logistic Excellence through Integrated Transport Management**

Logistic is a key process involving movement of millions of tons of materials across various units of the Company and to the customers. This activity has high business risk in terms of pilferage, safety, and delayed delivery of goods.

To eliminate this risk through technology and innovation, Integrated Transport Management System (ITMS) has been introduced. The initiative is one of its kind across the country, which has enabled real time tracking of raw materials, semi-finished and finished goods without any human intervention. Salient features such as route deviation alert, fleet breakdown notifications, have helped reduce the turnaround time. Prior registration of drivers and vehicles have eliminated the risk of unauthorised entry in the premises, thereby improving safety and security. End-to-end processes from loading to unloading has been automated, this includes gate entry, weigh bridges, geo fencing and digitally signed invoicing.





## captive power

### Our Captive Power Plants (CPP) provide, reliable power to mines and smelters.

The Company has coal based thermal power plants with a total power generation capacity of 474 MW. These CPPs generated 3961 million units in FY 2019 as compared to 4,155 million units in FY 2018. The decline was due primarily to lower demand from smelters and mines. The overall specific coal consumption was 440 Gms per Kwh in FY 2019 as compared to 443 Gms per Kwh in FY 2018.

During the year, Chanderiya CPP achieved its best ever Auxiliary Power Consumption (APC) and Specific Water Consumption while Dariba CPP and Zawar CPP achieved their lowest Specific Coal Consumption (SCC) and Zawar CPP delivered the highest ever Plant Availability (98.02%). Additionally, all CPPs received 5S certification from QCFI during the year.

CPP	Capacity	PLF (%)	APC (%)	SCC (Gms/Kwh)
Chanderiya	234 MW	95	8.30	442
Dariba	160 MW	95	8.31	437
Zawar	80 MW	97	8.21	438

The Company has ZERO Harm policy and several sustainability initiatives were undertaken at CPPs during the year to achieve higher safety, reliability and efficiency of operations:

- Turbine enclosure modified at Chanderiya CPP to separate oil and hot circuits reducing fire hazard in turbine
- Commissioning of overhead fire line at Chanderiya CPP to increase the reliability of firefighting system
- Installation of rear camera in coal yard vehicle at Chanderiya CPP and automation of coal feeding system at Zawar CPP to eliminate man – machine interface
- Composite islanding and Load Management System at Chanderiya CPP upgraded for better reliability
- Structure painting at three CPPs for improved structure stability
- Return roller guarding implemented at Zawar CPP to improve safety of conveyor belts
- Roof sealing in boiler pent house at all three CPPs to reduce the annual overhauling time
- Sustained successful islanding at Dariba & Zawar CPP
- Installation of Variable Frequency Drive in primary air fan, forced draught fan at Chanderiya CPP and induced draught fan at Zawar CPP leading to total power saving of 3.6 million units per year
- Reverse osmosis plant revamped in Chanderiya CPP to treat blowdown water and treated water is used in cooling tower which led to water saving of 350 cum per day
- Replaced cooling tower shaft from stainless steel to fibre at Zawar leading to saving of 500 Kwh per day

### RENEWABLE POWER

The Company has made significant investment in green energy aggregating to 346.8 MW to reduce greenhouse gas emission and carbon footprint.

22 MW solar power plant was commissioned at Rampura Agucha tailings dam taking the total solar power capacity of the Company to 38.9 MW for captive consumption. In addition, the Company has captive capacity of 34.4 MW through waste heat recovery boilers. The 273.5 MW wind energy plants are located in five states and are under long-term power purchase agreement with distribution companies.

During the year, the Company produced solar power of 49.5 million units, waste heat energy of 114 million units and wind power of 449 million units leading to a reduction of 602,120 MT of CO<sub>2</sub> through green power.

### CARBON FOOTPRINT REDUCTION

The Company is planning to increase its green Energy portfolio through following projects leading to reduction in carbon footprint of 201,292 MT of CO<sub>2</sub>

- Installation of 30 MW solar power project at Dariba
- Installation of 1 MW floating Solar Power Project at Ghosunda Dam which will also help in reduction of evaporation loss of dam

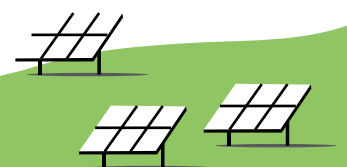




- Installation of 2.3 MW solar roof top projects
- Installation of 2 MW solar power project with storage at Kayad mine
- Commissioning of 8 MW Waste Heat Recovery Boiler (WHRB) at Fumer project
- Installation of 5 MW WHRB at Dariba
- Conversion of Chanderiya 9.4 MW WHRB from backpressure type to condensing type
- Switching from open-cast to underground mine at Rampura Agucha to reduce diesel consumption
- Switching from high speed diesel to pipe natural gas in Pantnagar Metal Plant
- Installation of variable frequency drives to reduce auxiliary power consumption

### AWARDS AND RECOGNITION

- Chanderiya CPP received **best power plant performance** award by Mission Energy 2018
- Chanderiya CPP received **first prize in Fly ash utilization** award – 2019 by Mission Energy Foundation under category “Efficient Management of Fly ash – CPP”
- Dariba CPP received “**Fame Excellence**” Gold award and IPPAI award for energy efficiency
- Dariba CPP received silver award by **SEEM National Energy Management Awards** under the category ‘Industries CPP’
- Rampura Agucha solar project received **Project Development Innovation of the year** award by RE – Assets India 2019 conference
- Debari Solar received gold award in the **Rising Category as Best Performing Project of the Year** on Utility Scale Solar Energy at the RE ASSETS Excellence Awards Summit
- Dariba Smelter Complex won the ‘**12<sup>th</sup> National Award for Excellence in Water Management**’ under “within the Fence” category at the 4<sup>th</sup> Water Innovation Summit 2018 by CII – Triveni Water Institute
- The Captive Power Plant at Zavar was certified and recognised by CII - Triveni Water Institute as a ‘**Water Efficient Unit**’, under ‘Within the Fence’ category





# human resources

*enriching our talent*

**Our vision is to be the most admired employer brand where every employee feels engaged and developed in a high-performance environment and is our best brand ambassador.**

Hindustan Zinc has a committed workforce of 4199 employees and over 16,000 associates through business partners. The Company continuously strives to hire the best talent and develop & retain them with focused HR interventions while ensuring their health, safety and well-being. These interventions encompass technical and functional space as well as behavioural, managerial and leadership aspects.

## DIVERSE WORKFORCE

The Company believes a diverse workforce with varied skill sets leads to high performance. Furthering that belief, the Company has taken conscious steps to increase diversity, which now stands at 12.5%. The entrepreneurial culture of Hindustan Zinc encourages its young generation to play an important role in Company's growth. In sync with India's demographic advantage, the Company has a young and vibrant workforce with an average age of 32.7 years.

## TALENT MANAGEMENT

The Company's long-term success depends on attracting the best talent and nurturing it. To engage millennials and ensure their holistic development, the Company has a robust 90-day induction program consisting of a mix of classroom sessions and live projects. This integrated learning technique helps in nurturing the bright minds and driving an organisation-wide culture of innovation.



There are regular sessions for young talent to present innovative ideas and drive the projects with complete ownership. Last year, 56 employees have been a part of such projects. The employees are engaged in a plethora of programs for efficiency improvement and skill upgradation. Through various initiatives such as Accelerated Competency Tracking & Up Gradation Program (ACT UP) and Internal Growth Workshops, over 288 employees have been identified and are being developed for fast track growth path.

At Hindustan Zinc, it is the foremost priority to develop and groom leaders internally who can successfully lead the growth of the Company. In FY 2019, 15 top level executives were identified as future leaders and are undergoing customised coaching programs to help them unlock their potential and maximize their performance as well as that of the organisation.

## EFFECTIVE PERFORMANCE MANAGEMENT

To drive meritocratic performance in the organisation, there is continuous process of performance enhancement by setting individual and team objectives that are aligned with the strategic intent of the organisation. The Company encourages regular conversations with employees rather than a single annual performance review. We are increasingly driving individual ownership of performance and link it with rewards.

## EMPLOYABILITY AND SKILLS TRAINING

Being one of the largest mining companies equipped with state-of-the-art technology and advanced operational framework, Hindustan Zinc is committed to uplifting the surrounding communities by imparting necessary training-cum-employment programs to local youth to increase their employability. Through its Mining Academy, the Company offers full time residential training to unemployed youth from local communities on various skills required for underground mining operations. After successful completion of the training, candidates are equipped to join the workforce of any organisation as operators of jumbo drill or underground mining equipment. During the year, three batches were trained in collaboration with Indian Institute of Skill Development and NGO partner.





At Hindustan Zinc, it is the foremost priority to develop and groom leaders internally who can successfully lead the growth of the Company.

For gainful employability of science graduates, the Company has launched 'Earn While U Learn – HZL NEEM Program' wherein the candidates are selected through a structured training process and are provided training for 3 years within the Company's various business operations. The aim is to enhance their employability and make them earn while learning. Over 150 graduates in two batches have been trained until now under this program.



### HEALTH AND WELL-BEING

Hindustan Zinc promotes healthy living practices and improve awareness by providing a range of healthcare facilities. The Company has well equipped health centres for regular health examination for all the employees, including contract workforce. There are provisions for thorough medical check-up and first aid and occupational health awareness trainings for all employees. In addition to periodic physical health check-ups, sessions on mental health wellness are conducted to help the employees reduce stress and effectively balance their professional and personal life. During the year, sessions on financial awareness and well-being were initiated.

### AWARDS AND RECOGNITIONS

**"Significant Achievement in HR Excellence"** in CII – HR Excellence Award 2018-19.

**"Good Cultural Foundation"** in Great Place To Work Survey in 2018-19



# sustainability

*growing responsibly to create long term value*



**Sustainability is an integral part of our business. We believe in long-term sustainable economic development and value creation for our stakeholders by protecting health and safety of our people and community, minimizing environmental impact throughout the lifecycle, respecting human rights and sharing benefits with the community.**

We are committed to minimise the impact of our business and its operation on environment and reducing our water, land and carbon foot print. We have enhanced our focus in the areas of building environment of trust and care among communities and employees, skill upgradation, active engagement and managing task based risk and continuous improvement. We aspire to be the industry benchmark in terms of improving our sustainability performance and are putting in efforts to achieve the same.



Hindustan Zinc is a signatory to the United Nations Global Compact (UNGC) and committed to its ten principles on human rights, labour standards, environmental protection and anti-corruption.

Our sustainability performance was ranked No. 5<sup>th</sup> in the Dow Jones Sustainability Index (Metal and Mining) globally, and No. 1 globally in the Environment category and also we were selected as Index Constituent of Emerging Index 2018 FTSE4Good. Other significant endorsements during the year include the CII- ITC Sustainability Award for Outstanding Accomplishment as well as awards for Sustainable Business of the Year Award and Sustainability Disclosure Leadership Award from the World CSR Day.

We publish an annual Sustainability Report in accordance with requirements of Global Reporting Initiative standard. This report covers in considerable detail our approach, our performance and our efforts towards sustainability practices. Our sustainability reports are available on our website.

[www https://www.hzindia.com/sustainability/overview/](https://www.hzindia.com/sustainability/overview/)

### SUSTAINABILITY APPROACH

*Our **Vision** is to excel in operations upholding world-class standards of governance to achieve zero harm, zero discharge while being socially responsible*

**Our Mission** is to become a global leader and create value by our business in socially responsible and ethical manner by:

Improving Health, Safety and Well-being at workplace

Eliminating any potential damage of our activities on the environment and by conducting reducing environmental footprint with adoption of sustainable practices and preservation of natural resources

Enhancing livelihood and benefitting the communities where we operate

Communicating our sustainability efforts and performance to our stakeholders with transparency, authenticity and integrity

Our approach to sustainability is embodied in the Vedanta Sustainability Framework, where we strive to achieve our Sustainability vision and mission across our operations.

## STAKEHOLDER ENGAGEMENT

**Proactive, transparent and constructive approach to stakeholder engagement and development is critical to maintaining our social licence to operate.**

Structured stakeholder identification and engagement process is in place at corporate and operational sites to ensure delivery of transparent, timely and fact-based communications to stakeholders. Regular feedback and grievance redressal are important aspects of the stakeholder engagement process. The Grievance Committee reviews the grievances on a periodic basis.



## safety and health

**We are committed to achieve Zero Harm across the business. The health and safety policy, related guidelines and standards are implemented to maintain safety and wellbeing of our people at workplace, respond responsibly to incidents and undertake appropriate provision to mitigate risks.**

The leadership team's primary focus is on eliminating fatalities and serious workplace incidents. Launched in 2013 in partnership with a global leader, the Company's safety excellence journey 'Aarohan' aims to strengthen safety management, understand the top risks and effectively managing these risks through robust controls and systems by fostering workforce involvement at every level. The organisation has developed a belief that each and every incident is preventable and thus the focus is on identifying, understanding and controlling the risks associated with hazards at workplace. The Company's safety council comprising of all unit heads and central leadership converges one unit every month and interacts in multiple teams across the location and thereafter shares these observations for risk mitigation and implementation across the Company.

With our transition to fully underground mining operations, the safety risks in our operations have significantly increased

culminating in increased LTIFR and fatalities, a situation that is completely unacceptable. In order to bring renewed focus on our changing operating environment, the Company has redesigned the Aarohan Journey focusing on the top 5 risks across our operations. To reinforce leadership commitment, each Exco member now spends a full day in a month at one site mentoring the local safety council and spotting areas of vulnerability.

The Company's Health, Safety and Environment policy demonstrate its commitment to protect employee and others affected by operations while a set of standards, guidelines, operating procedures and systems detail the accountability, mandatory controls and requirements for managing the business in a safer way.

## KEY ELEMENTS OF SAFETY PROGRAM

HSE Policy and Principles

Corporate Safety Council- chaired by CEO

Monthly Exco member site visits

Critical control management through 6 sub-committees

Work place Safety Standards, Safe Operating Procedure, Work permit System, Safety Instructions

### Introduction of FSIPP (Fatality & Serious incident Prevention Program) Subcommittee

As part of our Aarohan journey, we have five subcommittees i.e. Safety Interaction, Contractor Safety Management, Process Safety Management, Incident Management and Standard Rules & Procedure. With an aim to enhance focus on high risk activities and monitoring the effectiveness of control measures, we introduced 6<sup>th</sup> subcommittee i.e. FSIPP sub-committee.

The key objectives of the FSIPP subcommittee is to ensure that

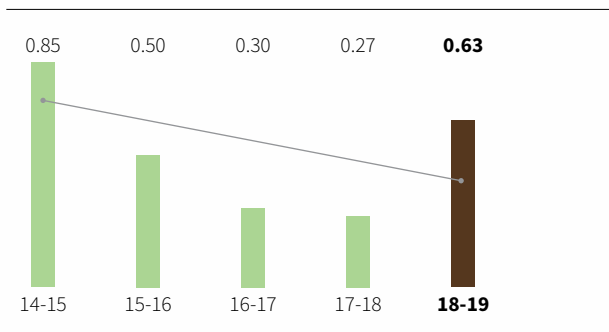
- All the identified high risk activities are analysed for risks and control measures defined, implemented and monitored
- Drive organization fatality and serious injury prevention program in a structured way
- Periodic monitoring, audit and horizontal deployment of critical controls across all locations

**SAFETY PERFORMANCE**

The Company believes in fostering the culture of transparent reporting and encourages employees to report every incident in order to eliminate all potential hazards and risks in our operations and prevents reoccurrence. During the year, the Company reported increase in the number of incidents although there is reduction by 26% over the previous five years. This year, there was an increase in lost time injury frequency rate from 0.27 to 0.63 partly on account of higher local contract workforce and increase in underground mining operations. This puts a high onus on the Company to enhance skill development and safety training to local workforce and several initiatives are being taken in this area.

There were regrettably seven fatalities during the year including four in mining and three in smelting operations. The root cause for these incidents have been thoroughly investigated and barriers have been put in place to prevent their recurrence. Safety trainings of 0.81 million man-hours were conducted to strengthen adherence to safety standards and procedures. In particular, on-boarding and skill enhancement of contractor workforce has become a critical business imperative.

**LTIFR\* Trend**



\*one million man-hours and incident reporting as per ICMM guidelines

**SAFETY BENCHMARKING WITH GLOBAL PEERS**

	HZL*	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5
LTIFR 2018	0.63	0.47	1.06	1.35	No latest report	1.63
LTIFR 2017	0.27	0.34	1.02	1.25	0.55	1.68

\*FY 2019 data. Company date for peers

**KEY SAFETY INITIATIVES DURING THE YEAR**

- Leadership driven safety townhall, IBU level safety council, zone HSE coach programme, mining and smelting safety workshops, second party safety audit and leadership tour of shop floor to showcase felt leadership
- Introduced FSIPP subcommittee to focus on high risk areas
- Safety Innovation cell constituted for implementing global best practices, innovative engineering solutions and automation to eliminate risks and manual interventions. Subject matter experts were handpicked from operations for formation of this cell
- Theme based initiatives to increase focus were taken across areas such as awareness on line of fire concept, electrical safety, UG fire and man-machine interaction etc.
- Safety maturity assessment of 'Aarohan' safety excellence journey was conducted by DuPont to identify issues and improvement opportunities for taking organisation to next level i.e. Inter-dependent safety culture
- In addition to the Company's existing audit frame work, second party safety audit (SPSA) process was implemented. SPSA is inter location audit process of site safety management system, safety standards and work streams across organization. Seasoned auditors were also deployed for cross audit. All operating locations have undergone SPSA during the year and corrective and preventive actions were tracked for effective closure
- 11 mandatory online safety tests conducted to bring awareness on various safety standards
- Videos on machine guarding and excavation standards were released under training application. Safety videos will be made for all standards in the coming years
- Introduced Observance Day to sensitize all employees on past incidents, implementation of its learnings and to avoid recurrence of same incident in future





### ENHANCING COMPETENCY OF MINING MATES

As we transition to high level of mechanisation at Zawar mines, it is imperative for us to enhance competency of frontline supervisors to deliver growth in a safe manner. Therefore, we have implemented a comprehensive Mining Mate Training program – a custom built, contextualised 3-stage program which includes assessment, training and audit of mining mates at Zawar Mines in partnership with a leading mining training specialist from Australia. The course covers a range of key elements related to statutory requirements and safety in mining operations.

A skill gap assessment of 300 mining mates was conducted to understand the current knowledge of skills, roles & responsibilities and a custom built training program was developed with strong emphasis on “why they do, what they do at the workplace”. In Stage 1, data from the assessment was analysed for insights on each mining mate, ranking them based on their performance during assessment. In Stage 2, a 15-day training program was conducted for 21 selected mining mates to develop them as master mining mates. In Stage 3, these master trainers are imparting training to all mining mates at Zawar mines.

The training modules are designed with a blend of classroom and practical activities on the surface and underground to improve operational & risk management skills and empower mining mates to make informed decisions regarding safety and production parameters.

### WAY FORWARD

- Leadership coaching and safety leadership development
- Focus on zero fatality and serious injury
- Enhance competency of safety professionals
- Structured skill improvement of contractor workforce
- Upgradation of vocational training centre for skill and competency development
- Strengthening process safety management
- Drive for structural stability of plants, buildings, tailing dams, dumps, other storage facilities etc.
- Development of design safety standards

### environment

**Being a natural resource company, we feel it is our responsibility to optimise resource usage in our operations, maximise resource recoveries and minimise environmental footprint.**

Hindustan Zinc understands the fundamental importance of managing its impact on the environment and seeks to minimise and mitigate its impact on water, land, air quality, climate and biodiversity. Being a responsible miner, the Company works with its stakeholders to reduce environmental footprint by deploying resource management systems and controls.

The Company’s sustainable development framework comprises comprehensive policies, standards and guidance notes to manage environmental impacts. For ensuring the effectiveness of the Environment Management Systems and compliance with environmental norms and standards, all operating units are certified for ISO 14001. Specifically, Sindesar Khurd, Rajpura Dariba Mines and Pantnagar metal plant are certified for ISO: 50001 Energy Management System.

Hindustan Zinc has set yearly goals for efficient use of water, energy, reduction in greenhouse gas (GHG) emissions and strives to meet these goals by creating necessary technological interventions and infrastructure. Its focus areas during the year included reducing fresh water consumption, energy efficiency and biodiversity conservation, maintaining air quality and recycling and reducing waste. Inter unit audits were conducted across the units to assess the current environment management status, gap analysis and compliance to environment legal requirements.

The Company reports and records environmental incidents and hazards in an online Incident Management portal. Incident investigations are undertaken to identify and implement appropriate preventative and remediation measures. During the year, there were no category 4 (serious) and category 5 (catastrophic) incident reported.

Environment and social impact assessments are conducted before initiating new projects to manage and mitigate the environmental and social risks associated with project. During the reporting period, there were no significant non-compliances or fines related to environmental laws and regulations across our operations.

**zero** high potential environmental incidents  
(category 4 & 5 incidents)

**₹ 69 cr** environment expenditure ex capex

**100%** assurance of all sites through VSAP

**WATER MANAGEMENT**

Water is a key natural resource and of utmost importance as the Company’s operations are based in the water stressed state of Rajasthan. Over the years, the Company has taken several measures to recycle and reuse water and augment rainwater harvesting within and beyond the fence. We report to the CDP Water Disclosure Program.

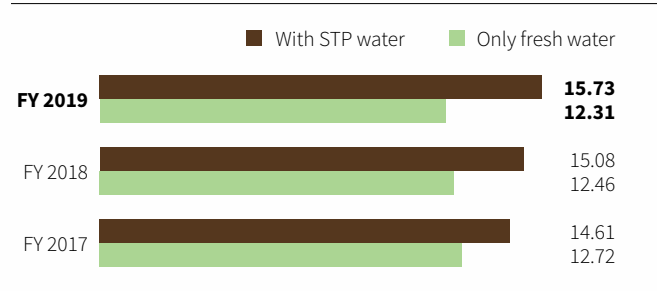
Multiple water management projects have been undertaken including:

- 25 MLD sewage treatment plant (STP) at Udaipur for treating municipal sewage was commissioned during the year taking our STP capacity to 45 MLD and another 15 MLD STP is in progress. This will reduce the fresh water intake to negligible at Rajpura Dariba complex
- Water risk assessment across all operating sites
- 35.95% of total water requirement met by recycling and reuse
- Technological upgradation by installation of MEE/ MVR at Debari and Chanderia Smelters in place of conventional evaporators will strengthen Zero discharge with improved water recovery



**SPECIFIC WATER CONSUMPTION**

(m<sup>3</sup>/MT)



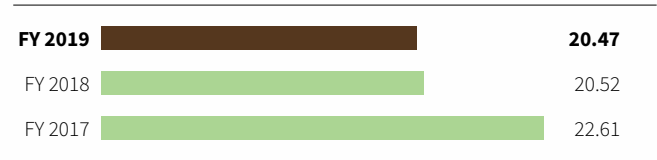
Increase in specific water has been observed due to variance in metal production and increase in use of STP treated water but fresh water intake has reduced.

**ENERGY MANAGEMENT**

Hindustan Zinc is committed to efficient usage of energy and diversifying its energy portfolio to the extent possible. Its top priorities are energy efficiency, reduction in energy usage and lowering of GHG emissions. The Company invests in latest technologies and processes to enhance energy efficiency. Its energy management approach aligns with Energy and Climate Change management policy to achieve a balanced Energy-Carbon cycle and monitors progress to achieve its Science based targets.

**SPECIFIC ENERGY CONSUMPTION**

(GJ/MT)



**CLIMATE CHANGE**

Hindustan Zinc participates in CDP Carbon Disclosure Programme, whereby it calculates and reports inventory of greenhouse gas emissions i.e. Scope 1 (process emissions and other direct emissions), Scope 2 (purchased electricity) and Scope-3 (Downstream and upstream movement) as defined under the World Business Council for Sustainable Development and World Resource Institute GHG protocols. The Company is also committed to Science Based Target initiative (a global team comprised of UNGC, CDP, WWF and WRI) to set GHG emissions reduction targets in accordance with climate science, i.e. in line with the level of decarbonisation required to keep global temperature increase below 2°C compared to preindustrial temperatures.

Hindustan Zinc Limited is committed to reduce absolute Scope 1 and 2 GHG emissions by 14% and absolute Scope 3 GHG emissions by 20% by 2026 from a 2016 base-year.

### GREEN ENERGY

The Company has 273.5 MW wind farms in five states across India which are registered under Clean Development Mechanism (CDM) program by United Nations Framework Convention on Climate Change (UNFCCC) and Verified Carbon Standard program - VERRA. The Company is also registering these projects at 'Gold Standard', the most rigorous certification standard globally for carbon offset projects supported by WWF.

For its captive use, the Company commissioned a 22 MW solar power project on its waste dumps at Rampura Agucha taking the total to 38.9 MW. All solar power projects have been installed on land that otherwise had no possible usage at Rajpura Dariba mine, Debari Zinc smelter and Rampura Agucha mine. The green power generated from it have reduced carbon footprint by 66,049 MT of CO<sub>2</sub> emission per annum. The Company is planning to further enhance its solar energy footprint by another 35 MW in the coming year. This includes a 1MW floating solar power project at a captive dam near Chanderiya which will not only eliminate 5 acres of land usage, but also reduce water evaporation in a water stressed region.

In addition, there is 34.4 MW of power capacity through waste heat recovery from roasters and steam turbo generator, out of which 9.4 MW is registered under CDM along with 21 TPH Low Calorific Value boilers for steam generation project.



### GHG EMISSION (SCOPE-1 & SCOPE-2) INTENSITY (tCO<sub>2</sub>/MT)

<b>FY 2019</b>	<b>5.44</b>
FY 2018	5.19
FY 2017	5.39

### MAINTAINING AIR QUALITY

Hindustan Zinc is committed to measuring, controlling and reducing air emissions at each of our sites and is implementing systems and procedures to address the concerns of local communities as well as to comply with the environmental license conditions. Through advanced mitigation, measurement and management strategies, it continues to identify, reduce and wherever possible, eliminate any potential impacts to air quality caused by improving operational processes and increasing awareness. The Company has installed online emission monitoring systems connected directly to the servers of Pollution Control Board.

### WASTE MANAGEMENT

Hindustan Zinc follows the principle of reducing waste generation at source and recovering and recycling where possible and has rigorous waste management systems to dispose waste while preventing environmental contamination. The Waste to Wealth committee explores opportunities to generate wealth from waste and achieve primary objectives of reduction of waste generation, conversion of residue material to saleable product and reduction of waste to landfills.

The Company has laid down comprehensive guidelines on waste management for all its units, which cover hazardous as well as non-hazardous waste and all units are monitored regularly. Major waste generated from operations are tailings, jarosite, fly ash, slag and rock. Any unused waste is stored at earmarked places or disposed timely.

The Company is increasingly focusing on best practices for void management in its underground mines where it is doubling paste fill plant capacity by first quarter of current financial year from 5.5 mtpa in December 2017 and continues to add capacity. Good void management practices maximise the use of waste generated in underground along with tailings from the mill and fly ash from CPPs.





### CONSERVING NATURAL RESOURCE BY USING SMELTER WASTE FOR HIGHWAY CONSTRUCTION

Zinc Smelter Debari recovers zinc from process residue waste and produces a non-hazardous solid waste called Waelz Kiln (WK) Slag generated at high temperature of over 1000°C, which is stored in slag yards. To gainfully utilise this slag, studies were done to establish its usage as sub-grade filling material for various construction activities, which has now been accredited by Indian Road Congress.

To use this slag on a large scale, Hindustan Zinc started exploring the possibility of its usage in construction of national highways. Through continuous engagement with National Highway Authority of India (NHAI) and establishing lab scale testing, a breakthrough was achieved when NHAI agreed to use WK slag for sub-grade filling purpose after testing the strength and stability of road constructed with this slag. Approx. 57,000 MT of WK slag has been utilized in the construction of six-lane NH 27 so far and is continuing.

This project has not only created avenue to use waste gainfully and avoid need for storage but also eliminated the need to use alternate natural resource by cutting of hillock or excavating soil as filling material by NHAI. In this manner, Hindustan Zinc has made its contribution in preserving fresh natural resources & topography of the region.

The Company is also focusing on setting up paver block units which can use slag, fly ash, bottom ash and jarosite; the Company uses large amounts of paver blocks in its operations. The Company is also gainfully utilizing some of these waste materials to cement and road construction industries. During the year 3,14,776 MT of waste from smelters utilized in road construction and 77,608 MT utilized in cement industry.

The Company is also helping expand its ancillary facility for recovering value from waste in Dariba Smelting Complex to manufacture copper sulphate, which is required for ore beneficiation at mines. A second ancillary unit is under construction at Chanderiya Lead Zinc Smelter premise which will also convert to consumable or saleable products.

In response to recent high-profile tailings dam failures in the world, the Company initiated review of tailings storage facility standards, guidelines and risks and subsequently tailing management policy was rolled out during the year. Dam break stability studies are under progress in coordination with global experts. Tailing Storage facility (TSF) community has been formed for driving actions to prevent similar incidents and ensure best practices are implemented at all mining locations. Following actions were initiated by TSF community

- Structured TSF (Tailing storage facility) organogram at each mine site and periodic review
- Replacing the wet tailing disposal system with dry Tailing disposal system. Dry tailing disposal would reduce the water content in tailings which will help in improving the stability of dam
- Creation of secretariat at each location for ensuring availability of Tailing dam related documents at single desk
- Dam break assessment
- Initiated online monitoring of health of tailing dam embankment through vibrating wire type piezometers and in-place inclinometer

### GENERATING VALUE-ADD PRODUCTS FROM WASTE

Pyro smelter produces about 800 MT of antimony slag consisting of 60% lead and 20% antimony. With the aim of producing a saleable product, Central R&D Laboratory of Hindustan Zinc has developed a hydrometallurgical route for treatment of antimony slag and successfully validated at pilot scale. The antimony in slag is recovered as antimony tri-oxide with more than 95% purity, which is commercially accepted with high demand as flame retardant. The leftover residue is rich in lead which can be consumed internally.

## CONSERVING AND ENHANCING BIODIVERSITY

Hindustan Zinc recognises that its impact on biodiversity can arise from a number of sources including operational activities, land use and management of waste streams. Biodiversity Management Plan is in place at all units that collectively supports the management of biodiversity.

The biodiversity management programme is developed to avoid, minimise or compensate the loss of biodiversity as a result of new projects or major expansions. During assessments of new projects, detailed environmental impact assessments are undertaken, including biodiversity aspects to identify and understand the critical biodiversity areas and develop action plan to mitigate the risk associated with new project activities on the region's biodiversity.

During the year, Natural Capital Externalities Evaluation for impact on natural capital was conducted through CII at Dariba Smelting Complex, Chanderiya Lead-Zinc Smelter and all five mines. The objective of the assessment was to develop a baseline for natural capital impacts from operations and to track performance annually.

## WAY FORWARD

- Work towards water stewardship in line with the United Nations Sustainable Development Goal SDG-6: water and sanitation to reduce fresh water use
- Evaluate opportunities to improve energy efficiencies or implement lower emissions sources
- Actions to achieve Science-based GHG emissions targets
- Reduce carbon footprint through enhancing green energy portfolio.
- Strengthening of zero liquid discharge at all locations
- Exploring opportunity for reducing, reusing and recycling of waste

### BUTTERFLY CUM ROSE GARDEN AT CLZS

A Butterfly cum Rose Garden has been developed at CPP unit in Chanderiya as implementation of Biodiversity Management Plan.



### PLANTATION DRIVE TO ENHANCE BIODIVERSITY

Around 60,000 saplings were planted at Chanderiya for development of green area leading to a prestigious award 'Van Wordhak Prohatsan' from District Forest Department Chittorgarh. 20,000 fruit bearing and ornamental plants were distributed under 'Udaipur Green City' program conducted in coordination with Forest Department, Udaipur. During the year, 155,000 saplings were planted to increase flora density in the areas around our operations.



## occupational health management

### ESTABLISHING HEALTH AND WELL-BEING AT WORK PLACE

Hindustan Zinc believes that all occupational diseases can be prevented. The Company aims to eliminate occupational illness by providing a workplace free from occupational health and hygiene risk and by proactively contributing towards healthier lifestyles of our people to increase productivity, reduce absenteeism and enhance retention.

**zero** occupational health cases

**100%** periodic medical examinations of all relevant employees

### OCCUPATIONAL HEALTH CENTRES

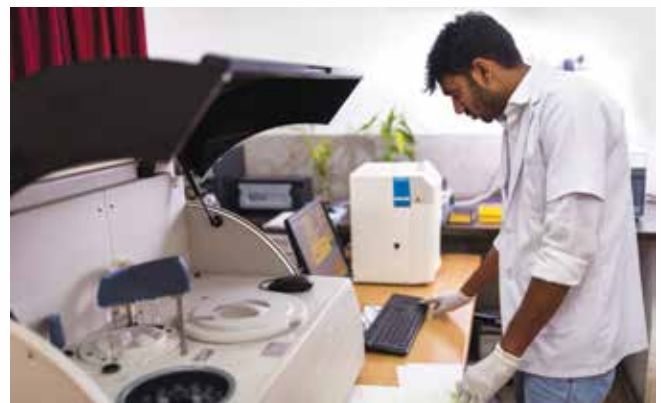
The Company has established occupational health centres at all mines and smelters with medical professionals for regular health examination of employees and contract workforce. The operations of these health centres are managed using software to coordinate all aspects of patient care, from pre-registration and admission to patient care and discharge.

### HEALTH SERVICES

Health services include pre-employment medical check-up followed by periodic medical check-ups with on-site medical professionals to monitor the occupational exposure limits. Depending on the nature of exposure and surrounding risk, there are different levels of processes, controls and monitoring mechanisms.

### HEALTHY WORKPLACE

In pursuit of a healthy work environment, the Company emphasizes on controlling source of pollution and monitoring exposure to hazardous substances through technologically advanced processes that reduce possible exposure levels. Additionally, various life style management trainings are conducted.



During the year, over 24,158 employees and contract employees underwent periodic and initial medical examinations. No occupational illness related cases were reported.

# corporate social responsibility

*empowering and enriching lives*

*“As a responsible mining company, we have long-term commitment towards all stakeholders. We want our communities to be an integral part of our growth story wherein all members participate and no one is left behind.”*

*- Mr. Sunil Duggal*



The Company's CSR efforts are directed towards 189 villages near its operations including 184 in Rajasthan and five in Uttarakhand. The projects are in areas of national importance and are carried out in close partnerships with the Government, local communities and credible NGOs. The emphasis is on effective response to grassroots development needs and high impact results.

During the year, CSR spend was ₹ 130.20 Crores impacting the lives of over 5,00,000 beneficiaries.

The broad vision of our CSR policy, 'to enhance the quality of life and economic well-being of the communities around our operations', is drawn from the Company's core management belief that "our license to operate comes not only from the Government but also from the communities surrounding our operations and particularly the people of Rajasthan."

MEAL (monitoring, evaluation, accountability and learning) systems are an integral part of project design to ensure high transparency in all CSR projects. The Company has developed highly effective monitoring tools, documentation and process manuals in some of its flagship projects for its own project efficacy and also to contribute towards the CSR knowledge repository in India.

### GOVERNANCE

At Hindustan Zinc, transparency and accountability are the cornerstones of governance that are achieved through strong systems/processes and multi-tiered reviews. The overall responsibility of shaping CSR engagements rests with the Board CSR sub-committee while the Executive Committee and the Implementation Monitoring Committee (IMC) play a leading role in ensuring the translation of that vision into action. The dedicated CSR professionals in the Company are responsible for project design, quality execution, monitoring and reporting.

All flagship CSR projects follow a listing of activities, expected outputs, outcomes and impacts along with allotted budget. In many cases, there are Project Advisory Committees consisting of respected external experts on relevant thematic areas who provide guidance and thought leadership to ensure high quality design and effective implementation of the projects. The large flagship projects also have Project Steering Committees (PSC) that usually meet monthly. The PSC is responsible for taking stock of the progress as per plan, efficacy of the interventions and keeping alive innovation and learning.

Due diligence, accountability and transparency around the implementation of all CSR projects are constantly ensured through audits conducted at three levels. In addition, the Company commissions a comprehensive baseline and impact study by a third party, at all its locations, once every three years.

### PROGRAMS

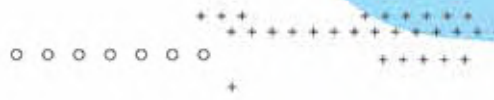
The Board of Directors revised the CSR policy in April 2018 to reflect the changes in program mix. The Company's CSR policy lays down thematic focus areas of work as education, sustainable livelihoods, women's empowerment, health & water, sports & culture, environment and community development. The specific project priorities emerge through baseline studies conducted once every three years and constant community engagement and consultations. Projects are designed to effectively address the felt developmental needs in identified villages.

#### ALL IMPACT AND RECOMMENDATION DATA ARE EXCERPTS FROM THE BASELINE & IMPACT ASSESSMENT STUDY CARRIED OUT DURING 2018-19

About 64% of the sample households (HHs) in the operational areas benefitted from at least one CSR program

About 88% impacted HHs are from lower or middle income group and about 85% belong to SC/ST/OBC





## education

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 51.41 Crore	39%	75,000	1, 2, 3, 4, 5, 10 & 17

(SDG = Sustainable Development Goal)

*Our Goal: To enhance the quality of education accessible to children and youth (in the 0 to 18 years age group); giving wings to dreams of a future that each child wants to create for herself or himself*

### PROGRAMS

**1. KHUSHI** – The project is in its fourth year and directly reaches 60,000 children in 3,089 Anganwadi Centres (AWCs) of the Government. The AWCs are important grassroots village level institution that cater to the health, nutrition and pre-school needs of children in the formative 0-6 year age group. The key highlights and achievements for the year were:

- 60% of the enrolled children regularly attended AWCs
- Preschool education (learning) assessments were carried out at 1522 AWCs covering about 21,000 children in five districts. This tool rates the performance of children in five development domains i.e. language, cognitive, social, physical and creative. The assessment is done twice a year and an average increase of 11% was observed across all domains for the common children in the two tests
- All 3089 AWCs were evaluated using a unique Grading Tool and the results showed significant improvement from last year with 89% of AWCs rated A or B as compared to 56% a year ago
- About 1600 severe and acutely malnourished children were identified, of which 37% were successfully brought to normal category through various project interventions
- To improve nutrition, kitchen gardens were set up at AWCs and recipe trials for mothers using Take Home Ration were conducted
- More than 34,000 community meetings were held. Community contributions received at more than 44% AWCs amounted to ₹ 82 Lacs
- Two AWC workers, Ms. Rukmani Bhoi & Ms. Vimla Kunwar, were selected by the Ministry for Women & Child Development for the 'National Awards for Exceptional Achievements'



**2. NANDGHAR** – This project also focuses on the AWCs and re-imagines them into state of art centres which find a place of pride in communities. The Nandghars provide a child safe and friendly learning environment with amenities like safe drinking water, uninterrupted supply of solar power, digital learning facilities, etc.



Many Nandghars are also used (post AWC hours) for providing entrepreneurial skill training for women through another flagship project 'Sakhi'. During the year, 264 Nandghars were constructed taking the total to 314.

**3. SHIKSHA SAMBAL** – The project aims at quality teaching of Science, Maths and English (SEM) subjects and is now reaching out to more than 7800 students in 60 Government schools. The project places additional teachers into schools and builds a strong conceptual foundation among students using innovative learning techniques and activities such as group learning, worksheets, learning camps, science fairs, etc. The class 10 results were a huge reaffirmation of this investment with significant improvements in results of SEM subjects. The table below shows the change in % of schools which had pass rate of over 70% in these subjects in 2016 (base year) and 2018 (current year).

Subject	2016 – % Schools With >70% Pass Rate	2018 – % Schools With >70% Pass Rate
Science	76	99
English	86	100
Maths	62	72

During the year, a new program using a personalized and adaptive cloud-based learning solution called 'Mindspark' was initiated in 19 Government schools to strengthen language and mathematics learning for classes 1 to 8, directly benefitting more than 3200 students.

**4. UNCHI UDAAN** – This project builds on the foundation of Shiksha Sambal and creates an opportunity for high performing students from the project schools to enter engineering institutions of national repute. The project provides residential and non-residential schooling and coaching support to select group of students. The first batch of 24 residential and 6 non-residential students are taking the Joint Entrance Examinations for engineering colleges this year.



**5. JEEVAN TARANG** – This program focuses on more than 800 children with special needs who have hearing/visual impairment or have special intellectual need. The objective is to make the children self-reliant through improved education opportunities including technology-based learning. The project also aims to spread overall awareness and sensitisation about the disabled among the general public and employers to build an equal and inclusive society.

Some of the key highlights and achievements from this year were:

- In a first for the mining sector in India, job mapping and inclusion assessment for persons with disabilities was conducted in partnership with a nationally reputed and specialist organisation
- Workshops on menstrual hygiene and sexual violence were organised for hearing impaired girls
- Introduced Indian Sign Language to family members and teachers of hearing-impaired children to facilitate better two-way communication
- Mainstream cinema hall screenings of Bollywood movie "Hichki" in Audio Described Format for visually impaired audience were organized in Udaipur, Bhilwara and Ajmer



## 6. SCHOLARSHIP SUPPORT FOR HIGHER EDUCATION

Hindustan Zinc provides merit-cum-means scholarships called 'Yashad Sumedha' for youth pursuing engineering education. During the year, 111 students received this scholarship. In addition, 8 top ranking students of various streams from College of Technology and Agriculture Engineering, Udaipur were awarded scholarships. The Company also provides full scholarship for girls from villages around its operations to pursue higher education at the Vedanta Post-Graduate Girl's College, Ringus. The Company supported 51 girls during the year taking the total to 98 girls.



## OTHER ENGAGEMENTS IN THE EDUCATION DOMAIN

The Company has five schools that are directly providing education to 1737 children from communities. Also, need based furniture and infrastructure support is provided to Government schools in our vicinity.





### IMPACT

**Jeevan Tarang** – impressive change observed in deaf schools; children are becoming confident

**Shiksha Sambal** – improvement in grades (78% HHS); interest in going to schools (81% HHS); improved quality of education (78% HHS)

**Khushi** – Increase in enrolment; Focus on cognitive development; Nutritious food; about 65% reported medium to high impact; 99% desired continuation of program

**Unchi Udaan** – By providing free education, the students especially girls are continuing their higher education.



### RECOMMENDATIONS

Vocational training programs for the illiterate to help them gain secure livelihoods





## sustainable livelihoods

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 16.32 Crore	13%	13,000 families	1, 2, 8, 10, 11 & 12

*Our Goal: To enable families to enhance financial security and stability; striving to create thriving communities*

### PROGRAMS

**1. SAMADHAN** – This is the Company's flagship program for on-farm sustainable livelihood reaching out to 8174 farmers through agriculture interventions and 4295 families through livestock interventions during the year. The foundational element of the project is the formation of Farmer Interest Groups in villages based on their unique circumstances such as types of land holding and farm activity to help them to collectively overcome challenges related to market access and product pricing. Some of the key efforts carried out during the year focused on improving soil health, quality of agriculture seeds & horticulture plants, improving breeds of animals like goats, buffaloes & cows and also improving farming practices & technology. The key highlights and achievements for the year were:

#### Agriculture

- Maize production increased by 23.1% in three clusters while Soyabean production increased by around 7% as compared to non-intervention area
- During Rabi 2018, around 57% farmers (out of 3,451) adapted line sowing technique from the Package of Practices provided in the project
- Vegetable support was provided to 372 new farmers leading to additional cash flow ranging from ₹ 5000 to ₹ 25000 per farmer based on a sample of 198 farmers
- Established 288 fruit orchards covering an area of 142 acres. In addition, 25 Ultra High Density Plantation orchards of mango and guava were established
- 3835 new farmers were added during the year through various interventions
- Farmers' Day was conducted successfully in five clusters which saw an active participation of around 3129 farmers



#### Livestock

- Sorted semen, a cutting-edge technology that is proven to have 90% female calf birth rate was introduced this year
- 271 animal camps were conducted during the year covering more than 1,00,481 animals and benefitting over 2,610 families
- 6,747 artificial inseminations were carried out through nine different Integrated Livestock Development Centres running in the project
- Cumulatively 3,429 calves were born in the project over the last 2.5 years of which 1624 are female calf resulting in an asset creation of ₹ 78.42 Lacs for the farmers. The newly introduced sorted semen project is likely to substantially improve female calf ratio



Some of the key efforts carried out during the year focused on improving soil health, quality of agriculture seeds & horticulture plants, improving breeds of animals like goats, buffaloes & cows and also improving farming practices & technology.



**2. SKILL DEVELOPMENT PROJECTS** – This program trains local youth for appropriate job-related skills based on their aptitude and education to improve their employability. During the year, six projects were initiated exclusively for youth living around our operating sites in partnership with leading organizations known for their commendable work in skill development.

Key highlights for the year were:

- **Mining Academy** – Started in 2016, the Academy continues to grow with three centres currently comprising of about 172 students who are provided opportunity of a lucrative career in underground mining. The students receive class-room instruction as well as practical training using simulators and on the job training in mines
- **Skilling and Entrepreneurship Centres** – Skill development centres at Dariba and Agucha were started which will train about 700 youth every year across six different trades including micro finance, home electrician, security guard, general duty assistant, sales associate and data entry. Currently, 159 youth including girls are undergoing training who will then be placed in surrounding districts
- **ITI training at Maruti Suzuki, Gurgaon** – A 2-year course offered by Maruti Suzuki to train youth for jobs in the automotive industry. Instead of starting its own ITI training program, the Company decided to encourage, prepare and support youth to be selected for this program. Presently, 152 youths have made it to this program
- **National Employability Enhancement Mission** – Under this project, qualified graduates are placed as apprentices in various business units of the Company for a period of three years for receiving on-the-job training. During this year, 134 youth were taken in as apprentices under this scheme
- **BPO Training** – the course was started during the year at two locations where training was imparted to 48 youth including 26 girls and 22 boys, of which 70% were placed in jobs with salaries ranging from ₹ 8000 to ₹ 25000 per month
- **Other Training Courses** - Training programs for employment as security guards and drivers as well as a 45-day training on micro entrepreneurship was introduced during the year benefitting 21 youth



#### IMPACT

Samadhan's reach is about **24%**

About 33% HHs reported **increase in yield** by improved seed varieties

About 74% HHs reported **medium to high benefits** from the program

#### RECOMMENDATIONS

Identify progressive farmers and facilitate links with banks for low-cost loans and online marketing portals

Camps to address bovine fertility & gynaecological issues, treatment of such animals and raise awareness about best practices in dairy business



## women's empowerment

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 5.40 Crore	4%	23,000 families	1, 5, 8, 10, 11 & 17

*Our Goal: To unlock the full potential of women in our neighborhoods through helping them experience economic self-reliance and find their collective voice for setting developmental priorities in their families and villages*

### PROGRAMS

**SAKHI** – The flagship project is geared towards mobilizing rural women into self-help groups (SHGs) and developing their capacities around leadership, skill development, savings and entrepreneurship. Under this project, there are 1922 SHGs with a membership of about 23,954 with total savings of ₹ 6.2 Crore and cumulative loans of ₹ 17.13 Crore including credit of ₹ 2.7 Crore leveraged from banks. 18,053 women availed loans from SHGs for various purposes like livelihood activities, education, debt redemption and house hold consumption. 492 women have started or expanded their micro-enterprises. Two other significant developments from the year were:

- An SHG normally consists of 10 members. Within a village there would be 10-15 SHGs, who come together to form a Village Organization (VO). 30-odd villages are then registered as an autonomous women's federation. This 3-tier structure of women's organisations is what provides a pathway to financial self-sufficiency. The project now has 126 functional VOs and five federations with a base of 23,000 women were formed during the year
- Two of the largest programs – Khushi and Sakhi were brought together under various initiatives. One example is the involvement of about 140 women in stitching uniforms for 60,000 Khushi Anganwadi children under the 'Khushi Baatiye' Campaign



### IMPACT

Sakhi program has maximum coverage of about 73%

30% of surveyed households had availed loans for their business/ enterprise

67% HHs reported income enhancement

Strong bearing on thought process and behaviour of community

### RECOMMENDATIONS

Initiatives for skill-based vocational trainings and facilitation of business development

Linking women to appropriate vocational training centres or skill development centre





## community asset creation

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 9.44 Crore	7%	NA	9 & 11

*Our Goal: To support creation of appropriate common property resources in villages thereby enhancing the quality of life in communities*

### PROGRAMS

Creation of an appropriate physical asset for communities is sometimes the most tangible expression of the Company's commitment towards their continuing development. Creation of any community asset is taken up through close consultation with concerned villagers. During the year, several such projects were undertaken ranging from construction of community halls, classrooms in schools, roads, bus stands, cremation centers, culverts, drains and open-air public spaces in villages as per need from the community. In addition, water projects like installation of pipelines, providing water connections, construction of water tanks, pond deepening, supplying drinking water through tankers, etc. were also undertaken.



## health, water and sanitation

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 11.65 Crore	9%	2,00,000	3, 6, 9, 10 & 11

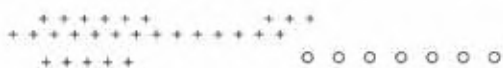
*Our Goal: To ensure improved and quality access to healthcare and drinking water; especially for the most vulnerable populations*

### PROGRAMS

#### HEALTH

**1. Mobile Health Vans:** During the year, the Company re-launched MHVs around four of its locations to provide accessible and affordable medical care to neighbouring communities. The project is set to positively touch lives of around 1.4 Lac people over the next 3 years with special focus on women and children. The key highlights and achievements for the year were:

- Total of 832 OPD sessions were held providing healthcare to about 42,000 patients of which 26,000 were women and children
- 1,491 rapid tests were conducted along with 293 antenatal check-ups
- 309 villagers were referred to base hospitals in the district
- 62 awareness sessions conducted on anemia and women health, nutrition, etc. covering 3,617 beneficiaries



The Company has always supported people in having adequate access to drinking water. During the year, the Company activated a long term water security strategy for its operating areas including water replenishment and access to clean drinking water.



**2. Angdaan Mahadaan Campaign:** This was a joint initiative of Hindustan Zinc and Dainik Bhaskar with Mohan Foundation Jaipur Citizen Forum as the technical partners. The campaign reached more than 12,000 people through awareness seminars in 15 towns of Rajasthan, workshops for doctors and nursing staff in hospitals, street plays, talk shows cum felicitation ceremony for donor families, road shows in rural markets and Udaipur marathon.

**3. Other Health Initiatives:**

- The six Company run hospitals treated over 1,07,500 external patients through the year
- Over 22,000 patients were treated at a Homeopathic camp supported by Hindustan Zinc at Gulabpura near Rampura Agucha



**RECOMMENDATIONS**

- Medical services are accessed by 18% HHs
- About 66% HHs travel more than 5 kms to access health care services
- Strengthening of health services through the Mobile Medical Vans
- Raise awareness on individual level sanitation in partnership with Government run programs
- Camps and low-cost services especially for respiratory disease to reduce the cost of health care

**WATER** - Water is among the single most important need of communities, especially in a state like Rajasthan. The Company has always supported people in having adequate access to drinking water. During the year, the Company activated a long term water security strategy for its operating areas including water replenishment and access to clean drinking water.

**1. Water Harvesting:**

- In partnership with the State Government, 34 water harvesting structures were built or repaired with a capacity to hold 4,675 cubic metres of rainwater
- Commissioned a water resource assessment using remote sensing and Geographic Information System as well as a rainwater harvesting plan for Dariba

**2. Drinking Water Provisioning:**

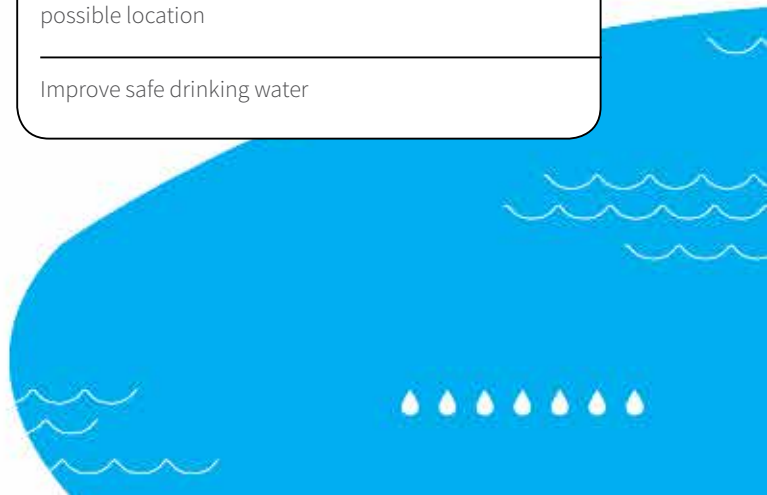
- Initiated community RO water plants in partnership with local Gram Panchayats based on a viable business model where in the Company provides capital costs and funds gap in operational funding for the first few years. Three such community RO plants were set up this year along with five water ATMs

**IMPACT**

34% coverage, 48% people received medium impact from the program

**RECOMMENDATIONS**

- Aquifer mapping and plotting of hand pumps, open well other sources. Conduct audit to replenish existing sources
- Introduce rain water harvesting and recharge in all possible location
- Improve safe drinking water



## sports & culture

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 19.89 Crore	15%	45,000	3, 5, 9, 10 & 11

*Our Goal: To support young talent in achieving excellence; making sports and culture accessible for everyone*

### PROGRAMS

**SPORTS** – Our significant investments in sports this year reflects our commitment to promote education outside of classrooms.

**1. Zinc Football (ZF):** Hindustan Zinc has initiated a massive program directed at achieving grassroots development as well as excellence in football in Rajasthan.

- ZF Schools (Football for All) – Uses football as a tool for social development and ensuring young kids have a platform to express themselves through football. With the philosophy that “every child should have an opportunity to play”, ZF has set up community football schools across six operating locations of the Company. Over 2,000 children receive football training at these academies on a weekly basis by All India Football Federation certified coaches
- ZF Academy (Football for Excellence) - Nurturing talent to develop future football stars for the state and the country. At the heart of this initiative is a Residential Academy with world-class facilities at Zawar and the country’s first ever ‘technology-hinged football training’ centre. The Academy is currently training its first under-14 batch of 32 children where they are coached using innovative training programs with equal emphasis on learning and playing

Some of the key achievements of ZF in its first year of operation were:

- ZF team made its debut at the national level annual sports meet conducted by School Games Federation of India (SGFI) and reached quarter finals
- Aman Khan, a student of the ZF academy, was selected to represent Rajasthan’s state team in the SGFI U-17 Championship, held in Jammu and was its youngest member
- 8 out of U-14 ZF Academy boys have been selected to represent DAV Rajasthan in the forthcoming DAV Under-19 National Championship to be held in Ranchi
- Skill improvement initiative for coaches was conducted in collaboration with coaches from US and UK from the award-winning non-profit organization “Coaches Across Continents”

### IMPACT

81% received medium to high impact from the football program



**CULTURE** – The Company continues to support cultural events to make them accessible for all.

**1. Festivals/Concerts:** The 3-day World Music Festival in Udaipur was supported by the Company and was attended by 150 artists from 15 different countries and over 42,000 spectators. The Company continued to support Smritiyaan and Maharana Kumbha Sangeet Samaroh which was graced by leading classical artists like Ustad Amjad Ali Khan, Prakhar Jojan, Ustad Asghar Husain, among others.

**2. Ajmer Dargah:** Hindustan Zinc is the CSR partner under Government of India's Swachh Iconic Places initiative as part of Swachh Bharat Mission. This initiative was rolled out by the Prime Minister of India under which the Company signed a tripartite MoU with the Khwaja Moinuddin Chishti's Dargah and the Municipal Corporation of Ajmer to make the Dargah into a clean and iconic place.

Key activities during the year included:

- A rose petal manure making machine and 17 high-tech cleaning machines were deployed to ensure the cleanliness of the Dargah premises

- Trainings in risk management, fire safety and crowd management were conducted for the Dargah functionaries along with mock drills to ensure full preparedness among the stakeholders to deal with any unforeseen eventualities
- A detailed disaster management plan for the Dargah was prepared in association with the Ajmer District Disaster Management Authority



## environment & safety

### KEY FACTS

Spend in FY 2019	% of CSR Spend	People impacted / beneficiaries	SDG
₹ 10.98 Crore	8%	51,000	7, 11 & 15

*Our Goal: To be an active partner with communities living around our operations in caring for the environment and embedding a culture of safety*

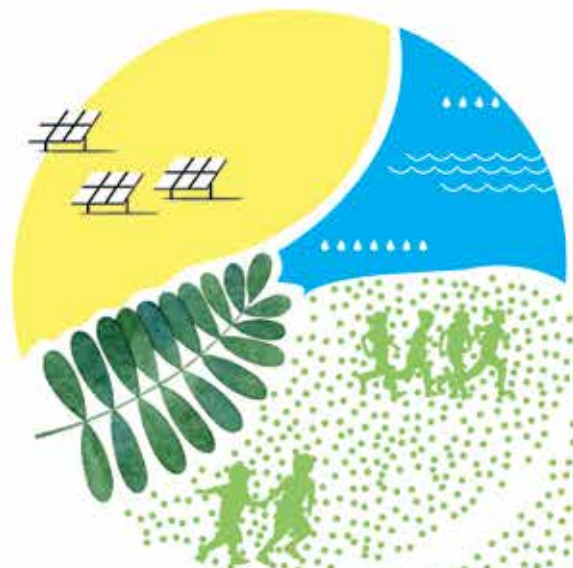
### PROGRAMS

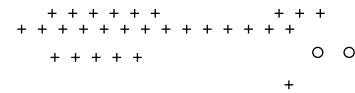
**SEWAGE TREATMENT PLANT** - In 2014, Hindustan Zinc set up Udaipur's first Sewage Treatment Plant (STP) with a capacity of 20 MLD, with the twin objective of preventing untreated sewage from entering the city's lakes and to reduce the freshwater consumed for industrial purposes. Another STP with a capacity of 25 MLD was completed during the year to further reduce proportion of untreated water.

**COMMUNITY SOLAR LIGHTS** - Solar street lights in villages have become a very powerful intervention towards safety and convenience of villagers. During the year, 396 solar powered street lights were installed in 23 core villages.

**SAFETY IN COMMUNITIES** - To create a safety culture in communities, Hindustan Zinc conducts several awareness activities ranging from fire safety among school children to road safety sessions in communities. During the year, 569 road safety awareness sessions were organized covering 51,954 community

members. Activities like essay writing, poster making, debates, slogan writing, street theatre, etc. were organised in schools across all operating locations to raise awareness in road safety among 24,157 school children.





## employee engagement

*Our Goal: To encourage holistic engagement of employees ensuring that being responsible becomes a part of our DNA*

**KHUSHI BAATIYE** - In its second year of continued commitment to gift a pair of clothes and sandals to 60,000 children enrolled in Khushi Anganwadis, the campaign received support from 875 donors with contributions of over ₹ 24.17 Lacs

**CRAFT ABILITY** - Organized in support of deaf children of Badhit Baal Vikas Samiti, Ajmer, employees purchased Diwali diyas that were handcrafted by the students

**CONNECTING FARMS WITH ZINC AREAS** - As an initial step of linking Samadhan beneficiaries' produce with the market, employees and their families purchased their fresh produce to support the initiative

**V BOND** - A friendly cricket match was organized between Putholi villagers and Zinc employees in Chanderiya to build bonds between community and employees

**MENTORING SHIKSHA SAMBAL STUDENTS** - Employees volunteered during the summer and winter camps held for children under the Shiksha Sambal project

2300 employees participated in CSR initiatives

₹ 20.97 Lacs financial contribution from employees

SDGs 4, 8 & 10



### OUR PARTNERS

<b>Education</b>	Ministry of Women & Child Development – Government of India, Department of Women & Child Development – Government of Rajasthan, Care India, Seva Mandir, Jatan Sansthan, Gramin Evam Samajik Vikas Sanstha, Vidya Bhawan Society, Resonance, Sumedha, Educational Initiatives Private Limited, Avanti Learning Centers Private Limited, Noida Deaf Society, V-Shesh, Vedanta PG Girls College Ringus
<b>Sustainable Livelihood</b>	BAIF Institute of Sustainable Livelihood Development, Skill Council for Mining Sector, Indian Institute of Skill Development, Maruti Suzuki, Ambuja Cement Foundation, Team Lease
<b>Women's Empowerment</b>	Manjari Foundation & Saheli Samiti, Center for Study of Values
<b>Community Asset Creation</b>	Local Panchayats & Government
<b>Health, Water &amp; Sanitation</b>	Mukhyamantri Jal Swavlamban Yojana (MJSY) – Government of Rajasthan, Swacch Bharat Abhiyaan, Smile Foundation, Jimmedari Foundation, Dainik Bhaskar
<b>Sports &amp; Culture</b>	Football Link, Seher, Government of India
<b>Environment &amp; Safety</b>	Urban Improvement Trust, Forest Department



## goal! committed to the aspirations and dreams of our communities

*Zinc Football was nothing short of a dream when the idea was first conceived. It was a dream to better the lives of communities living around us.*

Zinc Football is now one of the largest grassroots program in the entire country training over 2000 young players at 64 Zinc Football Schools on a weekly basis. These community football grounds are spread across 22,500 square km and four districts in southern Rajasthan. The program is based on a comprehensive 360-degree age-specific curriculum and training is provided by more than 50 coaches trained and certified by AIFF, Coaches Across Continents Social Program, First Aid Training Program, among others.

### NURTURING EXCELLENCE

A key achievement of the program is identifying and nurturing raw talent. The Zinc Football Scouting Team has so far scouted over 5000 players from across the state to identify the 32 best footballers under the age of 14 and enrolled them in our flagship, world-class residential academy with full scholarship, state-of-the-art facilities and amenities at Zawar. The infrastructure at the Residential Academy includes the F-Cube Performance Analysis

Centre, the first-of-its-kind experiential centre of excellence equipped with a FIFA grade 7v7 grass field, 3 5v5 artificial turfs, a Rehabilitation Centre, a Scouting Zone and a multi-sport arena.

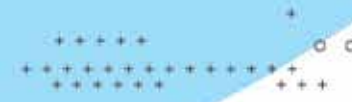
### SUCCESS STORIES

The efforts directed towards community engagement have produced some heart-warming results with team finishing in top tally in various championships as well as stand out individual performances with few girls from the program selected for National Women's Championship.

### WAY FORWARD

Zinc Football plans to partner with the state government to replicate the ideas across all districts in Rajasthan. The program also envisions an Under-13 team at the I-League, database of over 2 lakh young footballers in Rajasthan, participation in national and international level tournaments and eventually be rated among the top three football academies in the country.





# risk management

## *identifying and addressing existing and emerging risks*

**We are exposed to a variety of risks inherent to global mining & resource organization besides other common business risks. Our philosophy of risk management encompasses strategy & operations and seeks to pro-actively identify, address and mitigate existing and emerging risks under a well-designed risk management framework.**

Risk Management is embedded in our critical business activities, functions and processes. Materiality and tolerance of risk is key considerations in our decision making. There is a formal monitoring process at unit and Company level, wherein new risks are identified, categorized as per impact & likelihood, mapped to key responsibilities of select managers and managed with appropriate mitigation plan. Employees are encouraged to report any type and category of risk identified through available online reporting platforms and escalate to next level. Risk management targets and indicators are also part of the scorecard and performance evaluation process at management levels and above.

Formal discussion on risk management happens in unit level review meetings on quarterly basis. The respective units review the risks, change in nature and quantum of major risks since the last assessment, control measures established for mitigation and further action plans. The control measures stated in the risk register are periodically reviewed to verify their effectiveness.

Further to continually improve our risk management performance, we review our risk management framework and processes at regular frequency. Risk management function consults relevant internal subject matter experts on environment, health and safety, social, legal, corporate social responsibility from time to time for proactive and long term risk management.

We have adopted an integrated approach towards risk management education and conduct periodic sessions to enhance the risk management process understanding across our business units. This also includes periodic updates for our Board members and non-executive directors on emerging risks and other updates on changes in risk profile.

To ensure transparency and critical assessment, we have a Group Management Assurance System that co-ordinates the risk management framework, which is reviewed annually by the Audit Committee on behalf of the Board. This in turn is supported by a Board Level Risk Management Committee comprising of CEO, CFO and Chairman of the Audit Committee. Head of Group

Management Assurance along with Director Operations, Director Commercial, CHRO, COO Mines and COO Smelters are permanent invitees.

Our principal and emerging risks, which have been assessed based on impact and likelihood, are described below. The order in which these risks appear does not necessarily reflect the likelihood of their occurrence or the potential magnitude of their impact on our business. While our Risk Management Framework is designed to help the organization meet its objective, there can be no guarantee that our risk management activities will mitigate or prevent these or other risks from occurring.

### **PROJECT EXECUTION RISKS FOR MINING PROJECTS**

**The Company's current and future mining projects may be significantly delayed by failures due to receive timely regulatory approvals, technical difficulties, natural disasters, human resource, technological and other resource constraints, resulting in significant cost overruns and delayed delivery of our growth plans.**

The Company continues to invest in ensuring the best-in-class human resources to complete large projects on time and within budgeted cost. Besides a dedicated internal project team consisting of industry experts, leading international consultants have been engaged for geotechnical modelling and optimization to endorse mining projects' technical feasibility and mine stability. Renowned global contractors for shaft sinking, beneficiation plant, paste fill plant and mine development have been engaged for timely execution of the projects.

The project progress is closely monitored both at individual mine level and Company level. During the year we commissioned underground crusher, shaft hoisting system & beneficiation plant at Sindesar Khurd and a beneficiation plant at Zawar. The Company produced ever highest production from underground mines and expansion activities are going well. Our underground mines have ramped up at a CAGR of approximately 33% in the last six years.



Risk Management is embedded in our critical business activities, functions and processes. Materiality and tolerance of risk is key considerations in our decision making. There is a formal monitoring process at unit and Company level, wherein new risks are identified, categorized as per impact & likelihood, mapped to key responsibilities of select managers and managed with appropriate mitigation plan.

### OPERATIONAL RISK

**Disruptions in mining and production due to natural calamities, equipment failures, and unexpected interruptions, non-availability of input materials at appropriate price & quality and industrial unrest could negatively impact business operations.**

The Company's operational success is dependent upon the ability to produce metals at a low cost and any. Any disruption in the operations will impact volumes and costs. For this, the Company proactively undertakes process improvements programs, benchmarks with best-in-class peers, increases automation to reduce manual-interface and focuses on asset optimization & utilization. The Company has created Business Excellence organization to identify and drive savings and synergy initiatives, in order to further reduce costs and improve overall financial performance of our operations. These initiatives include aspects such as reducing cycle time, using low cost substitutes, optimizing consumption, optimizing supplier portfolio, consolidating purchases, combining logistics activities and developing closer relationships with key vendors to reach benchmark performance and optimise costs.

The Company maintains cordial relations with employee unions and has comprehensive insurance programs to reduce risks. The Company also actively engages communities around us via our CSR and social performance programs focusing on understanding and meeting critical needs of communities around our locations.

### PEOPLE RISK

**The Company's inability to recruit and retain skilled manpower will hamper operations and projects.**

The Company's highly skilled workforce and experienced management team is critical in maintaining current operations, implementing development projects and achieving long-term growth. It continues to invest in initiatives to widening and retention of talent pool in order to mitigate potential shortage of

underground mining professionals due to multi-fold increase in underground operations. The Company is proactively engaging international contractors and recruiting expatriates & experts and is also supporting local skill development through a mining academy in Rajasthan under the aegis of National Skill Development Council. Further, proactive investments are being made in suitably trained external & internal workforce carrying specialized skills like digitalization, automation to maintain future relevance of workforce in order to stay efficient and minimize business disruption.

There are robust processes and systems in place for leadership development - to nurture and promote talent from within the Company. Succession plan is in place for most key positions. Besides, the Company follows best practices to retain employees including several employee engagement initiatives, reward & retention schemes and fast track growth for high-potential employees.

### RESERVE & RESOURCE (R&R) AND DISCOVERY RISK

**The Company's longevity depends on its ability to access mineral resources that have desired geological characteristics enabling mining at competitive costs.**

The Company's strategic priority is to extend the life of its resources at a faster rate than it depletes them, through a focus on drilling high potential exploration targets within mine leases. In order to achieve this, it has a strong exploration organisation, latest tools & technologies and right fit contractors. The Company has more than doubled its R&R in last one decade and maintained overall mine life of over twenty-five years. It also engages the services of independent global experts annually to ascertain and verify the quantum and grade of R&R.

Additionally, the Company has an active portfolio of tenements where it has preferential rights under MMDRA Act 2015 at different stages of approval. It is also looking at participating in mineral auctions opened up by the Government recently.

## HEALTH, SAFETY AND ENVIRONMENT RISKS (HSE)

**The resource sector has inherent hazards and is therefore subject to extensive health, safety and environmental laws, regulations and standards. Any incident can result in property damages, injuries and potential fatalities as also adversely impact surrounding communities and environment. Such incidents may result in litigation, disruption of operations, penalties and loss of Company image & goodwill.**

The focus on HSE goes well beyond complying with international & local regulations and standards. Key priorities are to protect people, communities & the environment from harm and business operations from interruptions.

The Company has implemented a set of standards that align its sustainability framework to globally accepted international practices like IFC, ICMM and OECD standards. In its quest to prevent all injuries and achieve the objective of zero harm, the Company has an ongoing programme "Aarohan" to achieve excellence in safety performance. In this journey, to enhance focus on high risk areas we introduced 'Fatality and Serious Incident Prevention Sub-committee' (FSIPP) and created safety innovation cell to eliminate risk by implementing innovative engineering solutions and best practices. The Company regularly monitors occupational health; hazard identification & analysis has been incorporated in all critical operations. The focus is on capturing leading indicators to eliminate incidents while continuing to invest in training of employees & contractors and remaining focused on creating a zero-harm culture across the organization. All safety and environmental incidents are thoroughly investigated for root cause analysis and to eliminate recurrence. Tailing dam management has been a recent area of focus, where the Company is implementing the recommendations from the global experts to mitigate associated risks.

The Company has undertaken several initiatives to control air, water and noise pollution including dust suppression, electronically delayed blasting for minimal vibrations & dust, regular effluent monitoring and waste management to achieve the goal of zero discharge. It has also committed to reduce footprint on environment by judicious use of natural resources like water and energy and have taken concrete steps for alternate use of various wastes.

## COMMUNITY RELATIONS RISK

**Inability to provide inclusive growth to the communities and any disruption to their lives due to the Company's operations will cause discontent and can have negative impact on the Company's reputation and social license to operate.**

Our businesses are operating in an ever more challenging environment. We firmly believe in responsible value creation for all our stakeholders. Establishing and maintaining close links with stakeholders is an essential part of our sustainability journey and

we work with our stakeholders to understand their expectations and alleviate disruptions to maximum extent feasible. This includes conducting detailed impact assessments of our activities to lower the adverse impacts (if any) on stakeholders.

The Company regularly engages with local bodies and communities to help them identify their priorities through need assessment and articulate programs around assessed needs. It also seeks to identify & minimise potential negative impact caused by operations; act transparently and ethically; promote dialogue with communities and has developed grievance mechanisms at each of its locations. Further details of CSR activities and environment management are included in the CSR & sustainability sections respectively and also covered in the Company's Sustainability Report.

Our comprehensive management systems include continued focus on meeting the environmental and social (including occupational health and safety) compliance aspects of applicable national and state specific legislations. We further take continuous efforts to integrate best practices and move beyond compliance requirements.

## CURRENCY AND PRICE RISK

**Price and demand of the Company's finished products are inherently volatile and remain strongly influenced by global economic conditions. Any fluctuation in finished product prices or currency has direct impact on the Company's revenue and profits.**

The Company considers exposure to commodity price fluctuations to be an integral part of its business and its usual policy is to sell its products at prevailing market prices. The Company has a well-defined policy framework wherein no speculative positions are taken and limited commodity hedging is done with an endeavor to achieve month-average rates both in currency and metal prices. The Company follows the policy of taking forward cover for net foreign currency exposure, if the net is payable in foreign currency and takes very limited exposures in non USD currencies. The Company also takes forward cover for next twelve months for projects on a rolling basis. All policies are periodically reviewed basis local and international economic environment.

## FINANCIAL RISK

**Like any large and complex business, the Company's operations are also prone to interest rate volatility on treasury funds, counter party risk and insurance risk. If the financial policies are not designed well or not implemented rigorously, it could lead to control breakdown and impact the Company's cash reserves, profitability, growth and image.**

The Company follows a conservative treasury policy revolving around capital protection and yield maximisation, in that order.

Treasury operations are managed in an overall framework encompassing segregation of duties, third party confirmations and supplementary management assurance audits. The Company policy restricts trading or speculative calls or dealing in exotic structured products.

Furthermore, the Company has defined policies to mitigate counter party risks by making substantially all its sales on a secured basis while its investments are only in highly rated debt instruments with defined counter party limits. The Company's investment portfolio is periodically reviewed by an external agency certifying 'highest' credit quality basis evaluation of underlying portfolio and exposures. The Company runs a well-structured insurance program balancing risks and costs and encompassing loss of profits and project risks, in addition to traditional asset risks.

### WATER, ENERGY AND LAND

**Natural resource companies such as ours are highly dependent on availability of water, energy and land. Lack of availability of these resources will hamper Company's operations and impact future projects.**

The Company endeavors to minimise its environment footprint and has several structured programs to reduce energy and water consumption and maximise utilisation of waste.



Supporting water conservation efforts of the Government is the stated priority and the Company maintains several water sources in conjunction with the Government. A Sewage Treatment Plant (STP) was also set up in Udaipur which not only reduces inflow of sewage into local lakes but also provides a sustainable water source to its operations. The Company is currently in process of tripling the capacity to 60 MLD treating half of the Udaipur's sewage helping fresh water usage reduction.

The Company is self-sufficient in power through coal-based captive power generation for which it sources high calorific value coal from the global market in addition to established linkages from



indigenous sources. The Company has also invested in wind and solar energy. It has already started working towards reducing GHG emissions and is signatory to Science Based Target initiative (SBTi). Fly ash generated in power plants is sold to cement industry while major waste from zinc smelters is neutralised in an environment friendly manner and stores in secured landfills. Further, use of smelter waste in road construction and introduction of Fumer & Dry tailing technology will help in eliminating land requirement for landfills and would convert these wastes into commercially usable slag / back filling and manufacturing paver blocks.

### POLITICAL, LEGAL AND REGULATORY RISKS

**Non-compliance with applicable laws & regulations as well as changes in the Government policies, such as changes in royalty mechanism or rates, reduction in export incentives, changes in tax structure, cancellation or nonrenewal of mining leases & permits and reduction or curtailment of duty & tax benefits available may adversely impact operations and hamper growth.**

The Company has a strong team of professionally qualified experts to manage compliance with laws and has built-in adequate checks and balances to monitor compliance through technology. Its well thought out tax planning strategies may sometimes get challenged resulting in long disputes which may not always go in Company's favour. Similarly, changes in royalty or additional levies or change in regulations could impact the Company's profitability and operations.

The Company proactively communicates with all Government functionaries to ensure that its suggestions and views are heard before policy making which may impact the industry and the Company's business.

The Company believes in responsible policy advocacy. The Company does not contribute funds to any political party.



## FRAUD AND CYBER SECURITY

**With ever increasing reliance on information technology, there is enhanced risk of security breaches resulting in misappropriation of funds or assets. Such breaches could bring the operations to a standstill or worse.**

The Company has an IT security framework in place and same is periodically reviewed through expert agencies and strengthened to mitigate newer threats and risks. While several safeguards and policies have been put in place to protect out IT systems landscape from cyber security attack in the earlier years, this year it has been taken up to a next level by implementing various initiatives like privileged identity management system, drive encryption, data leakage prevention tools, data privacy framework, comprehensive risk management in line with ISO 31000 standards, DR/BCP framework in line with ISO 22301 framework. The Company is focusing on Plant Technical System security and have implemented various measures to mitigate all vulnerabilities. It has recently deployed ISO standards for Information Security Management and has been certified with ISO 27001 certification. It also carries out periodic penetration testing, vulnerability assessment and continuous monitoring of all critical IT devices and applications.

The Company is further automating its processes and internal controls to minimise human intervention in all operations. For an effective Cyber Defense, it is also running a campaign for Information Security Awareness to all users.

There is a strong Code of Conduct and the Company encourages reporting of irregularities through its strong and well communicated whistle- blower mechanism and is governed by an Ethics Committee.

## TECHNOLOGY TRANSITION RISK

**Globally the companies are facing disruptions by digital technologies. Our success depends on our ability to successfully adapt to the emerging technology trends including digitalization.**

The Company is exploring digital solutions for mining operations, mining value chain processing, and maintenance and trading. We understand the need to breakdown the operational silos and integrate digitalization to enhance the end-to-end visibility and

enable better decision-making, increase asset reliability, and improve people and process efficiency. Further, this is interlinked to our talent management risk and the Company is taking concrete actions to scale up the hiring of specialized manpower in niches areas like Artificial Intelligence, Intelligent automation and advanced optimization.

## INTERNAL CONTROLS

The Company has an effective and adequate internal audit and control systems, commensurate with its business size. Regular audits of operations are undertaken to ensure that high standards of internal controls are maintained at each level.

These consist of comprehensive internal and statutory audits, which are conducted by internationally reputed audit firms. Independence of the audit and compliance function is ensured by the auditors reporting directly to the Audit Committee.

The Company regularly engages with local bodies and communities to help them identify their priorities through need assessment and articulate programs around assessed needs. It also seeks to identify & minimise potential negative impact caused by operations; act transparently and ethically; promote dialogue with communities and has developed grievance mechanisms at each of its locations.





**statutory reports  
and  
financial statements**

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# board's report

Dear Members,

The Directors are pleased to inform that Hindustan Zinc delivered strong performance from all our underground mines and many benchmarks in operational performance were set during the year.

## I. FINANCIAL PERFORMANCE

We share with you our 53<sup>rd</sup> Annual Report, together with the Audited Financial Statements for the year ended March 31, 2019.

### FINANCIAL INFORMATION

Particulars	₹ in Crore	
	FY 2019	FY 2018
Revenue from operations (net of Excise Duty)	21,118	22,082
Other Income	1,782	1,716
Profit before depreciation, interest and tax	12,452	14,226
Less: Interest	113	246
Less: Depreciation and amortization expense	1,883	1,483
Profit before tax	10,456	12,497
Less: Net tax expense	2,500	3,221
Net profit	7,956	9,276
Earnings per share, ₹	18.83	21.95

#### REVENUE

The Company reported 'Revenue from operations' (net of excise duty) including other operating income of ₹ 21,118 Crore, a decrease of 4% y-o-y higher lead & silver volumes and rupee depreciation, offset by lower metal prices and zinc volume.

The 'Other income' was ₹ 1,782 Crore during the year compared to ₹ 1,716 Crore in the previous year on account of higher treasury income due to mark-to-market gains resulting from decline in interest rates, partly offset by decline in investment corpus on account of special interim dividend payment.

#### PRODUCTION COST

Net zinc metal cost per tonne, without royalty, during the year was higher by 11% in INR (3% in USD) at ₹ 70,444 (\$1008) MT and was impacted by higher mine development, lower metal volume, higher coal & commodity prices, LTS related expense and rupee depreciation (in case of rupee COP), partly offset by higher acid credits. The Company concluded a five-year long-term settlement with its recognised union impacting cost by \$33 per tonne.

#### OPERATING MARGIN

The above revenue and production cost resulted in profit before depreciation, interest and tax (PBDIT) of ₹ 12,452 Crore in FY 2019, down 12%. In addition to lower revenue and higher cost of production, operating income was impacted by one-time expense related to LTS arrears.

#### NET PROFIT

The Company reported record net profit of ₹ 7,956 Crore, 14% lower than previous year on account of lower PBDIT and higher depreciation, partly helped by lower tax rate.

Depreciation & amortisation has trended up due to higher capitalisation and increased underground ore production resulting in higher amortisation.

#### EARNINGS PER SHARE (EPS)

The EPS for the year was ₹ 18.83 per share as compared to ₹ 21.95 per share in FY 2018.

#### DIVIDEND

On October 22, 2018, the Board of Directors declared a Special Interim Dividend of 1000% i.e. ₹ 20 per share on equity share of ₹ 2 each amounting to ₹ 10,188 Crore (including DDT). The Board has not recommended final dividend for the year.

#### CREDIT RATING AND LIQUIDITY

CRISIL has reaffirmed the Company's long-term rating of AAA/Stable and short-term rating of A1+. The ratings continue to reflect the Company's dominant position in India's zinc industry, efficient and integrated operations and a strong financial risk profile.

The Company follows a conservative investment policy and invests in high quality debt instruments. As on March 31, 2019, the Company's cash and cash equivalents was ₹ 19,490 Crore invested in high quality debt instruments and the portfolio continues to be rated "Tier-1" implying Highest Safety by CRISIL. During the year, the Company borrowed ₹ 5,000 Crore of short term commercial paper in to meet cash flow mismatch for special interim dividend funding requirement. Of this, ₹ 3,000 Crore of commercial paper was paid off during the year. The net cash and cash equivalents at the end of the year was ₹ 16,952 Crore as compared to ₹ 20,395 Crore at the end of FY 2018.



**CASH FLOWS**

₹ in Crore

Particulars	FY 2019	FY 2018
Opening Cash*	20,395	23,972
Add: EBITDA**	10,747	12,373
Add: Net Interest Income	1,552	1,329
Less: Income Tax & Dividend	14,518	13,497
Less: Capital Account Payments	3,400	2,733
Add: (Increase) / Decrease in Working Capital & Others	4,714	(1,049)
Closing Cash*	19,490	20,395

(\*) *Includes Cash & Equivalents (refer Note 11 of the Audited Financial Statements) and Current Investments (refer Note 9 of the Audited Financial Statements)*

(\*\*) *Earnings before Interest, Tax, Depreciation and Amortization expenses and Income on investments.*

**GROSS WORKING CAPITAL**

Gross working capital represented by inventory, trade receivables and other current assets increased from ₹ 1,956 Crore to ₹ 2058 Crore as at March 31, 2019 primarily due to increase of stores inventory. The working capital cycle was 36 days in FY 2019 as compared to 32 days in FY 2018.

**GROSS BLOCK**

The gross block during the year increased from ₹ 23,879 Crore to ₹ 28,096 Crore. This was largely due to the ongoing mining projects and other sustaining capex.

**CAPITAL EMPLOYED**

The total capital employed as at March 31, 2019 was ₹ 16,652 Crore, as compared to ₹ 15,537 Crore at the end of previous fiscal year mainly due to addition in fixed assets.

**CONTRIBUTION TO THE GOVERNMENT TREASURY**

The Company has contributed ₹ 11,563 Crore during FY 2019, in terms of royalties, taxes and dividends to the Government treasury on cash basis, aggregating to approximately 55% of the total revenue.

**II. OPERATIONAL PERFORMANCE****PRODUCTION**

The FY 2019 mined metal production was entirely from underground mines, which ramped up strongly by 29% to 936 kt on account of 27% increase in ore production and better grades. The closure of open-cast operations caused total mined metal production to decline marginally by 1% from a year ago.

Integrated metal production was 894 kt, down 7% from a year ago. Zinc production at 696 kt was lower by 12% year-over-year due to lower zinc mined metal availability during the year as underground mines ramped up to fill the vacuum from closure of open-cast operations and higher lead ratio in ore. Integrated lead and silver production were at record 198 kt and 679 MT, higher by 18% and 22% respectively from a year ago driven by higher lead mined metal production,

retrofitting of pyro metallurgical smelter in Q2 FY 2019 to produce more lead in line with higher lead mined metal availability and better silver grades.

The Company generated 3,746 million units of power in FY 2019 as compared to 3,817 million units in FY 2018. Total green power generation was 449 million units as compared to 414 million units in FY 2018.

**SALES**

The refined zinc metal sales in the domestic market during the year was 513 kt, while export sales accounted for 181 kt as compared to 515 kt and 278 kt respectively a year ago. The aggregate sales were lower by 12% than previous year, in line with production. Lead metal sales in the domestic market were 154 kt, while export sales were 44 kt leading to higher aggregate sales of 17% from a year ago, in line with increase in lead metal production during the year. Silver sales were 676 MT in FY 2019, all in the domestic market and 21% higher than previous year.

**III. RESERVE & RESOURCE (R&R)**

During the year, gross additions of 5.4 million MT were made to reserve & resource (R&R), prior to depletion of 13.8 million MT. As at March 31, 2019, the combined R&R were estimated to be 403 million MT, containing 34.6 million MT of zinc-lead metal and 965 million ounces of silver. Overall mine life continues to be more than 25 years.

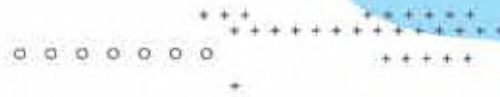
**IV. PROJECTS**

The announced mining projects are nearing completion in line with the target of reaching 1.2 million MT per annum of mined metal capacity in FY 2020.

**UPDATE ON ONGOING EXPANSION PROJECTS**

Capital mine development increased by 12% to 43 km in FY 2019.

At Rampura Agucha underground mine, the ventilation system was commissioned earlier in the year liberating the mine from ventilation issues. The commissioning of mid



shaft loading system in October 2018 allowed waste hoisting to be done through the shaft ahead of schedule, leading to improvement in ore production. The second paste fill plant was completed ahead of schedule in Q4 and the mine is equipped with paste fill capacity to support 5.0 mtpa production. The full shaft commissioning is expected to complete by September 2020 synchronising with completion of crusher and conveyor system.

During the year, Sindesar Khurd received environment clearance to produce 6.0 million MT of ore and 6.5 million MT of ore beneficiation. The new 1.5 mtpa mill accomplished smooth commissioning and began production in the third quarter of the year, taking the total milling capacity to 6.2 mtpa. The underground crusher and production shaft were commissioned during Q4 and ore hoisting from shaft is expected to start in Q1 of the current year. The second paste fill plant is under mechanical completion and also expected to commission in Q1 of the current year.

Zawar mines: The new 2.0 mtpa mill was commissioned in Q4 while the dry tailing plant is under execution and expected to commission in Q2 FY 2020.

Rajpura Dariba mine has received Environment Clearance by the Ministry of Environment, Forest & Climate Change to increase ore production from 0.9 to 1.08 mtpa and regulatory approval for further expansion to 2.0 mtpa is under process. Ore production run-rate is already at 1.2 million MT per annum post major infrastructure enhancement. During the year, orders were placed for a new 1.5 mtpa mill and paste fill plant which are expected to complete in FY 2020.

#### OTHER PROJECTS

The Fumer project at Chanderiya is expected to commission in Q1 of the current year.

22 MW solar plant was completed at Rampura Agucha taking the total solar capacity to 38 MW.

25 MLD Sewage Treatment Project was commissioned at Udaipur taking the total capacity to 45 MLD which will help improve water availability at Dariba and treat over half of Udaipur city's sewage.

Planning is underway for the next phase of expansion to 1.35 million MT per annum.

#### V. OUTLOOK

Both mined metal and finished metal production in FY 2020 will be significantly higher than last year and expected to be about 1.0 million tonnes each. The Company expects to complete the underground mine expansion plan announced in early 2013 by Q2 of the current financial year, quadrupling its underground mined metal production capacity to 1.2 mtpa.

Zinc cost of production in FY 2020 is expected to be under \$1000 per MT. The guidance of FY 2020 silver production is in

the range of 750 - 800 MT. The project capex for the year will be in the range of US\$350 to US\$400 million.

#### VI. HEALTH, SAFETY AND ENVIRONMENT

Safety, health and sustainability initiatives have been discussed in detail in 'Business Review', which forms a part of this Annual Report.

#### VII. CORPORATE SOCIAL RESPONSIBILITY (CSR)

The Company's CSR focuses on Education, Sustainable Livelihoods, Women Empowerment, Health & Water, Sports & Culture, Environment and Community Development including Community Assets Creation.

During the year, the Company spent ₹ 130 Crore on CSR programs as compared to ₹ 92 Crore in previous year. For further details, refer Annexure 5 and 'Business Review' section of this Annual Report.

#### VIII. DIRECTORS

During the year under review, Mr. Agnivesh Agarwal resigned as Director and Chairman of the Board on February 22, 2019 after 13 years of being on the Board of Directors. We thank Mr. Agarwal for his leadership and guidance towards the growth of the Company. Mrs Kiran Agarwal was appointed as Additional Director and Chairman of the Board on March 02, 2019.

Mr. Sudhir Kumar, Independent Director and nominee of Government of India, completed his tenure on November 29, 2018. We thank Mr. Kumar for his contribution.

#### IX. MANAGEMENT DISCUSSION AND ANALYSIS

The Business Review section of this Annual Report gives a detailed account of the Company's operations and the market in which it operates, including its initiatives in areas such as human resources, sustainability and risk management.

#### X. CORPORATE GOVERNANCE AND BUSINESS RESPONSIBILITY REPORT

As a listed company, necessary measures are taken to comply with the listing agreements of the Stock exchanges. A report on Corporate Governance, along with a certificate of compliance from the statutory auditors, forms part of this report. Further, Business Responsibility Report describing the initiatives taken by your Company from an Environmental, Social and Governance perspective, also forms a part of this report. Various disclosures as required under section 134 and 135 of the Companies Act 2013 are annexed to this report or covered in the Corporate Governance Report, such as Related Party Transactions; Information and details on conservation of energy, technology absorption, foreign exchange earnings and outgo; extract of annual return; constitution of various Board level Committees; Annual Report on CSR.



## XI. DIRECTORS RESPONSIBILITY STATEMENT

As required under Section 134(5) of the Companies Act, 2013, the Directors hereby confirm that:

- i. In the preparation of the annual accounts, the applicable accounting standards read with requirements set out under Schedule 3 to the Act, have been followed and there are no material departures in the same.
- ii. The Directors have selected such accounting policies, applied them consistently and made judgements & estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company at the end of the financial year and of the profits of the Company for that period.
- iii. The Directors have taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of this Act, for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities.
- iv. The Directors have prepared the annual accounts on a 'Going Concern' basis.
- v. The Directors have laid down internal financial controls to be followed by the Company and that such internal financial controls are adequate and were operating effectively; and
- vi. The Directors have devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems are adequate and operating effectively.

## XII. AUDITORS

The Company had appointed M/s. SR Batliboi & Co. LLP, Chartered Accountants, as Statutory Auditors of the Company to conduct audit of Financial Statements for the year ended March 31, 2019. The Notes to Financial Statement referred to in the Auditors' Report are self-explanatory and do not call for any further comments. The Auditors' Report does not contain any qualification or reservation. The only adverse remark is for not fulfilling the criteria of adequate number of Independent Directors for which we are in touch with the two major shareholders.

Pursuant to the orders issued by the Central Government under section 148 of The Companies Act, 2013, the Board has appointed M/s K G Goyal & Co. Cost Accountants

for conducting the audit of the cost accounting records maintained by the Company for all its products and M/s Chandrasekaran Associates, Company Secretaries as the Secretarial Auditors for conducting the Secretarial audit of the Company.

As per provisions of Section 136 of the Companies Act, 2013, the Annual Report including the Audited Accounts for the year will be sent to all the Shareholders.

## XIII. PARTICULARS OF EMPLOYEES

Disclosures pertaining to remuneration and other details as required under Section 197(12) of the Act, read with Rule 5(1) of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014 are attached to this report. In terms of the provisions of Section 197(12) of the Companies Act, 2013 read with Rules 5(2) of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, a statement showing the names and other particulars of employees drawing remuneration in excess of the limits set out in the said Rules forms part of the Report. However, having regard to the provisions of the first proviso to Section 136(1) of the Companies Act, 2013, the Annual Report excluding the aforesaid information is being sent to the Members of the Company. The said information is available for inspection at Registered Office of the Company during working hours. Any member interested in obtaining such information may write to the Company Secretary at the registered office and the same will be furnished on request. Further the details are also available on the Company's website: [www.hzindia.com](http://www.hzindia.com).

## XIV. ACKNOWLEDGEMENTS

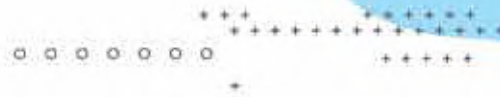
The Board of Directors places on record its sincere appreciation of the contribution made by the employees and the employees' unions in the success of the Company. The Directors also sincerely thank the Central Government and the State Governments of Rajasthan, Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu, Maharashtra and Uttarakhand; and the bankers, auditors, vendors, customers and the shareholders of the Company for their continued support.

For and on behalf of the Board of Directors

**Sunil Duggal**  
CEO & Whole-time Director  
Camp: London

**A R Narayanaswamy**  
Director

Place: Mumbai  
Date: May 02, 2019



# annexure 1

Particulars of technology absorption and foreign exchange earnings and outgo, as per Section 134(3)(m) of the Companies Act, 2013 and the rules made therein and forming part of the Board's Report for the year ended March 31, 2019.

## A) CONSERVATION OF ENERGY

- Trails of DROSRITE™ zinc dross treatment process conducted at zinc melting section of Pantnagar Metal Plant. This process uses the heat generated by the oxidation of unrecoverable zinc metal, in the presence of oxygen, as a source of energy

## B) TECHNOLOGY ABSORPTION

### A) SPECIFIC AREAS IN WHICH R&D HAS BEEN CARRIED OUT BY THE COMPANY IN FY 2019

- Feasibility testing of new technologies like Stage Flotation Reactor (SFR), flash floatation, graphite pre-float and lead re-grinding for suitability in our operations to address ore variability and improve recovery
- Modification in floatation circuit configuration for increase in metal recovery in mills
- Testing of new floatation reagents for improved metallurgical performance and cost benefits
- Plant surveys of grinding and floatation circuit across all mines for optimised plant performance
- Benchmarking of beneficiation plant performance and modelling and simulation studies to strengthen metallurgical accounting at Zawar
- Process development for tailing re-processing to recover metal from tailings
- Conversion of pre-graphite concentrate into saleable graphite product and to recover metal values from pre-graphite concentrate
- Pilot scale testing for 18.75 MT antimony slag was successfully completed. About 3 MT of antimony trioxide of purity >96% and 17 MT of enriched lead residue suitable for internal consumption were generated
- Pilot scale testing initiated for high grade cobalt cake generation from purification waste cake. The operating parameters have been optimised at lab and bench scale to generate purified cobalt cake of about 20% purity
- Process for recovery of vanadium as ammonium meta vandate from spent acid catalyst validated at lab scale. Replacement of sodium peroxide is being explored
- Cold bricks are being prepared with 3-5% cement and 80% of different wastes used in various composition. Enhancing of brick strength is in progress.
- Process feasibility for magnesium bleeding through zinc dross treatment has done. Bench scale closed loop testing is in progress

### B) BENEFITS DERIVED AS RESULT OF ABOVE R&D

- Testing of new technologies suggest that its implementation will increase recovery of lead and silver in case of flash floatation and lead

re-grinding and improve concentrate grade by using SFR and pre-graphite floatation

- Circuit modification in zinc floatation circuit suggests that it will increase zinc recovery by 2%
- Regular plant surveys across all mines gives an idea of plant operating status and any opportunity for improvement thereof
- Metallurgical accounting will help in bridging gap between theoretical and actual recovery
- Tailing re-processing at Rampura Agucha mine will give an extra 3% increase in overall metal recoveries
- 18.75 MT antimony slag treated and total realization of ₹ 25.5 lacs is achieved from pilot plant operation. Expected realization is ₹ 11.5 Crore per annum
- Drosrite process suggests the Improvement in 1<sup>st</sup> pass metal recovery by 0.35%. Also the final dross can be directly treated at leaching plant
- The spent vanadium catalyst can be reused and disposal cost can be saved
- Successful dross leaching signify zero dross to roaster
- High grade cobalt cake serve the purpose of cost generation from waste

### C) FUTURE PROJECTS FOR R&D IN FY 2019-20

- Modification in floatation circuit configuration for increase in metal recoveries
- Plant optimisation through cell hydrodynamic and mineralogical characterization
- Implementation of tailing recovery project
- Process flowsheet validation for cobalt recovery at pilot scale
- Exploration of solvent extraction to get high grade cobalt cake
- Antimony slag treatment plant setup at Chanderiya ancillary plant
- Establishment of vanadium recovery process to bench and pilot scale
- Raw mix design and generation of high strength bricks & paver blocks
- Zinc dross treatment for magnesium bleeding at pilot scale
- Lab & bench scale testing and parameter optimisation of mercury stripper water
- Recovery of manganese from manganese sulphate solution

## C) FOREIGN EXCHANGE EARNINGS AND OUTGO

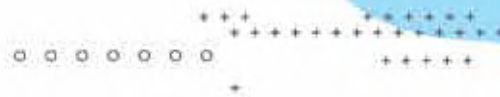
During the year, foreign exchange outgo was ₹ 1,700 Crore (which includes import of capital goods, stores & spares, coal, consumables, consultancy, travelling etc.), while foreign exchange earned was ₹ 4,237 Crore.



## FORM A

## FORM FOR DISCLOSURE OF PARTICULARS WITH RESPECT TO CONSERVATION OF ENERGY

Particulars	Unit	Year ended March 31, 2019	Year ended March 31, 2018
<b>A) ELECTRICITY, POWER GENERATION &amp; FUEL CONSUMPTION</b>			
Purchase Units	Million Kwh	206	191
Total Amount	₹ Cr	172.90	149.33
Average rate of purchasing	₹/kwh	8.39	7.82
<b>CPP - Units generated from fuel oil</b>			
Own Generation Units (From Fuel Oil)	Million Kwh	0.28	0.21
Quantity Consumed			
LSHS/FO	MT	0.42	0.42
HSD	KL	493	526
Total Amount	₹ Cr	2.93	4.03
Average cost of fuel per Kg	₹/kg	72.45	93.28
Average cost of generation	₹/kwh	102.95	193.97
Unit generated per unit of fuel (LSHS/FO/HSD)	kwh/kg	0.70	0.48
<b>CPP - Units generated from Coal</b>			
Own Generation Units (From Coal)	Million Kwh	3,633	3,693
Quantity Consumed			
Coal	MT	17,42,116	17,84,862
LDO	KL	300	352
Total Amount	₹ Cr	1,456.34	1359.91
Average cost per Kg (Coal)	₹/kg	8.36	7.62
Average cost per Kg (LDO)	₹/kg	56.93	57.96
Average cost of generation	₹/kwh	4.65	4.21
Unit generated per unit of fuel (Coal)	kwh/kg	2.27	2.26
<b>B) FUEL CONSUMPTION FOR METAL PRODUCTION</b>			
(a) L.P.G./Propane			
Quantity	Million Kg	3.70	5.61
Total Amount	₹ Cr	17.27	23.17
Average cost per Kg	₹/Kg	46.69	41.27
(b) L.D.O./LSHS/FO			
Quantity	KL	29,612	19,000
Total Amount	₹ Cr	146.06	66.78
Average cost per Ltr	₹/Ltr	49.32	35.15
(c) Coal for Steam & Others			
Quantity	MT	26,250	26,424
Total Amount	₹ Cr	22.61	20.03
Average cost per MT	₹/MT	8,612	7,580
(d) Met Coke & Coke breez			
Quantity	MT	99,819	1,34,822
Total Amount	₹ Cr	277.37	353.69
Average cost per MT	₹/MT	27,787	26,234



## CERTIFICATE OF COMPLIANCE WITH THE CODE OF CONDUCT POLICY

As provided under clause 17 (5) (a) of the SEBI (LODR) Regulation 2015, all Board Members and the Senior Management personnel have confirmed compliance with the Business Ethics and Code of Conduct for the year ended on March 31, 2019.

For **Hindustan Zinc Limited**

### Sunil Duggal

CEO & Whole-time Director  
Camp: London

Date: May 02, 2019

### FORM NO. MR-3

### SECRETARIAL AUDIT REPORT

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2019

To,  
The Members,  
Hindustan Zinc Limited  
Yashad Bhavan,  
Yashadgarh,  
Udaipur, Rajasthan – 313004

We have conducted the Secretarial Audit of the compliance of applicable statutory provisions and the adherence to good corporate governance practices by **Hindustan Zinc Limited** (hereinafter called "**the Company**"). Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing our opinion thereon.

Based on our verification of the Company's books, papers, minute books, forms and returns filed and other records maintained by the Company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, we hereby report that in our opinion, the Company has, during the audit period covering the financial year ended on March 31, 2019 complied with the statutory provisions listed hereunder and also that the Company has proper Board-processes and compliance-mechanism in place to the extent, in the manner and subject to the reporting made hereinafter:

We have examined the books, papers, minute books, forms and returns filed and other records maintained by the Company for the Financial Year ended on March 31, 2019 according to the provisions of:

- (i) The Companies Act, 2013 (the "Act") and the rules made thereunder;
- (ii) The Securities Contracts (Regulation) Act, 1956 ("SCRA") and the rules made thereunder;
- (iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder to the extent of Regulation 76 of Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018;

- (iv) Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings;
- (v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI Act'):-
  - (a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011;
  - (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015;
  - (c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018;
  - (d) The Securities and Exchange Board of India (Share Based Employee Benefits) Regulations, 2014; Not Applicable
  - (e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008; Not Applicable
  - (f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client to the extent of securities issued;
  - (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009; Not Applicable
  - (h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 1998; Not Applicable
- (vi) The Management has identified and confirmed the following laws as being specifically applicable to the Company:
  1. The Mines Act, 1952 and Rules made thereunder, and
  2. The Mines and Minerals (Development and Regulation) Act, 1957 and the Rules made thereunder.



We have also examined compliance with the applicable clauses/Regulations of the following:

- (i) Secretarial Standards issued by The Institute of Company Secretaries of India and notified by Ministry of Corporate Affairs.
- (ii) SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

During the period under review, the Company has substantially complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. mentioned above except as mentioned hereinafter.

**WE FURTHER REPORT THAT:**

The Board of Directors of the Company is duly constituted with proper balance of Executive Directors, Non-Executive Directors *except that with regard to the requirement of having at least one half of the Board of Directors comprising of Independent Directors in terms of Regulation 17 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Company falls short by two Independent Director.* The changes, if any, in the composition of the Board of Directors that

took place during the period under review were carried out in compliance with the provisions of the Act.

Adequate notice is given to all directors to schedule the Board/Committee Meetings. Agenda and detailed notes on agenda were sent in advance (and at a shorter notice for which necessary approvals obtained, if any) and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for meaningful participation at the meeting.

All decisions at Board Meetings and Committee Meetings are carried out unanimously as recorded in the minutes of the meetings of the Board of Directors or Committee of the Board, as the case may be.

We further report that there are adequate systems and processes in the Company commensurate with the size and operations of the Company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines.

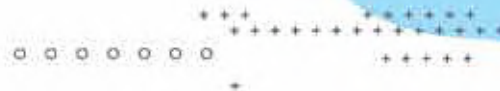
We further report that during the audit period, no specific events / actions took place having a major bearing on the Company's affairs in pursuance of the above referred laws, rules, regulations, guidelines, standards, etc.

Place: Delhi  
Date: May 02, 2019

For **Chandrasekaran Associates**  
Company Secretaries

**Shashikant Tiwari**  
Partner  
Membership No. A28994  
Certificate of Practice No. 13050

Note: This report is to be read with our letter of even date which is annexed as **Annexure-A** and forms an integral part of this report.



## ANNEXURE-A

### TO SECRETARIAL AUDIT REPORT

To,  
The Members,  
**Hindustan Zinc Limited**  
Yashad Bhavan,  
Yashadgarh,  
Udaipur, Rajasthan - 313004

1. Maintenance of secretarial record is the responsibility of the Management of the Company. Our responsibility is to express an opinion on these secretarial records based on our audit.
2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of the secretarial records. The verification was done on the random test basis to ensure that correct facts are reflected in secretarial records. We believe that the processes and practices, we followed provide a reasonable basis for our opinion.
3. We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company.
4. Whenever required, we have obtained the Management representation about the compliance of laws, rules and regulations and happening of events etc.
5. The compliance of the provisions of Corporate and other applicable laws, rules, regulations, standards is the responsibility of Management. Our examination was limited to the verification of procedures on random test basis.
6. The Secretarial Audit report is neither an assurance as to the future viability of the Company nor of the efficacy or effectiveness with which the Management has conducted the affairs of the Company.

Place: Delhi  
Date: May 02, 2019

For **Chandrasekaran Associates**  
Company Secretaries

**Shashikant Tiwari**  
Partner  
Membership No. A28994  
Certificate of Practice No. 13050





# annexure 2

Particulars of contract or arrangements with related parties

## FORM NO. AOC-2

### FORM FOR DISCLOSURE OF PARTICULARS OF CONTRACTS/ARRANGEMENTS ENTERED INTO BY THE COMPANY WITH RELATED PARTIES REFERRED TO IN SUB-SECTION (1) OF SECTION 188 OF THE COMPANIES ACT, 2013 INCLUDING CERTAIN ARM'S LENGTH TRANSACTIONS UNDER THIRD PROVISIO THERETO

#### 1. Details of contracts or arrangements or transactions not at arm's length basis: NIL

- (a) Names(s) of the related party and nature of relationship
- (b) Nature of the contracts/arrangements/transactions
- (c) Duration of the contracts / arrangements/transactions
- (d) Salient terms of the contracts or arrangements or transactions including the value, If any
- (e) Justification for entering into such contracts or arrangements or transactions
- (f) Date(s) of approval by the board
- (g) Amount paid as advances, if any:
- (h) Date on which the special resolution was passed in general meeting as required under first proviso to section 188

#### 2. Details of the material contracts or arrangements or transactions at arm's length basis: NIL

- (a) Names(s) of the related party and nature of relationship
- (b) Nature of contracts/arrangements/transactions
- (c) Duration of the contracts / arrangements/transactions
- (d) Salient terms of the contracts or arrangements or transactions including the value, If any
- (e) Date(s) of approval by the board
- (f) Amount paid as advances, if any:

For and on behalf of the Board of Directors

#### Sunil Duggal

CEO & Whole-time Director  
Camp: London

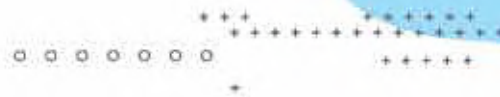
#### A.R. Narayanaswamy

Director

Place: Mumbai

Date: May 02, 2019

Note: In item 2, material is defined as greater than 10% of the turnover



# annexure 3

## FORM NO. MGT-9

### EXTRACT OF ANNUAL RETURN

as on March 31, 2019

[Pursuant to section 92(3) of the Companies Act, 2013 and rule 12(1) of the Companies (Management and Administration) Rules, 2014]

#### I. REGISTRATION AND OTHER DETAILS:

i)	CIN	:	L27204RJ1966PLC001208
ii)	Registration Date	:	January 10, 1966
iii)	Name of the Company	:	Hindustan Zinc Limited
iv)	Category / Sub-Category of the Company	:	Public Limited Company
v)	Address of the Registered office and contact details	:	Yashad Bhawan, Udaipur - 313004 (Rajasthan) Email id: - hzl.cosecy@vedanta.co.in Phone No: - 0294-6604000
vi)	Whether listed company Yes / No	:	Yes
vii)	Name, Address and Contact details of Registrar and Transfer Agent, if any	:	Karvy Fintech Private Limited (Formerly known as KCPL Advisory Services P Ltd) Karvy Selenium Tower B, Plot Nos. 31 & 32   Financial District Nanakramguda   Serilingampally Mandal   Hyderabad - 500032   India P: +91 40 67161591

#### II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY

- Mining and Smelting of Non-Ferrous metals (Zinc, Lead, Silver).
- Wind energy

All the business activities contributing 10% or more of the total turnover of the Company shall be stated: -

Sl. No.	Name and Description of main products / services	NIC Code of the Product/ service	% to total turnover of the company
1	Zinc	27204	69.5%
2	Lead	27209	15.2%

#### III. PARTICULARS OF HOLDING, SUBSIDIARY AND ASSOCIATE COMPANIES –

S. No.	Name and Address of the Company	CIN/GLN	Holding/ Subsidiary/ Associate	% of shares held	Applicable Section
1	Vedanta Limited	L13209GA1965PLC00044	HOLDING	64.92%	2 (46)





Category of Shareholders	No. of Shares held at the beginning of the year			No. of Shares held at the end of the year			% Change during the year
	Demat	Physical	Total % of Total Shares	Demat	Physical	Total % of Total Shares	
<b>2. Non-Institutions</b>							
(a) Bodies Corporate	22925813	135000	23060813	19729167	127000	19856167	0.47 (-)0.08
(b) Individuals							
i) Individual shareholders holding nominal share capital up to ₹ 2 Lac	40983618	1606269	42589887	39720417	1472866	41193283	0.97 (-)0.03
ii) Individual shareholders holding nominal share capital in excess of ₹ 2 Lac	1921923	0	1921923	854870	0	854870	0.02 (-)0.03
(c) Any Other (specify)							
(c-i) Trust	79292	0	79292	86476	0	86476	0 0
(c-ii) NRI	1828152	690000	2518152	1633165	690000	2323165	0.05 (-)0.01
(c-iii) NRI Company	-	-	-	-	-	-	- -
(c-iv) Foreign Individual	100	0	100	100	0	100	- -
(c-v) Foreign Corporate Bodies	92233912	0	92233912	61591026	0	61591026	1.46 (-)0.72
(c-vi) IEPF	940	0	940	940	0	940	- -
<b>Sub-Total (B)(2)</b>	<b>159973750</b>	<b>2431269</b>	<b>162405019</b>	<b>1233616161</b>	<b>2289866</b>	<b>125906027</b>	<b>2.98 (-) 0.86</b>
<b>Total Public Shareholding (B) = (B)(1)+(B)(2)</b>	<b>1479312421</b>	<b>2852269</b>	<b>1482164690</b>	<b>1479453824</b>	<b>2710866</b>	<b>1482164690</b>	<b>35.08 -</b>
<b>C. Shares held by Custodians and against which Depository Receipts have been issued</b>	-	-	-	-	-	-	- -
<b>GRAND TOTAL (A)+(B)+(C)</b>	<b>4222466731</b>	<b>2852269</b>	<b>4225319000</b>	<b>4222608134</b>	<b>2710866</b>	<b>4225319000</b>	<b>100 -</b>

**(II) SHAREHOLDING OF PROMOTERS**

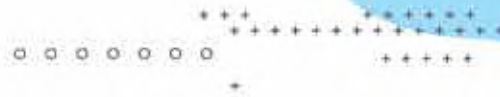
Sl. No	Shareholder's Name	Shareholding at the beginning of the year		Shareholding at the end of the year		% change in shareholding during the year	
		No. of Shares of the company	% of Shares Pledge/ encumbered to total shares	No. of Shares of the company	% of Shares Pledge/ encumbered to total shares		
1	Vedanta Limited	2743154310	0	64.92	2743154310	0	0
<b>Total</b>		<b>2743154310</b>	<b>0</b>	<b>64.92</b>	<b>2743154310</b>	<b>0</b>	<b>0</b>

**(III) CHANGE IN PROMOTERS' SHAREHOLDING (PLEASE SPECIFY, IF THERE IS NO CHANGE)**

Sl. No	Particulars	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
1	At the beginning of the year	2743154310	64.92	2743154310	64.92
2	Date wise Increase/Decrease in Promoters Shareholding during the year specifying the reasons for increase /decrease (e.g. allotment/ transfer/bonus/sweat equity etc.)	-No Change-	-No Change-	-No Change-	-No Change-
3	At the end of the year	2743154310	64.92	2743154310	64.92

**(IV) SHAREHOLDING PATTERN OF TOP TEN SHAREHOLDERS (OTHER THAN DIRECTORS, PROMOTERS AND HOLDERS OF GDRs AND ADRs):**

Sl. No	For Each of the Top 10 Shareholder's	Shareholding at the beginning of the year	
		No. of shares	% of total shares of the company
<b>At the beginning of the year (01.04.2018)</b>			
1	PRESIDENT OF INDIA	1247950590	29.54
2	LIFE INSURANCE CORPORATION OF INDIA	16870025	0.40
3	JANUS OVERSEAS FUND	8149485	0.19
4	INDIA OPPORTUNITIES III PTE. LIMITED	8024214	0.19
5	GENERAL INSURANCE CORPORATION OF INDIA	5800000	0.14
6	GOLDMAN SACHS INDIA LIMITED	5717222	0.14
7	GOLDMAN SACHS FUNDS-GOLDMAN SACHS GROWTH & EMERGING MARKETS BROAD EQUITY PORTFOLIO	4759052	0.11
8	HDFC STANDARD LIFE INSURANCE COMPANY LIMITED	4463950	0.11
9	VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS	4338093	0.10
10	INDIA CAPITAL FUND LIMITED	4050000	0.10
<b>Net Increase/Decrease in shareholding during the year specifying the reasons for increase /decrease (e.g. allotment/ transfer/bonus/sweat equity etc.)</b>			
1	LIFE INSURANCE CORPORATION OF INDIA	60793999	1.44
2	JANUS OVERSEAS FUND	(-)8149485	(-) 0.19
3	INDIA OPPORTUNITIES III PTE. LIMITED	(-)8024214	(-) 0.19
4	GENERAL INSURANCE CORPORATION OF INDIA	200000	-
5	GOLDMAN SACHS INDIA LIMITED	(-)3149521	(-) 0.07
6	GOLDMAN SACHS FUNDS-GOLDMAN SACHS GROWTH & EMERGING MARKETS BROAD EQUITY PORTFOLIO	(-)4759052	(-) 0.11
7	HDFC STANDARD LIFE INSURANCE COMPANY LIMITED	(-)4463950	(-) 0.11
8	VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS	7020	-
9	INDIA CAPITAL FUND LIMITED	4000	-
10	PTC CABLES PRIVATE LTD	11267300	0.27
11	JANUS HENDERSON OVERSEAS FUND	8149485	0.19
12	UTI - EQUITY FUND	1590000	0.04
13	VANGUARD TOTAL INTERNATIONAL STOCK INDEX FUND	596822	0.01
14	JANUS HENDERSON OVERSEAS PORTFOLIO	3692019	0.09
Change in holding is due to purchase/ sale of shares			
<b>At the end of the year (or on the date of separation, if separated during the year) (31.03.2019)</b>			
1	PRESIDENT OF INDIA	1247950590	29.54
2	LIFE INSURANCE CORPORATION OF INDIA	77664024	1.84



Sl. No	For Each of the Top 10 Shareholder's	Shareholding at the beginning of the year	
		No. of shares	% of total shares of the company
3	PTC CABLES PRIVATE LTD	11267300	0.27
4	JANUS HENDERSON OVERSEAS FUND	8149485	0.19
5	GENERAL INSURANCE CORPORATION OF INDIA	6000000	0.14
6	VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS	4345113	0.10
7	INDIA CAPITAL FUND LIMITED	4054000	0.10
8	UTI - EQUITY FUND	3963341	0.09
9	VANGUARD TOTAL INTERNATIONAL STOCK INDEX FUND	3744691	0.09
10	JANUS HENDERSON OVERSEAS PORTFOLIO	3692019	0.09

#### (V) SHAREHOLDING OF DIRECTORS AND KEY MANAGERIAL PERSONNEL:

Sl. No	Particulars For Each of the Directors and KMP	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
1	Mr. Arun L. Todarwal, Director				
	At the beginning of the year (01.04.2018) -	1500	0.00	-	-
	Purchase during the year	500	0.00	2000	-
	At the end of the year	-	-	2000	0.00
2	Mr. Rajendra Pandwal, Company Secretary				
	At the beginning of the year (01.04.2018) -	25000	-	-	-
	Purchase/Sale during the year	-	-	-	-
	At the end of the year	-	-	25000	-

#### V. INDEBTEDNESS

##### INDEBTEDNESS OF THE COMPANY INCLUDING INTEREST OUTSTANDING/ACCRUED BUT NOT DUE FOR PAYMENT

₹ in Crore

Particulars	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
Indebtedness at the beginning of the financial year (01.04.2018)	0	0	0	0
i) Principal Amount				
ii) Interest due but not paid				
iii) Interest accrued but not due				
<b>Total (i+ii+iii)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Change in Indebtedness during the financial year				
• Addition	0	12000	0	12000
• Reduction	0	10000	0	10000
Net Change	0	2000	0	2000
Indebtedness at the end of the financial year (31.03.2019)	0	2000	0	2000
i) Principal Amount				
ii) Interest due but not paid				
iii) Interest accrued but not due				
<b>Total (i+ii+iii)</b>	<b>0</b>	<b>2000</b>	<b>0</b>	<b>2000</b>

- Note:
- Interest is paid upfront on CP
  - Principal amount of CP is shown and not the CP issue proceeds, hence not matching with Balance Sheet numbers
  - On frequent basis overdraft is taken. As on 31.03.2019 amount of overdraft outstanding (unsecured) is ₹ 569.40 Crore



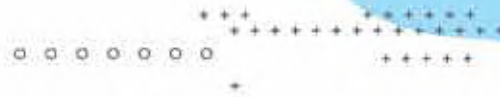
## VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL

### A. REMUNERATION TO MANAGING DIRECTOR, WHOLE-TIME DIRECTORS AND/OR MANAGER:

Sl. No	Particulars of Remuneration	Name of MD/ WTD/ Manager	Total Amount (₹)
		<b>Mr. Sunil Duggal</b>	
1	Gross salary (a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961 (b) Value of perquisites u/s 17(2) Income-tax Act, 1961 (c) Profits in lieu of salary under section 17(3) Income-tax Act, 1961	5,77,79,267	5,77,79,267
2	Stock Option	-	-
3	Sweat Equity	-	-
4	Commission - as % of profit - Others, specify	-	-
5	Others, please specify (ESOP of ultimate Holding Co.)	2,41,88,682	2,41,88,682
	<b>Total (A)</b>	<b>8,19,67,949</b>	<b>8,19,67,949</b>
	Ceiling as per the Act	10% of Profit after tax i.e. ₹ 796 Crore	

### B. REMUNERATION TO OTHER DIRECTORS:

Sl. No	Particulars of Remuneration	Name of Director			Total Amount (₹)
		Mr. A. R. Narayanaswamy	Mr. Arun L Todarwal	Mr. Sudhir Kumar	
1	Independent Directors				
	• Fee for attending Board / Committee meetings	5,50,000	4,25,000	2,00,000	11,75,000
	• Commission	15,00,000	15,00,000	9,98,630	39,98,630
	• Others, please specify	-	-	-	-
	<b>Total (1)</b>	<b>20,50,000</b>	<b>19,25,000</b>	<b>11,98,630</b>	<b>51,73,630</b>
2	Other Non-Executive Directors				
	• Fee for attending Board / Committee meetings	2,00,000	50,000	-	2,50,000
	• Commission	15,00,000	22,46,575	2,05,480	39,52,055
	• Others, please specify	-	-	-	-
	<b>Total (2)</b>	<b>17,00,000</b>	<b>22,96,575</b>	<b>2,05,480</b>	<b>42,02,055</b>
	<b>Total (B)=(1+2)</b>	<b>37,50,000</b>	<b>42,21,575</b>	<b>14,04,110</b>	<b>93,75,685</b>
	Overall Ceiling as per the Act	1% of Profit after tax i.e. ₹ 79.6 crore			



### C. REMUNERATION TO KEY MANAGERIAL PERSONNEL OTHER THAN MD/MANAGER/WTD

Sl. No	Particulars of Remuneration	KEY MANAGERIAL PERSONNEL			Total
		Company Secretary Mr. R Pandwal	Chief Financial Officer Mr. Amitabh Gupta (Upto 21.01.2019)	Acting Chief Financial Officer Mr. Swayam Saurabh (w.e.f 21.01.2019)	
1	Gross salary				
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	85,11,150	2,82,20,401	30,92,947	3,98,24,498
	(b) Value of perquisites u/s 17(2) of the Income-tax Act, 1961				
	(c) Profits in lieu of salary under section 17(3) of the Income-tax Act, 1961	-	-	-	-
2	Stock Option	-	-	-	-
3	Sweat Equity	-	-	-	-
4	Commission				
	- as % of profit	-	-	-	-
	- Others, specify...	-	-	-	-
5	Others, please specify (ESOP of ultimate Holding Co)	26,41,644	1,38,08,592	-	1,64,50,236
	<b>Total</b>	<b>1,11,52,794</b>	<b>4,20,28,993</b>	<b>30,92,947</b>	<b>5,62,74,734</b>

### VII. PENALTIES / PUNISHMENT/ COMPOUNDING OF OFFENCES:

Type	Section of the Companies Act	Brief Description	Details of Penalty / Punishment/ Compounding fees imposed	Authority [RD / NCLT / Court]	Appeal made, if any (give details)
<b>A. COMPANY</b>					
Penalty					
Punishment					
Compounding					
<b>B. DIRECTORS</b>					
Penalty					
Punishment					
Compounding					
<b>C. OTHER OFFICERS IN DEFAULT</b>					
Penalty					
Punishment					
Compounding					





# annexure 4

## I) DISCLOSURE ON REMUNERATION OF MANAGERIAL PERSONNEL

- (i) The ratio of the remuneration of each Director to the median remuneration of the employees of the Company for the financial year:

Name of Director	Mr. Sunil Duggal
Mean	1:51
Median	1:83

- (ii) The percentage increase in remuneration of each Director, Chief Financial Officer, Chief Executive Officer, Company Secretary or Manager, if any, in the financial year:

Name	Annual Increment (%)
Mr. Sunil Duggal	55
Mr. Amitabh Gupta	11
Mr. Swayam Saurabh	NA
Mr. R Pandwal	(-) 6

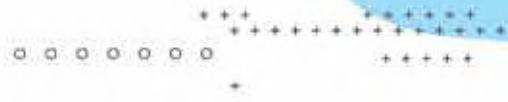
- (iii) The percentage increase in the median remuneration of employees in the financial year: Mean 11.1%, Median 8.2%
- (iv) The number of permanent employees on the rolls of Company: 4,199 (including 24 expats and retainers)
- (v) The explanation on the relationship between average increase in remuneration and Company performance: The Company achieved record volumes and profitability in FY 2017-18.
- (vi) Comparison of the remuneration of the Key Managerial Personnel against the performance of the Company: Remuneration of the KMPs as % of the PAT for 2018-19 is 0.17%.
- (vii) Variation in the market capitalisation of the Company, price earnings ratio as at the closing date of the current financial year and previous financial year and percentage increase over decrease in the market quotations of the shares of the Company in comparison to the rate at which the Company came out with the last public offer in case of listed companies and in case of unlisted companies the variations in the net worth of the Company as at the close of the current financial year and previous financial year:

Date	Market Price in (₹)	EPS (₹)	P/E ratio	Market Capitalization, ₹ Crore	% Change
March 31, 2018	300.95	21.95	13.71	1,27,161	
March 31, 2019	276.40	18.83	14.68	1,16,788	(-) 8.16

Percentage increase over the last public offer price is not relevant as there has never been any public offer by the Company.

- (viii) Average percentile increase already made in the salaries of employees other than the managerial personnel in the last financial year and its comparison with the percentile increase in the managerial remuneration and justification thereof and point out if there are any exceptional circumstances for increase in the managerial remuneration:
- Average increase in the remuneration of all employees excluding KMPs: 10%
  - Average increase in the remuneration of KMPs: 31%
  - Justification: KMP salary increases are decided based on the Company performance, inflation, prevailing industry trends and benchmarks
- (ix) Comparison of remuneration of each of the Key Managerial Personnel against the performance of the Company; Each KMP is granted salary based on his qualification, experience, nature of job, industry benchmark, earlier salary and many other factors, comparison of one against the other is not feasible.
- (x) The key parameters for any variable component of remuneration availed by the Directors: Only Whole-time Directors are given variable component, which is benchmarked against Company performance.

Note: The term remuneration includes value of the ESOP's issued by the Holding company.



- (xi) The ratio of the remuneration of the highest paid Director to that of the employees who are not Directors but receive remuneration in excess of the highest paid Director during the year: Nil
- (xii) Affirmation that the remuneration is as per the remuneration policy of the Company: Yes

Note: For Director, only CEO & Whole-time Director, has been considered. All remuneration figures are for Executives only.

CEO compensation also considers financial returns (return on assets, equity, invested capital), total shareholder return and volume growth of integrated metal



# annexure 5

## ANNUAL REPORT ON THE CSR ACTIVITIES PURSUANT TO THE COMPANIES (CORPORATE SOCIAL RESPONSIBILITY POLICY) RULES 2014.

A brief outline of the Company's CSR policy, including overview of projects or programmes proposed to be undertaken and a reference to the web-link to the CSR policy and projects or programmes	Company's vision on CSR is to enhance the quality of life and the economic well being of communities around our operations. For detailed policy, please refer our website <a href="http://www.hzlindia.com">www.hzlindia.com</a> . For projects please refer to section on CSR under Sustainability (Business Overview section)
The composition of the CSR committee	Mr. A R Narayanaswamy - Chairman Ms. Reena Sinha Puri Mr. Sunil Duggal
Average net profit of the Company for last three financial years	₹ 10,196.36 Crore (PBT, as prescribed)
Prescribed CSR Expenditure (two percent of the amount as in item 3 above)	₹ 203.93 Crore
Details of CSR spent during the financial year	
a) Total amount to be spent for the financial year	₹ 203.93 Crore
b) Amount Spent	₹ 130.20 Crore
c) Amount unspent, if any	₹ 73.73 Crore
d) Manner in which the amount spent during the financial year is detailed below	Refer next page
In case the Company has failed to spend the two percent of the average net profit of the last three financial years or any part thereof, the company shall provide the reason for not spending the amount in its Board report	We spent ₹ 130.20 Crore as CSR this year. This is a 41% increase over last year's expenditure and we are continuing to scale up many of our programmes. Several new projects were also launched this year, which are now ramping up.  In addition to the above, the Company has provided ₹ 637.83 Crore as contribution to District Mineral Foundation which is also meant to be spent towards the well-being of persons and areas affected by mining operations.
A responsibility statement of the CSR Committee that the implementation and monitoring of the CSR policy is in compliance of CSR objectives and Policy of the Company	Yes. The CSR Committee of the Company hereby confirm that the implementation and monitoring of CSR policy, is in compliance with CSR objectives and Policy of the Company.

### Sunil Duggal

CEO & Whole-time Director  
Camp: London

### A. R. Narayanaswamy

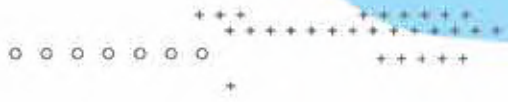
Director and Chairman of CSR Committee

Place: Mumbai

Date: May 02, 2019

S. No	CSR Project or Activity Identified	Sector in which the Project is covered	Project or Programme		Amount Outlay (₹ in Lac) (budget)	Amount spent (₹ in Lac)			Cumulative spend till reporting period (₹ in Lac)	Amount spent, direct or Implementing Agency	Name of implementing agency
			1. Local area or otherwise	2. Specify the district		Direct	Overheads	Total			
			Area	Name of District							
1	Vedanta Bal Chetna Anganwadi & Child care Project (KHUSHI Project)	Education	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara & Ajmer	2,030	1,805	-	1,805	5,188	Implementing Agency	Seva mandir, Jatan Sansthan, CARE India, Gramin Evam Samajik Vikas Sanstha, Institute of Financial Management & Research
2	Brownfield & Greenfield Nandghar	Education	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara & Ajmer	2,950	1,694	-	1,694	2,237	Direct & Implementing Agency	Jatan Sansthan, Seva Mandir, Gramin Evam Samajik Vikas Sanstha, Care India
3	Shiksha Sambal Project	Education	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	400	420	-	420	1,027	Implementing Agency	Vidya Bhawan Society, Avanti Learning Centers Pvt Ltd, Educational Initiatives Pvt Ltd
4	Rural education Program & Company run School	Education	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	2,423	1,098	-	1,098	6,681	Direct & Implementing Agency	HZL, SUMEDHA, Dean Boy's Fund, Udaipur; Muskaan Dream Creative Foundation, Resonance Eduventures Ltd, Vedanta Ringus PG Girls College, Round Table India Trust
5	Jeevan Tarang, Zinc ke Sang	Education	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	220	123	-	123	218	Implementing Agency	Noida Deaf Society, National Handicapped Finance and Development Corporation, Viklang Kalyan Samiti, Badhir Bal Kalyan Vikas Samiti, Badhit Bal Vikas Samiti, V-Shesh Learning Services Pvt Ltd
6	Health, Water & Sanitation including company run hospitals	Health, Water & Sanitation	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	1,930	1,122	-	1,122	6,200	Direct & Implementing Agency	HZL, Smile Foundation, Jimmedari Foundation, Dainik Bhaskar
7	Hospital Upgradation	Health, Water & Sanitation	Local area	Udaipur	-	-	-	-	636	Direct	HZL
8	Vocational training for youth (HZL Mining Academy)	Sustainable Livelihood	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	1,840	990	-	990	2,217	Implementing Agency	Skill Council for Mining Sector & Indian Institute Skill Development, TeamLease Skills University, Ambuja Cement Foundation
9	Agriculture Project (SAMADHAN Project)	Sustainable Livelihood	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	1,130	642	-	642	1,392	Implementing Agency	BAIF Institute of Sustainable Livelihood Development
10	Animal Husbandry project	Sustainable Livelihood	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara	10	-	-	-	284	Direct & Implementing Agency	BAIF, Government Animal Husbandry Dept.

S. No	CSR Project or Activity Identified	Sector in which the Project is covered	Project or Programme		Amount Outlay (₹ in Lac) (budget)	Amount spent (₹ in Lac)			Cumulative spend till reporting period (₹ in Lac)	Amount spent, direct or Implementing Agency	Name of implementing agency
			1. Local area or otherwise	2. Specify the district		Direct	Overheads	Total			
11	Women Empowerment (SAKHI Project)	Women Empowerment	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara	943	540	-	540	1,295	Implementing Agency	Saheli Samiti & Manjari Foundation, Center for Study of Values (COS-V)
12	Rural Infrastructure	Infrastructure Projects	Local & Otherwise	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	1,432	944	-	944	7,360	Direct & Implementing Agency	HZL, Ashadham Ashram Society, Waterlife India Pvt Ltd
13	Football Academy	Sports & Culture	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	1,500	1,546	-	1,546	2,416	Implementing partner	The Football Link, Sanjeev Gupta Architects, Young Monk Communications Pvt. Ltd
14	Ajmer Dargah - Swachh Bharat Abhiyaan	Sports & Culture	Local area	Ajmer	1,000	176	-	176	272	Implementing partner	Abhimanyu Dalal Architects, Sri Sri Rural Development Programme; N.B. Mercantile Co. Pvt. Ltd.
15	Sports & Culture	Sports & Culture	Local & Otherwise	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	532	267	-	267	1,914	Direct & Implementing agency	HZL, Maharana Kumbha Sangeet Parishad, Seher, Pandit Chaturial Memorial Trust
16	Social Forestry/ Environment	Environment	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	493	258	-	258	767	Direct	HZL, Frontier Markets Consulting Pvt Ltd
17	Social Audit, Evaluation, CSR Communications, etc	Programme evaluation	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara, Ajmer and Utrakkhand	90	95	-	95	182	Direct	HZL, Taru Leading Edge, Subhash Mittal & Associates
18	STP - Maintenance and depreciation	Health, Water & Sanitation	Local area	Udaipur	900	840	-	840	3,577	Direct	HZL
19	Program Management	Programme & Administration	Local area	Udaipur, Rajsamand, Chittorgarh, Bhilwara and Ajmer	577	-	458	458	1,946	Direct	HZL, Adecco India Pvt Ltd, Shrushti Seva Samiti
20	Miscellaneous initiatives		Local area	Udaipur	-	-	-	-	1,276	Direct	HZL
	<b>Total CSR</b>				<b>20,400</b>	<b>12,562</b>	<b>458</b>	<b>13,020</b>	<b>47,086</b>		



# corporate governance report

## CODE OF GOVERNANCE

Transparency and accountability are the two basic tenets of Corporate Governance. Responsible corporate conduct is integral to the way we do our business. Our actions are governed by our values and principles, which are reinforced at all levels within the Company. We are committed to doing things the right way which means taking business decisions and acting in a way that is ethical and is in compliance with applicable legislations. Company's Business Ethics & Code of Conduct is an extension of our values and reflects our continued commitment to ethical business practices across our operations. We acknowledge our individual and collective responsibilities to manage our business activities with integrity. Our Business Ethics & Code of Conduct inspires us to set standards which not only meet applicable legislation but go beyond in many areas of our functioning. Sustainable governance requires highest standards of corporate behaviour towards everyone we work with, the communities we touch and the environment on which we have an impact. This is our road to consistent, competitive, profitable and responsible growth and creating long term value for all our stakeholders. All Directors and employees are bound by Code of Conduct that sets out the fundamental standards to be followed in all actions carried out on behalf of the Company.

In India, Corporate Governance standards for listed companies are regulated by the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 (SEBI (LODR)). The Company has adopted best practices mandated in SEBI (LODR). This chapter, along with those in the Business Review Section and Additional Shareholder Information, reports the Company's compliance with SEBI (LODR).

## BOARD OF DIRECTORS

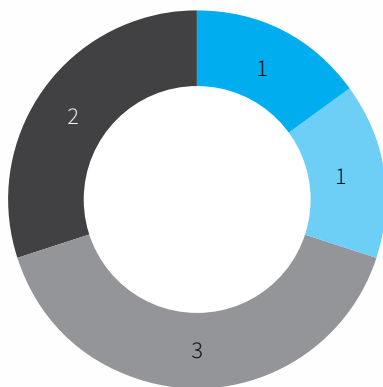
The Board is at the core of our Corporate Governance Practice. This belief is reflected in our governance practices, under which we strive to maintain an effective, informed and independent Board.

We keep our governance practices under continuous review and benchmark ourselves to best practices across industries.

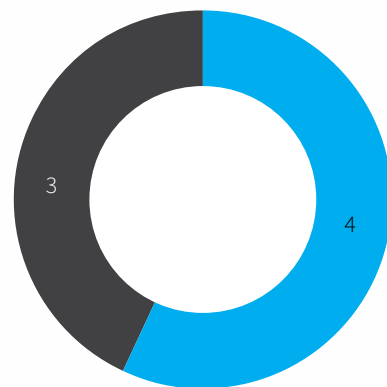
As trustees, the Board has a fiduciary responsibility towards all the shareholders and ensures that the Company has clear goals aligned to shareholder value and its growth. The Board sets strategic goals and seeks accountability for their fulfilment. The Board also provides direction and exercises appropriate control to ensure that the Company is managed in a manner that fulfils all stakeholders' aspirations and societal expectations.

### (I) COMPOSITION OF THE BOARD

The composition of Board is an appropriate combination of Executive and Non-Executive Directors with right element of independence. As on March 31, 2019, the Company's Board comprised of seven Directors, out of which three are women Directors. Further, amongst them two are nominated by Government of India, two are nominated by promoters, two are independent Directors and one Executive Director. As the Chairperson is related to the promoters, in compliance to clause 17(1)(b) of SEBI (LODR), the Company is required to have at least one half of total Directors as independent Directors; however, at the year end, the Company is short by two independent directors. The non-executive Directors are appointed or re-appointed based on the recommendation of the Nomination & Remuneration Committee, which considers their overall experience, expertise and industry knowledge. One third of the non-executive Directors of the Company other than independent Directors, are liable to retire by rotation every year and are eligible for reappointment, subject to approval by the shareholders at the Annual General Meeting (AGM). Independent Directors have confirmed their independence. All the Board members have confirmed that they are not disqualified to act as Director of the Company. Against the requirement of one woman Director, the Company is having three women Directors at the year end. Average tenure of Board Members is more than 5 years.



- Non-executive and Non-independent Chairman
- Executive and Whole-time Director
- Non-executive and Non-independent Directors
- Independent Directors



- Men
- Women



**(II) NUMBER OF BOARD MEETINGS**

The Board of Directors met four times during the financial year, on April 30, July 23, October 22 in 2018 and on January 21 in 2019. The maximum time gap between any two meetings was less than 120 days and at least one meeting was held in each calendar quarter. The agenda for each meeting is prepared well in advance, along with explanatory notes and timely distributed to all Directors.

**(III) ATTENDANCE AND DIRECTORSHIPS HELD**

As mandated by the SEBI (LODR), none of the Directors are members of more than ten board-level committees nor

are they chairman of more than five committees in which they are members. Further, all the Directors have confirmed that they do not serve as an independent director in more than seven listed companies or where they are whole-time directors in any listed company, then they do not serve as independent director in more than three listed companies.

The names and categories of the Directors on the Board, their attendance at Board meeting during the year and at last AGM, as also the number of Directorships and Committee memberships held by them in other Companies are shown in Table 1.

**TABLE 1: COMPOSITION OF THE BOARD OF DIRECTORS**

Name of Director	Relationship with Other Directors	Category	No. of Meetings Held	No. of Meetings Attended	Whether Attended Last AGM	No. of Outside Directorships of Public Companies	No. of Outside Committee Memberships <sup>#</sup>	No. of Outside Committee Chairmanships <sup>#</sup>
Mr. Agnivesh Agarwal, Chairman*	Relative of Mr. Navin Agarwal	NED	4	1	No	1 <sup>@</sup>	-	-
Mr. Navin Agarwal	Relative of Mr. Agnivesh Agarwal and Mrs. Kiran Agarwal	NED	4	4	No	2 <sup>@</sup>	-	-
Mr. A.R. Narayanaswamy	None	ID& NED	4	4	Yes	8	6	1
Mr. Arun L. Todarwal <sup>^</sup>	None	ID & NED	4	4	Yes	8	4	5
Mr. Sunil Duggal	None	ED	4	4	Yes	2	-	-
Mr. Sudhir Kumar <sup>**</sup>	None	ID & NED	3	3	Yes	-	-	-
Ms. Reena Sinha Puri <sup>§</sup>	None	NED	4	3	No	3	-	-
Ms. Farida M. Naik <sup>§</sup>	None	NED	4	4	No	-	-	-
Mrs. Kiran Agarwal <sup>***</sup>	Relative of Mr. Navin Agarwal	NED	-	-	-	-	-	-

Notes:

§ Nominees of Government of India

# Only Audit Committee and Stakeholder Relationship Committee considered as per SEBI (LODR)

@ Excludes foreign companies: Mr. Agnivesh Agarwal – 3, Mr. Navin Agarwal – 2

ID Independent Director as defined in the Companies act 2013 and SEBI (LODR) 2015

NED: Non-executive Director, ED: Executive Director

<sup>^</sup> Holds 2000 shares in his name, 1200 shares held by relatives

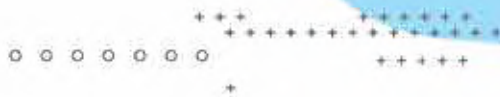
\* Ceased to be Director and Chairman on 22.2.2019

\*\* Ceased to be Director on 29.11.2018

\*\*\* Appointed as Additional Director and Chairman on 2.3.2019

**DIRECTORSHIP IN OTHER LISTED COMPANIES IN INDIA**

Name of Director & DIN	Name of the Listed entity including Debt Listed Entities	
	Name of Entity	Category
Mrs. Kiran Agarwal (02227122)	-	-
Mr. Navin Agarwal (00006303)	Vedanta Limited	Executive Chairman
Mr. Sunil Duggal (07291685)	-	-
Mr. A R Narayanaswamy (00818169)	Sterlite Technologies Limited	Director
	Bharat Aluminium Company Limited	Director
	Sterlite Technologies Limited	Director
	Anuh Pharma Limited	Director
	Welspun India Limited	Director
Mr. Arun L Todarwal (00020916)	Welspun Global Brands Limited	Director
	Bharat Aluminium Company Limited	Director
	Coal India Limited	Director
	Northern Coalfields Limited	Director
Ms. Reena Sinha Puri (07753040)	Bharat Aluminium Company Limited	Director
	Coal India Limited	Director
	Northern Coalfields Limited	Director
Ms. Farida M Naik (07612050)	-	-



### Diversity and inclusion

Your Company continues to recognise that an appropriate mix of diversity and skills is key for introducing different perspectives into Board discussion and for better anticipating the risks and opportunities in building a long-term sustainable business. As set out in the charts below,

each member of the Board offers a range of core skills and experience that is relevant to the successful operation of your Company

The below table summarizes the key qualifications, skills and attributes which are taken into consideration while nominating to serve on the Board.

<b>Business Leadership</b>	Sustainable success in business at a senior executive level
<b>Financial expertise</b>	Proficiency in financial accounting and reporting, corporate finance and internal controls, corporate funding, and associated risks.
<b>Natural Resources</b>	Senior executive experience in a large global mining organization involved in the discovery, acquisition, development and marketing of natural resources.
<b>Capital projects</b>	Experience working in an industry with projects involving large-scale long-cycle capital outlays.
<b>Experience</b>	Experience of working / handling multiple Indian/global locations, exposed to a range of political, cultural, regulatory and business environments
<b>ESG</b>	Familiarity with issues associated with workplace health and safety, asset integrity, environment and social responsibility, and communities.
<b>Corporate Governance</b>	Experience with a major organization that demonstrates rigorous governance standards
<b>Government &amp; International relations</b>	Interaction with government and regulators and involvement in public policy advocacy
<b>Technology/Digital</b>	A strong understanding of technology and innovation, and the development and implementation of initiatives to enhance production.

In the table below, the specific areas of focus or expertise of individual board members have been highlighted. However, the absence of a mark against a member's name does not necessarily mean the member does not possess the corresponding qualification or skills:-

Name of Director	Areas of Expertise									
	Business Leadership	Financial expertise	Natural Resources	Capital projects	Experience	ESG	Corporate Governance	Government & International relations	Technology/Digital	
Kiran Agarwal	√	√	√	√	√	√	√	√	√	
Navin Agarwal	√	√	√	√	√	√	√	√	√	√
Sunil Duggal	√	√	√	√	√	√	√	√	√	√
A R Narayanaswamy	√	√	√	√	√	√	√	√	√	
Arun L Todarwal	√	√	√	√	√	√	√	√	√	
Reena Sinha Puri	√	√	√	√	√	√	√	√	√	
Farida M Naik	√	√		√	√	√	√	√	√	

### (IV) INFORMATION SUPPLIED TO THE BOARD

The Board has complete access to all information of the Company and has been regularly provided advanced detailed information as a part of the agenda papers or is tabled therein. In addition, detailed quarterly performance report by the CEO is presented in the quarterly Board meeting, encompassing all facets of the Company's operations during the quarter, including update of key projects, outlook and matters relating to environment, health & safety, corporate social responsibility etc. The following information is provided to the Board as a part of the agenda papers:

- Annual and Quarterly financial statements for the Company and the Accounting Policy
- Minutes of the meetings of the Audit Committee and other Committees of the Board
- Annual business plan
- Information on recruitment and remuneration of senior officers just below the level of Board, including the appointment or removal of Chief Financial Officer and Company Secretary, whenever required
- Expansion projects and its status monitoring
- Materially important notices of show cause, demand, prosecution and penalty, if any
- Fatal accidents or any material environmental problems, if any
- Any material default in financial obligations to and by the Company, or substantial non-payment for goods sold by the Company, if any





- Any issue involving possible public or product liability claims of substantial nature, including any judgement or order which may have passed strictures on the conduct of the Company or taken an adverse view regarding another enterprise that can have negative implications on the Company
  - Details of any joint venture or significant collaboration agreement
  - Transactions that involve substantial payment towards goodwill, brand equity or intellectual property, if any
  - Significant labour issues and their proposed solutions, whenever necessary
  - Any significant development in human resources or industrial relations including long-term wage agreement, major voluntary retirement scheme, etc.
  - Sale and purchase of material equity investments and fixed assets, which is not in the normal course of business, if any
  - Quarterly details of foreign exchange exposures and the steps taken by the management to limit the risks of adverse exchange rate movement, if material
  - Quarterly disclosure of all the investments made
  - Material non-compliance of any regulatory, statutory nature or listing requirements and shareholders service,
- such as non-payment of dividend, delay in share transfer and others, if any
- Quarterly review of compliance status under various laws applicable to the Company
  - Corporate Social Responsibility activities
  - Substantial non-payment of goods sold by Company except disputes
  - Related Party Transactions, if they are not at arm's length or not in the ordinary course of business
  - Near term outlook
  - All other matters required to be placed before the Board for its review or information or approval under the statutes.

#### (V) REMUNERATION TO DIRECTORS

Non-executive Directors except Government Directors in the employment of the Government are paid a remuneration in the form of commission and a fixed sitting fee for each meeting, as approved by the Board and within statutory limits. The remuneration paid to Mr. Sunil Duggal, CEO & Whole-time Director is as per the approval granted by the Board and the shareholders. For FY 2018-19, the total remuneration is as shown in Table 2A and Table 2B. Payment of commission to non-executive Directors and independent Directors has been approved by the shareholders up to the limit specified under the Companies Act, subject to the annual amount approved by the Board.

**TABLE 2 A: SITTING FEE AND COMMISSION OF NON-EXECUTIVE DIRECTORS FOR FY 2018-19 (IN ₹)**

Name of Director	Category	Sitting fees	Commission
Mr. Agnivesh Agarwal, Chairman*	Non-Executive	50,000	22,46,575
Mr. Navin Agarwal	Non-Executive	2,00,000	15,00,000
Mr. A.R. Narayanaswamy	Independent	5,50,000	15,00,000
Mr. Arun L. Todarwal	Independent	4,25,000	15,00,000
Mr. Sudhir Kumar	Independent	2,00,000	9,98,630
Mrs. Kiran Agarwal	Non-Executive	-	2,05,480

\* Ceased to be Director and Chairman on 22.2.2019

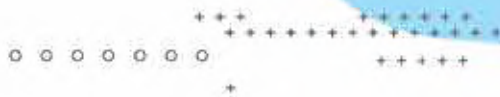
**TABLE 2 B: REMUNERATION PAID TO EXECUTIVE DIRECTOR FOR FY 2018-19 (IN ₹)**

Name of Director	Category	Salary, perquisites & other allowances	Stock option of ultimate holding Company	Total
Mr. Sunil Duggal	CEO & Whole-time Director	5,77,79,267	2,41,88,682	8,19,67,949

Non-executive Directors, other than Mr. Arun L. Todarwal, do not hold any shares of the Company and they have no pecuniary relationships or transactions vis-à-vis the Company, except as mentioned above. The Company has not granted any stock options to any of its Directors.

During FY 2018-19, the Company did not advance any loan or guarantee to any of its Directors.

As per the requirement of SEBI (LODR), a separate meeting of the independent Directors was held on February 28, 2019.



## (VI) FAMILIARISATION PROGRAMME FOR DIRECTORS

The Board members are provided with necessary documents, reports, internal policies and site visits to enable them to familiarise themselves with the Company's operations, its procedures and practices. Periodic presentations are made at the Board and Board Committee Meetings, on business and performance updates of the Company, global business environment, business strategy and business risks and sustainability. Details of the familiarisation programme are available on <http://hzlindia.com/common/images/Familiarisation-program-for-ind-directors-2018-19.pdf>

## (VII) DIRECTOR RETIRING BY ROTATION

As per law, two-third of non-executive and non-independent Directors should retire by rotation. One-third of these Directors are required to retire every year and if eligible, offer themselves for re-appointment. Mrs. Reena Sinha Puri would retire in upcoming AGM and being eligible, has offered herself for re-appointment. A brief profile of Mrs. Reena Sinha Puri is as follows.

### Ms. Reena Sinha Puri

Director

Ms. Reena Sinha Puri was appointed on the Board with effect from December 29, 2016. She is an officer of the

Indian Revenue Service. Currently, she is Joint Secretary and Financial Advisor in the Ministry of Mines and has held various positions in the Income Tax Department and was seconded to the Tax Department of Government of Botswana. She completed her Bachelor and Masters in Political Science from Punjab University, Bachelor of Law from Delhi University and Masters in Public Policy from National University of Singapore.

She is also on the Board of Bharat Aluminium Company Ltd., Coal India Ltd. and Northern Coalfields Ltd.

## (VIII) COMMITTEES OF THE BOARD

The Company has five Board-level committees - Audit Committee, Stakeholders Relationship Committee, Corporate Social Responsibility Committee, Nomination & Remuneration Committee and Risk Management Committee.

All decisions pertaining to the constitution of Committees, appointment of members and fixing of terms of service for Committee members are taken by the Board of Directors. Details on the role and composition of these Committees, including the number of meetings held during the financial year and the related attendance, are provided below:

## BOARD AND COMMITTEE COMPOSITION

Name of Director	Board	Audit Committee	Stakeholder Relationship Committee	Nomination and Remuneration Committee	Corporate Social Responsibility Committee	Risk Management Committee
Mrs. Kiran Agarwal	Chairman	-	-	-	-	-
Mr. Navin Agarwal	Member	-	-	-	-	-
Mr. A.R. Narayanaswamy	Member	Chairman	Chairman	Member	Chairman	Chairman
Mr. Arun L. Todarwal	Member	Member	-	Chairman	-	-
Mr. Sunil Duggal	Member	-	Member	-	Member	Member
Ms. Reena Sinha Puri	Member	Member	-	-	Member	-
Ms. Farida M. Naik	Member	-	Member	-	-	-
<b>Total no. of members</b>	<b>7</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>

### a) Audit Committee

The Audit Committee of the Board, inter alia, provides reassurance to the Board on the existence of an effective internal control environment that ensures:

- efficiency and effectiveness of operations;
- safeguarding of assets and adequacy of provisions for all liabilities;
- reliability of financial and other management information and adequacy of disclosures;

- compliance with all relevant statutes
- update on related-party transactions and key risks

Mr. A.R. Narayanaswamy is the Chairman of the Audit Committee. Details of meetings held and attendance record is given in Table 3.

The time gap between any two meetings was less than 120 days and at least one meeting was held in each calendar quarter. The Committee met four times in the financial year under review on April 27, July 23 and October 22 in 2018 and on January 21, 2019. The details of the Audit Committee are given in Table 3.



**TABLE 3: ATTENDANCE RECORD OF AUDIT COMMITTEE MEETINGS**

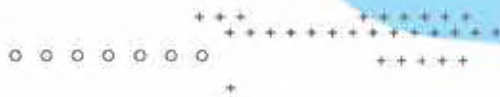
Name of the Member	Position	Status	No. of Meetings held	No. of Meetings Attended	Sitting fees (₹)
Mr. A.R. Narayanaswamy	Chairman	ID & NED	4	4	1,00,000
Mr. Arun L. Todarwal	Member	ID & NED	4	4	1,00,000
Ms. Reena Sinha Puri	Member	NED	4	3	--

The Chief Financial Officer, the representative of the Statutory Auditors (S.R. Batliboi & Co. LLP), Internal Auditors (Deloitte Haskins & Sells LLP) and Head of Management Assurance Cell are invitees to the Audit Committee meetings. The Company Secretary is the Secretary to the Committee.

Mr. A.R. Narayanaswamy is a Chartered Accountant and Chairman of the Audit Committee and all the members of the Audit Committee are well versed with financial management. The quorum for the meeting of the Audit Committee is two members. The Audit Committee functions in accordance with its constitution and charter, framed in compliance with SEBI (LODR).

The Role and functions of the Audit Committee include the following:

- Oversight of the Company's financial reporting process and the disclosure of its financial information to ensure that the financial statements are correct, sufficient and credible
- Recommending to the Board, the appointment, re-appointment and if required, the replacement or removal of the statutory auditor and the fixation of audit fees
- Approval of payment to statutory auditors for any other services rendered by them
- Reviewing with the management, the annual financial statements before submission to the Board for approval, with particular reference to:
  - matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of section 134 of the Companies Act, 2013
  - changes, if any, in accounting policies and practices and reasons for the same
  - major accounting entries involving estimates based on the exercise of judgement by management
  - significant adjustments made in the financial statements arising out of audit findings, if any
- compliance with listing and other legal requirements relating to financial statements
- approval of related party transactions and their subsequent modifications, if any
- scrutiny of inter corporate loans and advances
- qualifications if any in the draft statutory auditor report
- Reviewing with the management, the quarterly financial statements before submission to the Board for approval
- Reviewing with the management, performance of statutory and internal auditors, their independence, effectiveness of audit process and adequacy of the internal financial control systems
- Reviewing the adequacy of internal audit plan
- Discussion with internal auditors on any significant findings and follow up thereof
- Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control system of a material nature and reporting the matter to the Board
- Discussion with statutory auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern
- To look into the reasons for substantial defaults in the payment to the shareholders (in case of non-payment of declared dividends) and creditors, if any
- Reviewing the functioning of the vigil and whistle blower mechanism
- Appointment of the Chief Financial Officer of the Company, as and when required



- Carrying out any other function, as is mentioned in the terms of reference of the Audit Committee
- Valuation of undertaking of the assets of the Company, wherever necessary

The Audit Committee is empowered pursuant to its terms of reference to:

- Investigate any activity within its terms of reference and to seek any information it requires from any employee
- Obtain legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise, when considered necessary

The Company has systems and procedures in place to ensure that the Audit Committee mandatorily reviews:

- Business overview including results of its operations and financial condition
- All related party transactions
- Management letters and letters of internal control weaknesses issued by the statutory auditors

- Internal audit reports relating to internal control weaknesses and review of processes
- The appointment, removal and terms of remuneration of the Auditors.

During the year, all related party transactions were pre-approved by the Audit Committee and were at arm's length and in the ordinary course of business. There was no material transaction with any of the related parties of the Company for the year.

#### b) Stakeholders Relationship Committee

Mr. A.R. Narayanaswamy is the Chairman of the Stakeholders Relationship Committee. The Committee met twice during the financial year under review on April 30 and October 22, 2018.

The primary function of the Committee is to address investor and stakeholders' complaints pertaining to transfers or transmission of shares, non-receipt of dividend and any other related matters as prescribed under section 178 of the Companies Act, 2013. The minutes of each of the Committee meetings are reviewed by the Board. The attendance details are mentioned in Table 4.

**TABLE 4: ATTENDANCE RECORD OF STAKEHOLDER RELATIONSHIP COMMITTEE MEETINGS**

Name of the Member	Position	Status	No. of Meetings held	No. of Meetings Attended	Sitting fees (₹)
Mr. A.R. Narayanaswamy	Chairman	ID & NED	2	2	50,000
Mr. Sunil Duggal	Member	ED	2	2	-
Ms. Farida M. Naik	Member	NED	2	2	-

The matters, if any, requiring Board's attention are informed to the Board by the Committee Chairman. Mr. R. Pandwal, Company secretary, is the compliance officer of the Company.

Details of queries and grievances received and addressed by the Company during FY 2018-19 is given in Table 5.

**TABLE 5: NATURE OF COMPLAINTS RECEIVED AND ATTENDED TO DURING FY 2018-19**

1.	Number of complaints received from the investors comprising non-receipt of dividend warrants, non-receipt of securities sent for transfer and transmission, complaints received from SEBI/Registrar of Companies/Bombay Stock Exchange/National Stock Exchange / SCORE and so on	31
2.	Number of complaints resolved	31
3.	Number of complaints not resolved to the satisfaction of the investors as on March 31, 2019	0
4.	Complaints pending as on March 31, 2019	0
5.	Number of Share transfers pending for approval, as on March 31, 2019	0

The Board has delegated the power of approving physical transfer and transmission of shares to the Share Transfer Committee consisting of CEO & WTD, CFO and Company Secretary.



### c) Corporate Social Responsibility (CSR) Committee

The Corporate Social Responsibility Committee as on March 31, 2019 consisted of three members. The Committee met twice during the financial year under review on April 30, 2018 and on October 20, 2018. Mr. A.R. Narayanaswamy is the Chairman of the Committee, while Mr. Sunil Duggal and Mrs. Reena Sinha Puri are the members.

The primary function of the Committee is to monitor the CSR function of the Company in furtherance to Company's CSR Vision & Mission. The Committee is responsible for framing the CSR policy of Company and tracks implementation of key CSR projects approved by it during the financial year. In this financial year, the Company has spent ₹ 130.20 Crore on CSR activities.

**TABLE 6: ATTENDANCE RECORD OF CSR COMMITTEE MEETINGS**

Name of the Member	Position	Status	No. of Meetings Held	No. of Meetings Attended	Sitting fees (₹)
Mr. A R Narayanaswamy	Chairman	ID & NED	2	2	50,000
Mr. Sunil Duggal	Member	ED	2	2	-
Mr. Sudhir Kumar*	Member	ID & NED	2	2	50,000
Ms. Reena Sinha Puri**	Member	NED	--	--	--

\* Ceased to be member on 29.11.2018

\*\* Appointed as member on 21.1.2019

### d) Nomination & Remuneration Committee

The Nomination & Remuneration Committee as on March 31, 2019 consisted of two members. The Committee met four times during the financial year under review on April 30, July 23, September 22, 2018 and January 19, 2019. The primary function of the Committee is to recommend to the Board the appointment or reappointment of Directors, remuneration of Directors and Key Managerial Personnel (KMPs), formulate criteria for evaluation of Independent Directors, Board diversity, identification and selection of persons who could be appointed as Independent Directors etc.

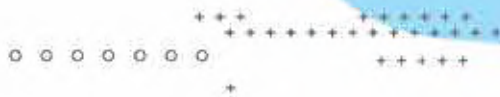
**TABLE 7: ATTENDANCE RECORD OF NOMINATION AND REMUNERATION COMMITTEE MEETINGS**

Name of the Member	Position	Status	No. of Meetings Held	No. of Meetings Attended	Sitting fees (₹)
Mr. Arun L. Todarwal	Chairman	ID & NED	4	4	1,00,000
Mr. A R Narayanaswamy	Member	ID & NED	4	4	1,00,000
Mr. Agnivesh Agarwal*	Member	NED	--	--	--

\* Ceased to be member on 22.2.2019

As per the requirement of Companies Act, 2013 and SEBI (LODR), the Nomination & Remuneration Committee has carried out a performance review of the individual Directors on the following parameters:

- The size and composition (executive, non-executive, independent members and their background in terms of knowledge, skills and experience) of the Board is appropriate
- The Board conducts itself in such a manner that it is seen to be sensitive to the interests of all stakeholders (including minority shareholders) and it has adequate mechanism to communicate with them
- The Board is active in addressing matters of strategic concerns in its review of the Board agenda with the executive management
- The Board makes well-informed high-quality decisions on the basis of full information and clear insight into Company's business
- The Board is effective in establishing a corporate environment that promotes timely and effective disclosure, fiscal accountability, high ethical standards and compliance with applicable laws and regulations
- The Board meets frequently enough and for sufficient duration to enhance its effectiveness
- The Board meeting time is appropriately allocated between management presentation and Board discussion
- The Board has a good understanding of the Company's key drivers of performance and associated risks, threats and opportunities



- The Board devotes considerable amount of time in developing the business strategy and annual business plan
- The Board has clearly defined the mandates of its various Committees and effectively oversees their functioning
- The Board is effective in formulating and monitoring various financial and non-financial policies and plans
- The Board is effective in developing a corporate governance structure that allows and encourages the Board to fulfil its responsibilities
- The Board pays considerable attention to the quality of financial reporting process and internal financial controls and effectively oversees them
- The Board regularly follows up on its decisions to ensure that action is taken on all its decisions
- The Board gives effective advice and assistance for achieving the Company's mission and vision.
- Board Members performance is assessed through internal assessment.

The Committee expressed its overall satisfaction on the performance of the individual Board members and the overall Board.

BSE Limited  
25<sup>th</sup> Floor, P.J. Towers,  
Dalal Street, Fort,  
Mumbai – 400 001

#### e) Risk Management Committee

The Risk Management Committee as on March 31, 2019 consisted of two members. The Committee met once during the financial year under review on March 26, 2019. Mr. A.R. Narayanaswamy is the Chairman of the Committee and Mr. Sunil Duggal is the member, while Mr. Amitabh Gupta, Mr. L.S Shekhawat, Mr. Arun Vijay Kumar, Mr. Dilip Golani and Mr. Swayam Saurabh are invitees of the Committee. The primary function of the Committee is to review the major risks identified by the Management, along with its mitigation plan, monitoring and reviewing the Company's risk management plan and to apprise the Board on risk assessment and minimization procedures. Please refer to the risk management section of this annual report for more details.

### SHAREHOLDERS MATTERS

#### (I) DIVIDEND

During the year, the Company has paid an interim dividend of 1000% declared on October 22, 2018, aggregating to ₹ 10,187.69 Crore including dividend distribution tax. In view of this, the Board has not recommended any final dividend.

#### (II) LISTING

At present, the equity shares of the Company are listed on BSE Limited (BSE) and National Stock Exchange of India Limited (NSE). The annual listing fees for FY 2018-19 to BSE and NSE have been paid. The addresses of stock exchanges are as under:

National Stock Exchange of India Limited  
“Exchange Plaza”, Bandra-Kurla Complex  
Bandra (East)  
Mumbai – 400 051

**TABLE 8: STOCK EXCHANGE CODES**

Name of the Stock Exchange	Stock Code	ISIN Code
National Stock Exchange of India Limited	HINDZINC	INE 267A01025
BSE Limited	500188	

#### (III) STOCK MARKET DATA

**TABLE 9: HIGH, LOWS AND VOLUMES OF THE COMPANY'S SHARES FOR FY 2018-19**

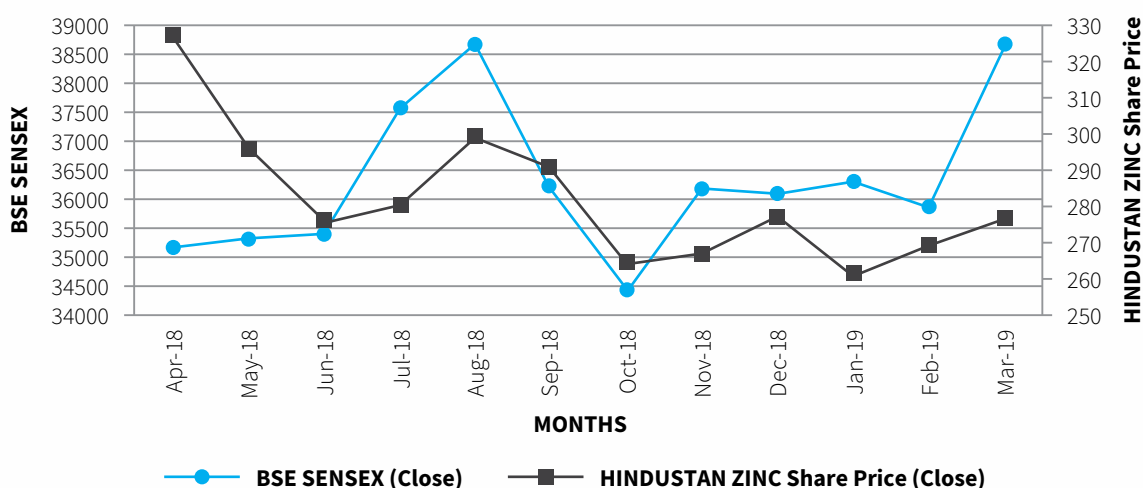
Month	BSE			NSE		
	High (₹)	Low (₹)	Volume (No. of Shares)	High (₹)	Low (₹)	Volume (No. of Shares)
Apr-18	336.35	301.30	4787496	336.50	300.80	48885085
May-18	321.15	281.55	2521470	321.35	281.15	34180565
Jun-18	308.00	270.00	2403152	305.85	269.55	41081536
Jul-18	283.80	261.15	6793749	283.85	260.65	43674277
Aug-18	306.00	272.65	2544905	303.30	272.05	21056329
Sep-18	308.90	272.85	1925948	309.45	268.95	23958243
Oct-18	299.00	262.40	2087397	298.65	261.20	36157031



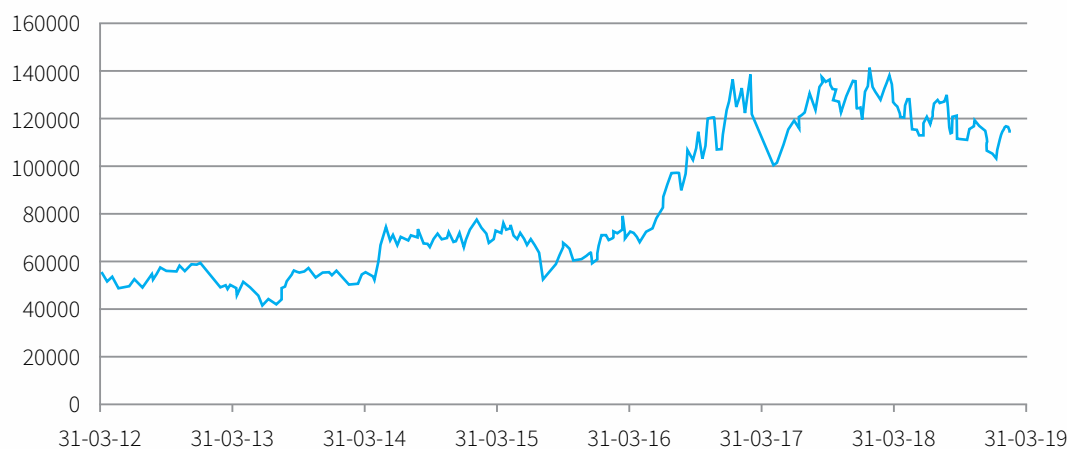
Month	BSE			NSE		
	High (₹)	Low (₹)	Volume (No. of Shares)	High (₹)	Low (₹)	Volume (No. of Shares)
Nov-18	273.20	259.50	9144492	273.30	259.40	17873505
Dec-18	283.00	264.80	850072	283.50	264.20	18287837
Jan-19	281.00	244.00	749137	279.45	244.00	13293607
Feb-19	271.50	243.00	933531	272.40	242.85	17782750
Mar-19	281.45	262.05	731626	281.75	265.85	13302747

CHART: SHARE PERFORMANCE VERSUS BSE SENSEX

HINDUSTAN ZINC SHARE PRICE/ BSE (SENSEX) MONTHLY CLOSE



MARKET CAPITALISATION PERFORMANCE FROM MARCH 31, 2012 TO MARCH 31, 2019 (₹ IN CRORE)



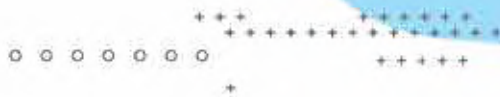
**(IV) DISTRIBUTION OF SHAREHOLDING**

Table 10 and 11 list the distribution of the shareholding of the equity shares of the Company by size and by ownership class, as on March 31, 2019.

**TABLE 10: SHAREHOLDING PATTERN BY SIZE ON MARCH 31, 2019**

<b>DISTRIBUTION SCHEDULE AS ON March 31, 2019</b>					
<b>S. No.</b>	<b>No. of Shares</b>	<b>No. of Shareholders</b>	<b>% of Shareholders</b>	<b>No. of Shares</b>	<b>% of Shareholding</b>
1	1 - 5000	106612	96.92	20817886	0.49
2	5001 - 10000	1751	1.59	6668524	0.16
3	10001 - 20000	823	0.75	6344603	0.15
4	20001 - 30000	282	0.26	3562140	0.08
5	30001 - 40000	170	0.15	3073574	0.07
6	40001 - 50000	53	0.05	1207344	0.03
7	50001 - 100000	133	0.12	4611353	0.11
8	100001 & ABOVE	174	0.16	4179033576	98.90
	<b>Total:</b>	<b>109998</b>	<b>100.00</b>	<b>4225319000</b>	<b>100.00</b>

**TABLE 11: SHAREHOLDING PATTERN BY OWNERSHIP AS ON MARCH 31, 2019**

<b>Category</b>	<b>No. of Shares Held</b>	<b>% of Shareholding</b>
<b>A PROMOTER'S HOLDING</b>		
<b>1 PROMOTERS</b>		
- INDIAN PROMOTORS		
VEDANTA LIMITED	2743154310	64.92
- FOREIGN PROMOTORS	0	
<b>Sub Total (A) (1)</b>	<b>2743154310</b>	<b>64.92</b>
<b>B PUBLIC SHARE HOLDING</b>		
<b>1 Institutions</b>		
(a) Mutual Funds	13296140	0.31
(b) Venture Capital Funds	0	0.00
(c) Alternate Investment Fund	0	0
(d) Foreign Venture Capital Investors	0	0.00
(e) Foreign Portfolio Investors	63473784	1.50
(f) Financial Institutions/Banks	2105017	0.05
(g) Insurance Companies	87492060	2.07
(h) Provident Funds/Pension Funds	0	0.00
(i) Any other	0	0.00
Foreign National	100	0.00
<b>Sub Total (B) (1)</b>	<b>166367101</b>	<b>3.94</b>
<b>2 Central Governments/State Governments</b>	2015181	0.04
<b>Sub Total (B) (2)</b>	<b>2015181</b>	<b>0.04</b>
<b>3 Non-Institutions</b>		
(a) (i) Individual Shareholders holding nominal share capital up to ₹ 2 Lakhs	41193283	0.97
(ii) Individual Shareholders holding nominal share capital in excess of ₹ 2 Lakhs	854870	0.02
(b) NBFC's Registered with RBI	10203	0.00
(c) Employee Trusts	0	0.00
(d) Overseas Depositories (Holding DRs)	0	0.00
(e) Any other		
President of India	1247950590	29.54



Category	No. of Shares Held	% of Shareholding
Non Resident Indian Repatriable	177181	0.00
Trusts	86476	0.00
Non Resident Indian	1478886	0.04
Clearing Members	41006	0.00
Other Schedule Banks	0	0.00
Non Resident Indian Non Repatriable	667098	0.02
Bodies Corporate	19856167	0.47
IEPF	940	0.00
HUF	1465708	0.03
<b>Sub Total (B) (3)</b>	<b>1313782408</b>	<b>31.09</b>
<b>Total Public Shareholding (B)= (B) (1)+(B) (2)+(B) (3)</b>	<b>1,482,164,690</b>	<b>35.08</b>
<b>GRAND TOTAL</b>	<b>4,225,319,000</b>	<b>100.00</b>

#### V) DEMATERIALISATION OF SHARES

The shares of the Company are compulsory traded in dematerialised form only. The Company's shares are available for trading in the depository system of both NSDL and CDSL. As at the financial year end 4222608134 equity shares forming 99.94% of the share capital of the Company, stand dematerialised.

The Company's share is actively traded on both the stock exchanges, namely BSE and NSE. Any shareholder desiring to transfer his shares either in physical form or to get the physical shares converted into electronic form, may contact the Company Secretary or the RTA for necessary advice and the procedure.

#### (VI) OUTSTANDING GDRS / ADRS / WARRANTS/ OPTIONS

The Company has not issued any Global Depository Receipts / American Depository Receipts / Warrants / Options.

#### (VII) DETAILS OF PUBLIC FUNDING OBTAINED IN THE LAST THREE YEARS

No public funding has been obtained in the last three years.

#### (VIII) COMMUNICATION WITH SHAREHOLDERS AND OTHERS

The Company published its quarterly, half yearly and yearly results in the form as prescribed under SEBI (LODR) within the prescribed time. The results were sent to stock exchanges where shares are listed and the same were published in select newspapers.

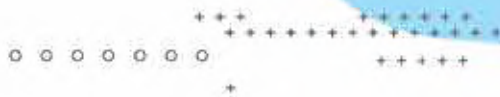
The financial results and official news releases are also displayed on the website of the Company ([www.hzlindia.com](http://www.hzlindia.com)). Annual Report containing inter-alia Audited Annual Financial Statements, Board's Report, Auditors Report and other important and statutory information are circulated to all members and to others entitled thereto. The Business Review along with CEO and CFO certificate forms a part of the Annual Report.

Presentations made to the institutional investors or to the analysts from time to time are available on the Company's web site under investor relations section.

**TABLE 12: DETAILS OF THE ANNOUNCEMENT OF THE FINANCIAL RESULTS FOR FY 2018-19**

Description	Date
Unaudited Financial Results for the quarter ended on June 30, 2018	July 23, 2018
Unaudited Financial Results for the quarter and half year ended on September 30, 2018	October 22, 2018
Unaudited Financial Results for the quarter and nine months ended on December 31, 2018	January 21, 2019
Audited Financial Results for the quarter and year ended on March 31, 2019	May 02, 2019

In addition to this, if there is any other announcement affecting the shareholders or public, it is duly informed to the stock exchanges and published in newspapers for the benefit of shareholders and public at large. The same are also placed on the website of the Company for information of all.



## (IX) GENERAL BODY MEETINGS

**TABLE 13: DETAILS OF THE LAST THREE GENERAL BODY MEETINGS**

Date	AGM	Location	Time
June 28, 2016	50 <sup>th</sup> AGM	Yashad Bhawan, Udaipur, Rajasthan	2.30 P.M.
August 18, 2017	51 <sup>st</sup> AGM	Yashad Bhawan, Udaipur, Rajasthan	2.30 P.M.
August 31, 2018	52 <sup>nd</sup> AGM	Yashad Bhawan, Udaipur, Rajasthan	2.30 P.M.

In the last three Annual General Meetings, special resolution was passed only for the reappointment of Statutory Auditors.

### Annual General Meeting

Date: July 31, 2019

Time: 2.30 pm

Venue: Yashad Bhawan, Udaipur

### Financial Calendar

The Company follows the financial year i.e. April to March for accounting purposes.

For the year ending March 31, 2020, financial results will be announced in the month following the end of the quarter.

### Book Closure

The dates of book closure are from July 26, 2019 to July 30, 2019, both days inclusive.

## (X) POSTAL BALLOT

During the current year, no approval of shareholders was taken through Postal Ballot.

## (XI) REGISTRAR AND TRANSFER AGENT

Karvy Fintech Private Limited  
(Formerly known as KCPL Advisory Services P Ltd)  
Karvy Selenium Tower B, Plot Nos. 31 & 32 | Financial District  
Nanakramguda | Serilingampally Mandal |  
Hyderabad - 500032 | India  
Ph. no.: +91 40 67161591  
Fax no.: 040-23311968  
E-mail: einward.ris@karvy.com

## GOVERNANCE & COMPLIANCE

### 1. CODE OF CONDUCT

Our values and principles are enshrined in the Business Ethics & Code of Conduct ('Code') applies to all executives of the Company. All Board members and all executives annually affirm compliance with the Code. This Code also ensures compliance with the provisions of the SEBI (LODR). All executives were imparted training during the year in addition to 100% of new joinees.

### These covers:

- Guidelines on Corporate Communication
- Securities Dealing Code (Insider Trading Regulations)
- Whistle Blower Policy
- Gift Policy
- The UK Bribery Act
- Foreign Corrupt Practices Act (USA)
- Fraud
- Human Rights
- Antitrust Compliance for Restricting Anti-Competitive Practices
- Health, Safety & Environment
- Political Contribution
- Sexual Harassment

The Code also covers Whistle Blower policy and Vigil Mechanism, which is available on the website of the Company, <http://www.hzindia.com/common/images/HZL-WHISTLE-BLOWER-POLICY-19.10.2015.pdf>. The annual declaration of its compliance by senior management personnel of the Company is given by the CEO & Whole-time Director, the same is annexed. During the year no personnel was denied access to the Audit Committee.

We adhere to section 184 of the Companies Act, 2013 which requires that every Director of a Company who is in any way concerned or interested in a contract or arrangement, is required to disclose the nature of his concern or interest annually at a meeting of the Board of Directors.

### 2. INTERNAL CONTROL SYSTEM

On the recommendation of the Audit Committee, the Company appointed M/s Deloitte Haskins & Sells LLP, Chartered Accountants as the internal auditors of the



Company for the financial year 2018-19. Documents, policies and authorisation guidelines comply with the level of responsibility and standard operating procedures specific to the respective businesses. Observations made in internal audit reports on business processes, systems, procedures and internal controls and implementation status of recommended remedial measures by M/s Deloitte Haskins & Sells LLP - Internal Auditors, are presented quarterly to the Audit Committee of the Board. The Company has a well-established internal control system and procedures and the same has been working effectively throughout the year.

### 3. RISK MANAGEMENT

The Company operates in conditions where economic, environment and social risk are inherent to its businesses. To overcome this and as per requirement of SEBI (LODR), Board has formed a Risk Management Committee to oversee the mitigation plan for the key risks faced by the Company.

The Company has developed a very comprehensive risk management policy under which all key risks and mitigation plans are compiled into a Risk Matrix. The same is reviewed quarterly by senior management and periodically also by the Risk Management Committee of the Board. The Risk Matrix contains the Company's assessment of impact and probability of each significant risk and mitigation steps taken or planned. The Company has unit-wise Risk Matrix which is reviewed quarterly by Unit and Location Management.

For a detailed discussion, please refer to section on Risk Management Framework.

### 4. COMPLIANCE

Our compliance systems cover a multitude of statutory obligations and ensures adherence to all applicable laws and regulations. During FY 2018-19, no material and uncontested financial or non-monetary sanctions were imposed upon the Company except as disclosed in the Financial Statements. Some of the key compliance aspects are dealt with below:

#### (a) Disclosure of Related Party Transactions

There have been no related party transactions with the Company's Promoters, Directors, Management or their relatives which have a potential conflict with the interests of the Company. Members may refer to disclosures made in Note No 37 to Financial Statements in compliance of Regulation 23 of SEBI (LODR) and Ind-AS 24. All the related party transactions are at arm's length price and in the ordinary course of business and with the prior approval of the Audit Committee. As per section 177 and 188 of the Companies Act 2013, Related Party Transaction policy is also available on the company website [http://www.hzlindia.com/common/images/Related\\_Party\\_Transaction\\_Policy.pdf](http://www.hzlindia.com/common/images/Related_Party_Transaction_Policy.pdf)

#### (b) Disclosure of Accounting Treatment in Preparation of Financial Statements

The Company follows the guidelines of Accounting Standards referred to in section 133 of the Companies Act, 2013 read with Rule 7 of the Companies (Accounts) Rules, 2014 together with Ind AS issued by the Institute of Chartered Accountants of India.

#### (c) Compliance with Capital market regulations

The Company has complied with all the requirements of regulatory authorities and no penalties or strictures were imposed on the Company by stock exchanges or SEBI or any other statutory authority on any matter related to capital market during the last three years.

In compliance with SEBI's regulation on prevention of insider trading, the Company has instituted a comprehensive insider trading code for its management and designated executives, which advises them on procedures to be followed and disclosures to be made while dealing with shares of the Company and cautioning them of the consequences of violations. No violations have been reported during the year.

#### (d) Vigil Mechanism

The Company has formatted a Vigil Mechanism for Directors and employees to report genuine concerns. The Vigil Mechanism provides adequate safeguards against victimisation of any person who avail the mechanism and also provides for direct access to the Chairperson of the Audit Committee. The designated email id for lodging the complaints under Vigil Mechanism or Whistle Blower is [hzl.whistleblower@vedanta.co.in](mailto:hzl.whistleblower@vedanta.co.in) and has also provided dedicated phone number. The same is also available on the website of the Company.

#### (e) Share Transfer system

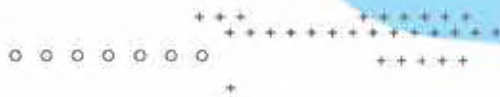
The Board has delegated the power of approving physical transfer and transmission of shares to the Share Transfer Committee consisting of CEO & WTD, CFO and Company Secretary.

#### (f) Credit rating

Company is rated by 2 agencies – namely CRISIL - Long Term – AAA, Short Term- A1+; and by India Ratings Short Term- A1+

#### (g) During the year company has not raised any funds through preferential allotment or qualified institutions placement as specified under regulation 32(7A)

#### (h) Fee disclosure as required by clause 10(K), part C, schedule V of SEBI (LODR) regulation 2015.



**Total fees for all services paid by the Company on a consolidated basis to S R Batliboi & Co. LLP (statutory auditors of the Company) and to entities of the network of which the statutory auditor is a part for the year ended March 31, 2019 is as follows:**

	<b>Amount (₹)</b>
Audit and related services	1,91,11,000
Other fees	13,53,636
<b>Total</b>	<b>2,04,64,636</b>

**(i) Commodity Price Risk or Foreign Exchange Risk and Hedging Activities**

**Fluctuation in commodity prices**

**Impact:** Prices of the Company's finished goods are linked to international bench mark i.e. LME (for Zinc and Lead) and LBMA (for silver) and are strongly influenced by global economic conditions and global demand supply for the products. Volatility in commodity prices and demand may adversely affect our earnings, cash flow and reserves.

**Mitigation:** We consider exposure to commodity price fluctuations to be an integral part of company's business and its usual policy is to sale its products at prevailing market prices, and not to enter into long term price hedging arrangements. However, to minimise price risk for finished goods and to achieve monthly average hedging is done. In exceptional circumstances, we may enter into strategic hedging with prior approval of the Company Management. The Company monitors the commodity markets closely to determine the effect of price fluctuations on earnings, capital expenditure and cash flows.

**Currency exchange rate fluctuations**

**Impact:** Our assets, earnings and cash flows are influenced by a variety of currencies. Fluctuations in exchange rates of those currencies may have an impact on our financials. Although the majority of the Company's revenue is tied to commodity prices that are typically priced by reference to the US dollar, a significant part of its expenses are incurred and paid in local currency.

**Mitigation:** We do not speculate in forex. We have developed robust controls in forex management to monitor, measure and hedge currency risk liabilities. The Treasury team, reviews our forex-related matters periodically and suggests necessary courses of action as may be needed by businesses from time to time, and within the overall framework of our forex policy.

The Company strives to achieve asset liability offset of foreign currency exposures and only the net position is hedged. The Company uses forward exchange contracts to hedge the effects of movements in exchange rates on foreign currency denominated assets and liabilities. The sources of foreign exchange risk are outstanding amounts payable for imported raw materials, capital goods and other supplies as well as financing transactions denominated in foreign currencies. The hedge mechanisms are reviewed periodically to ensure that the risk from fluctuating currency exchange rates is appropriately managed.

S. No.	Commodity Name <sup>(1)</sup>	Exposure <sup>(2)</sup> in INR towards the particular commodity	Units	Exposure <sup>(2)</sup> in quantity towards the particular commodity	% of such exposure hedged through commodity derivatives				Total
					Domestic market		International market		
					OTC	Exchange	OTC	Exchange	
1	Zinc	144,754,393,253	MT	694,141.28	0	0	31	26	58
2	Lead	31,585,892,662	MT	197,661.23	0	0	82	0	82
3	Silver	25,570,570,023	MT	676.17	0	0	31	31	62

1. Commodity means a commodity whose price is fixed by reference to an international benchmark
2. Exposure includes opening stock, purchases (or cost of production) and sales

**(j) CEO and CFO Certification**

The CEO and CFO certification of the Financial Statements for FY 2018-19 is enclosed at the end of this report.

**(k) The Company has complied with all mandatory requirements of SEBI (LODR) Regulations, 2015 including discretionary requirements. The ones not yet adopted are as follows:**

- Maintenance of Chairman's office: Currently Chairman is a non-executive Chairman.
- Communication of half yearly results to each household of members: Results are placed on the Company's website and published in leading newspapers.



**(I) Additional Shareholder Information**

**Registered Office:** Hindustan Zinc Limited, Yashad Bhawan, Udaipur – 313004, Rajasthan

**Plant Locations**

Mining Units (all in Rajasthan):

Rampura Agucha Mine	:	Bhilwara District
Sindesar Khurd Mine	:	Rajsamand District
Zawar Mines	:	Udaipur District
Rajpura Dariba Mine	:	Rajsamand District
Kayad Mine	:	Ajmer District

**Smelting Units (all in Rajasthan):**

Chanderiya Lead Zinc Smelter	:	Chittorgarh District
Dariba Smelting Complex	:	Rajsamand District
Debari Zinc Smelter	:	Udaipur District

**Captive Power Plants (all in Rajasthan):**

Chanderiya Lead Zinc Smelter	:	Chittorgarh District
Dariba Smelting Complex	:	Rajsamand District
Zawar	:	Udaipur District

**Processing & Refining Units:**

Pantnagar Metal Plant	:	Rudrapur District (Uttarakhand)
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**Discontinued Units:**

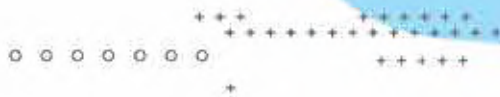
Vizag Zinc Smelter	:	Visakhapatnam District (Andhra Pradesh)
Tundoo Lead Smelter	:	Dhanbad District (Jharkhand)
Maton Mine	:	Udaipur District
Haridwar Zinc Plant	:	Haridwar District, (Uttarakhand)

**Wind Power Farms:**

Samana	:	Jamnagar District (Gujarat)
Gadag	:	Gadag District (Karnataka)
Gopalpura	:	Hassan District (Karnataka)
Mokal	:	Jaisalmer District (Rajasthan)
Osiyan	:	Jodhpur District (Rajasthan)
Chakala	:	Nandurbar District (Maharashtra)
Muthiyampatti	:	Tirpur District (Tamil Nadu)

**Address for Correspondence:**

Mr. R. Pandwal  
Company Secretary  
Hindustan Zinc Limited  
Yashad Bhawan,  
Udaipur – 313004,  
Rajasthan



### COMPLIANCE CERTIFICATE UNDER REGULATION 17(8) OF SEBI (LISTING OBLIGATIONS & DISCLOSURE REQUIREMENTS) REGULATION, 2015

- A. We, Sunil Duggal, CEO & Whole-time Director and Swayam Saurabh, Acting Chief Financial Officer of Hindustan Zinc Limited, have reviewed the financial statements and the cash flow statement for the year and that to the best of our knowledge and belief:
- (1) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;
  - (2) these statements together present a true and fair view of the listed entity's affairs and are in compliance with existing accounting standards, applicable laws and regulations.
- B. There are, to the best of our knowledge and belief, no transactions entered into by the Company during the year which are fraudulent, illegal or violative of the Company's code of conduct.
- C. We accept responsibility for establishing and maintaining internal controls for financial reporting and that we have evaluated the effectiveness of internal control systems of the Company pertaining to financial reporting and we have disclosed to the Auditors and the Audit Committee, deficiencies in the design or operation of such internal controls, if any, of which we are aware and the steps we have taken or propose to take to rectify these deficiencies.
- D. We have indicated to the Auditors and the Audit Committee
- (1) significant changes in internal control over financial reporting during the year;
  - (2) significant changes in accounting policies during the year and that the same have been disclosed in the Notes to the financial statements; and
  - (3) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the listed entity's internal control system over financial reporting.

**Swayam Saurabh**  
Acting Chief Financial officer

**Sunil Duggal**  
CEO & Whole-time Director  
Camp: London

Place: Mumbai  
Date: May 02, 2019



## AUDITOR'S REPORT ON COMPLIANCE WITH THE CONDITIONS OF CORPORATE GOVERNANCE AS PER PROVISIONS OF CHAPTER IV OF SECURITIES AND EXCHANGE BOARD OF INDIA (LISTING OBLIGATIONS AND DISCLOSURE REQUIREMENTS) REGULATIONS, 2015

The Members  
Hindustan Zinc Limited  
Yashad Bhawan,  
Udaipur-313004  
Rajasthan

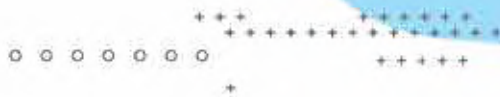
1. The accompanying Corporate Governance Report prepared by Hindustan Zinc Limited (hereinafter the "Company"), contains details as required by the provisions of Chapter IV of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, as amended ("the Listing Regulations") ("Applicable criteria") with respect to Corporate Governance for the year ended March 31, 2019.

### MANAGEMENT'S RESPONSIBILITY

2. The preparation of the Corporate Governance Report is the responsibility of the Management of the Company including the preparation and maintenance of all relevant supporting records and documents. This responsibility also includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the Corporate Governance Report.
3. The Management along with the Board of Directors are also responsible for ensuring that the Company complies with the conditions of Corporate Governance as stipulated in the Listing Regulations, issued by the Securities and Exchange Board of India.

### AUDITORS' RESPONSIBILITY

4. Pursuant to the requirements of the Listing Regulations, our responsibility is to express a reasonable assurance in the form of an opinion whether the Company has complied with the specific requirements of the Listing Regulations referred to in paragraph 1 above.
5. We conducted our examination of the Corporate Governance Report in accordance with the Guidance Note on Reports or Certificates for Special Purposes and the Guidance Note on Certification of Corporate Governance, both issued by the Institute of Chartered Accountants of India ("ICAI"). The Guidance Note on Reports or Certificates for Special Purposes requires that we comply with the ethical requirements of the Code of Ethics issued by the Institute of Chartered Accountants of India.
6. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for Firms that perform Audits and Reviews of Historical Financial Information, and other Assurance and Related Services Engagements.
7. The procedures selected depend on the auditor's judgment, including the assessment of the risks associated in compliance of the Corporate Governance Report with the applicable criteria. Summary of key procedures performed include:
  - i. Reading and understanding of the information prepared by the Company and included in its Corporate Governance Report;
  - ii. Obtained and verified that the composition of the Board of Directors w.r.t executive and non-executive directors has been met throughout the reporting period;
  - iii. Obtained and read the Directors register as on March 31, 2019 and verified that at-least one women director was on the Board during the year;
  - iv. Obtained and read the minutes of the following committee meetings held from April 01, 2018 to March 31, 2019:
    - (a) Board of Directors meeting;
    - (b) Audit committee;
    - (c) Nomination and remuneration committee;
    - (d) Stakeholders Relationship Committee; and
    - (e) Risk management committee



- v. Obtained necessary representations and declarations from directors of the Company including the independent directors; and
- vi. Performed necessary inquiries with the management and also obtained necessary specific representations from management.

The above-mentioned procedures include examining evidence supporting the particulars in the Corporate Governance Report on a test basis. Further, our scope of work under this report did not involve us performing audit tests for the purposes of expressing an opinion on the fairness or accuracy of any of the financial information or the financial statements of the Company taken as a whole.

#### **BASIS FOR QUALIFIED OPINION**

- 8. We further report that the Board of Directors of the Company is duly constituted with proper balance of Executive Directors and Non-Executive Directors except that with regard to the requirement of having minimum number of independent directors in terms of Regulation 17(1) (b) of the Listing Regulations, the Company has not met the said requirement with one independent director being short throughout the year and two independent directors for part of the year.

#### **QUALIFIED OPINION**

- 9. Based on the procedures performed by us as referred in paragraph 7 above, and according to the information and explanations given to us, except for matter stated in paragraph 8 above, we are of the opinion that the Company has complied with the conditions of Corporate Governance as stipulated in the Listing Regulations, as applicable as at March 31, 2019, referred to in paragraph 1 above.

#### **Other matters and Restriction on Use**

- 10. This report is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has conducted the affairs of the Company.
- 11. This report is addressed to and provided to the members of the Company solely for the purpose of enabling it to comply with its obligations under the Listing Regulations with reference to Corporate Governance Report accompanied with by a report thereon from the statutory auditors and should not be used by any other person or for any other purpose. Accordingly, we do not accept or assume any liability or any duty of care or for any other purpose or to any other party to whom it is shown or into whose hands it may come without our prior consent in writing. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

For **S.R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration Number: 301003E/E300005

**per Raj Agrawal**

Partner

Membership Number: 82028

UDIN: 19082028AAAAAA4737

Place: Gurugram

Date: May 02, 2019





# business responsibility report

## SECTION A: GENERAL INFORMATION

1. Corporate Identity Number (CIN) of the Company	L27204RJ1966PLC001208
2. Name of the Company	Hindustan Zinc Limited
3. Registered address	Yashad Bhawan, Udaipur – 313004 (Rajasthan) India
4. Website	www.hzlindia.com
5. E-mail id	hzl.cosecy@vedanta.co.in
6. Financial Year reported	April 01, 2018 - March 31, 2019
7. Sector(s) that the Company is engaged in (industrial activity code-wise)	Mining and Smelting of Non Ferrous metal National Industrial Classification Code: Zinc - 27204 Lead - 27209
8. List three key products/services that the Company manufactures/provides (as in balance sheet)	Zinc, Lead and Silver
9. Total number of locations where business activity is undertaken by the Company	
i. Number of International Locations	Nil
ii. Number of National Locations	9 operating units (excluding wind farms, captive power plants and administrative offices)
10. Markets served by the Company - Local/State/National/International	Our products are sold almost in all the states in India. We also export, primarily to Asia and Middle East

## SECTION B: FINANCIAL DETAILS

1. Paid up Capital	₹ 845 Crore
2. Total Turnover	₹ 21,118 Crore
3. Total profit after taxes	₹ 7,956 Crore
4. Total spending on Corporate Social Responsibility (CSR) as percentage of profit after tax (%)	₹ 130.20 Crore, equivalent to 1.64% of the profit after tax
5. List of activities in which expenditure in 4 above has been incurred	Education; Sustainable Livelihoods; Women's Empowerment; Health, Water & Sanitation; Sports & Culture; Environment; and Community Development

## SECTION C: OTHER DETAILS

1. Does the Company have any Subsidiary Company/ Companies?	No
2. Do the subsidiary Company/Companies participate In the BR Initiatives of the parent company? If yes then indicate the number of such subsidiary Company(s)	NA
3. Do any other entity/entities (e.g. suppliers, distributors etc.) that the Company does business with, participate in the BR initiatives of the Company? If yes, then indicate the percentage of such entity/entities? [Less than 30%, 30-60%, More than 60%]	No

## SECTION D: BR INFORMATION

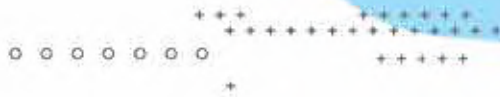
### 1. DETAILS OF DIRECTOR/DIRECTORS RESPONSIBLE FOR BR

#### a) Details of the Director/Director(s) responsible for implementation of the BR Policy/policies

S. No.	Particulars	Details
1.	DIN Number (if applicable)	07291685
2.	Name	Mr. Sunil Duggal
3.	Designation	Chief Executive Officer & Whole-time Director
4.	Telephone number	0294 6604000
5.	e-mail id	hzl.cosecy@vedanta.co.in

#### b) Details of the BR head

same as above



**2. PRINCIPLES OF BUSINESS RESPONSIBILITY (BR) POLICY AS PER NATIONAL VOLUNTARY GUIDELINES (NVG)**

- Principle 1 (P1): Conduct, Governance, Ethics, Transparency and Accountability
- Principle 2 (P2): Safety and Optimal Resource Utilisation across Product Lifecycle
- Principle 3 (P3): Employee Well-being
- Principle 4 (P4): Engaging Stakeholders
- Principle 5 (P5): Respecting and Promoting Human Rights
- Principle 6 (P6): Nurturing the Environment
- Principle 7 (P7): Responsible Policy Advocacy
- Principle 8 (P8): Supporting Inclusive Development
- Principle 9 (P9): Providing Customer Value

**Principle-wise (as per NVGs) BR Policy/policies**

Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
1. Do you have a policy/policies* for....	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Has the policy been formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	Y
3. Does the policy conform to any national /international standards? If yes, specify? (50 words) Please refer footnote* below	Y	Y	Y	Y	Y	Y	Y	Y	Y
4. Has the policy been approved by the Board*? If yes, has it been signed by MD/owner/CEO/ appropriate Board Director?	Y	Y	Y	Y	Y	Y	Y	Y	Y
5. Does the Company have a specified committee of the Board/ Director/Official to oversee the implementation of the policy?	Y	Y	Y	Y	Y	Y	Y	Y	Y
6. Indicate the link for the policy to be viewed online?	<a href="https://www.hzlindia.com/about-hzl/code-of-conduct/">https://www.hzlindia.com/about-hzl/code-of-conduct/</a>								
7. Has the policy been formally communicated to all relevant internal and external stakeholders?	The policies have been communicated to the key internal stakeholders and are in the Company website.								
8. Does the Company have in-house structure to implement the policy/policies?	Y	Y	Y	Y	Y	Y	Y	Y	Y
9. Does the Company have a grievance redressal mechanism related to the policy/policies to address stakeholders' grievances related to the policy/policies?	Yes, any grievances or the feed-back relevant to the policies can be sent to <a href="mailto:hzl.cosecy@vedanta.co.in">hzl.cosecy@vedanta.co.in</a> or <a href="mailto:hzl.whistleblower@vedanta.co.in">hzl.whistleblower@vedanta.co.in</a>								
10. Has the Company carried out independent audit/evaluation of the working of this policy by an internal or external agency?	The policies have been evaluated internally. Several of the policies are also included in third party audits.								

\* All the policies of the Company emanate from Vedanta Sustainability Governance Standards, which are aligned with International Finance Corporation and meet the requirement of IMS Standards. Most of these policies are enshrined in the Company's Business Ethics and Code of Conduct, which has been approved by the Board.

**2A. IF ANSWER TO S. NO. 1 AGAINST ANY PRINCIPLE, IS 'NO', PLEASE EXPLAIN WHY**

Not Applicable

**3. Governance related to BR**

**I. Indicate the frequency with which the Board of Directors, Committee of the Board or CEO assess the BR performance of the Company. Within 3 months, 3-6 months, Annually, More than 1 year.**

CEO & Whole-time Director and Senior Management assess the BR performance on an on-going basis, at least annually.

**II. Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?**

Separate Sustainability report was published in FY 2018 and same is hosted on the Company website. Same is being finalized for FY 2019 and will also be hosted on the Company website.



## SECTION E: PRINCIPLE-WISE PERFORMANCE

### PRINCIPLE 1: CONDUCT, GOVERNANCE, ETHICS, TRANSPARENCY AND ACCOUNTABILITY

**1. Does the policy relating to ethics, bribery and corruption cover only the Company? Yes/ No. Does it extend to the Group/Joint Ventures/Suppliers/ Contractors/NGOs /Others?**

No. The Business Ethics and Code of Conduct serves as the guiding philosophy for all employees, suppliers, customers, NGOs and others who have dealings with the Company. All stakeholders are expected to comply with the Business Ethics and Code of Conduct. A separate Vendor's Code of Conduct specifically covers our vendors and partners. Both the codes are available on the Company's website.

**2. How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.**

31 investor complaints were received during FY 2019 and all were resolved. Other complaints are received by different functionaries in the Company and are suitably addressed. In addition, customer complaints and whistle blower complaints are monitored separately and all have been satisfactorily resolved.

### PRINCIPLE 2: SAFETY AND OPTIMAL RESOURCE UTILISATION ACROSS PRODUCT LIFECYCLE

**1. List up to three of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities.**

Our three major products are zinc, lead and silver metal. We make all efforts to ensure that we produce in a safe and environmentally responsible manner. Over the year, we have constantly improved our recoveries, reduced hazardous waste generation, improved energy consumption and adopted new technologies to optimally use available natural resources to improve our environment footprint. Below are three illustrations:

- Zinc in Jumbo shape helps in lesser zinc wastage, ease of handling, cost efficiency and better safety in customer's operations. The smaller surface area to weight ratio of zinc jumbos compared to small ingot means less turbulence during galvanizing bath and therefore less ash is produced.

**i. Reduction during sourcing/production/ distribution achieved since the previous year throughout the value chain?**

	2017-18		2018-19	
	Sp. Energy Consumption	Sp. Water Consumption*	Sp. Energy Consumption	Sp. Water Consumption*
HZL	20.52	15.08	20.47	15.73

Energy (GJ/MT of Metal)

Water (m<sup>3</sup>/MT of Metal)

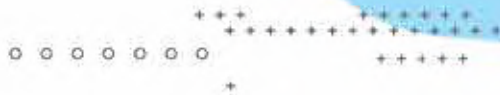
\* Including Udaipur STP treated water

- Continuous Galvanizing Grade (CGG) zinc alloy as per customer requirement removes the need to alloy at customer's premises and thus saves energy, cost and improves bath management during galvanizing.
- PW zinc is a pre-alloyed zinc lead combination and with its use there is no need to add lead separately in zinc galvanizing bath reducing occupational hazards of operators in dealing with lead in galvanizing plant.

**2. For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product (optional):**

**Energy Conservation:** Energy consumption is constantly monitored at the mines, smelters and refineries with a view to achieve overall reduction. In order to conserve energy, the Company has taken many initiatives like replacement of old high pressure burner with low pressure burner, duct modifications, process optimization, VFDs, replacement of motors with energy efficient motors and LED lights in place of conventional lights. To reduce our dependency on non-renewable energy sources we are optimizing renewable energy through solar power and wind power plant. The Company has 273.5 MW wind farms in five states across India which are registered under Clean Development Mechanism (CDM) program by United Nations Framework Convention on Climate Change (UNFCCC) and Verified Carbon Standard program by VEERA. For its captive use, the Company has solar power capacity of 38.9 MW out of this 22 MW has been commissioned in current year. All the Solar Power Projects have been installed on waste land/dump yard at Dariba mine, Debari Zinc smelter and Agucha mine. After completion of Fumer Project we are going to enhance waste management and it will generate 21 MW through waste heat recovery boiler, out of which 11 MW will be used in running the Fumer project and rest will be utilized for another operations or will be available for state grid.

**Water use efficiency:** Used water is reclaimed and re-used to conserve water. All units are maintaining zero discharge via effluent treatment plants. The processes are also reviewed and modified to reduce the requirement of fresh water. With the success of 20 million litres per day (MLD) Sewage Treatment Plant (STP), Phase-2 of 40 MLD STP is being planned out of which 25 MLD STP is commissioned and treated water will be utilised in Dariba and this will bring the fresh water intake to minimum at our Rajpura Dariba complex.



- ii. **There is reduction in energy consumption by 0.24 % and 4% increase in water consumption due to inconstancy in operation.**
- iii. **Reduction during usage by consumers (energy, water) has been achieved since the previous year?**

Our increased focus on value added products has improved energy consumption at the consumer's end. As an illustration of Jumbo zinc, with innovative design and customization of products, better zinc galvanizing bath management is achieved since melting of uniform bigger blocks is less energy consuming than smaller ingots due to lesser surface area, better transmission of heat and no energy wastage due to lesser splashing in zinc bath. Substantial amount of energy cost saving has been realized by zinc consumers. Customers get benefit of less dross generation and less recycling cost. Also with CGG, Pre aluminum alloyed Zinc etc., the customer gets benefit of avoiding the alloying energy cost.

**3. Does the Company have procedures in place for sustainable sourcing (including transportation)?**

- i. **If yes, what percentage of your inputs was sourced sustainably?**

The Company sources its primary raw-material from captive mines. Beneficiation is generally carried on within the mine premises to minimise transportation. For the past several years, the Company has added more to its mining reserves and resources than it has depleted, through systematic exploration efforts.

The Company has now developed in conjunction with transporters and third parties, mechanised shutter vehicles for movement of concentrate. This will be proliferated during the coming years and will reduce spillage, pilferage and dust pollution on the roads. We are increasing transportation of raw material and finished goods through Rail which will help in reduction in carbon emission. The company also encourages Vendors to set up local manufacturing units in vicinity of our operations to reduce transportation.

Please also refer to our Environment section of this Annual Report for details about our water, waste and energy conservation initiatives.

**4. Has the company taken any steps to procure goods and services from local and small producers, including communities surrounding their place of work? If yes, what steps have been taken to improve their capacity and capability of local and small vendors?**

The Company sources its major inputs from OEMs and large national and international manufacturers. There is limited industrial activity around our operations. We are actively

promoting "Make in India" concept and based on our request some of our major suppliers had set up manufacturing facility in proximity of our operations which had led to local employment and technology development in India. Our direct and indirect employment as also our CSR activities are largely focused on the communities surrounding our operations.

**5. Does the company have a mechanism to recycle products and waste? If yes what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%)? Also, provide details thereof, in about 50 words or so.**

Our production process is based on principles of optimal use of the material and natural resources. Our primary activities are in the extraction, processing and smelting of various minerals as well as power generation using well-established processes and technologies. Our focus on best available technology helps us to produce these products using efficient energy consumption and maximum mineral recovery. We have in place a Resource Use and Waste Management Technical Standard and the supporting guidance notes which augment us to mitigate the environmental impacts of our products and process.

We have been constantly enhancing technical capabilities for better recoveries of main products and by-products. We have commenced construction of a Fumer plant in our existing leaching circuit of Hydrometallurgical process. This will eliminate generation of hazardous waste and help us to eliminate the use of land for storing this waste. We have also commissioned Paste Fill Plants at Sindesar Khurd Mine and Rampura Agucha mine as an environmentally sustainable global practice. Central R&D Laboratory (CRDL) of Hindustan Zinc has worked with wastes generated from Pyro-smelting, Hydro-smelting and Captive Power Plant respectively and established a suitable raw mix design to cast paver blocks using these waste materials.

Our Waste to Wealth committee exploring the challenging initiative of generating wealth from waste and working on to achieve primary objective of Reduction of waste generation, Conversion of residue material to saleable product and Reduction of waste to SLFs. The business continued to improve its performance in conservation and recycling. During the reporting year, the water recycling rate was 35.95% (FY 2018: 35%) and 64% of the waste generated during the year recycled. (FY 2018: 42%)

*WE ARE ACTIVELY ENGAGED WITH REGULATORY AUTHORITIES' STREAM LINING APPROVALS FOR UTILIZING JAROSITE/ JAROFIX / SLAG IN ROAD CONSTRUCTION AND IN MANUFACTURING OF CEMENT. SO AS AN INITIATIVE PRESENTLY 3,14,776 MT OF WASTE FROM SMELTERS UTILIZED IN ROAD CONSTRUCTION AND 77,608 MT UTILIZED IN CEMENT INDUSTRY.*



**PRINCIPLE 3: EMPLOYEE WELL-BEING****1. Please indicate the total number of employees.**

4,199 executives and non-executives as at March 31, 2019

**2. Please indicate the total number of employees hired on temporary/contractual/casual basis.**

17,384 under our contractors as at March 31, 2019

**3. Please indicate the number of permanent women employees.**

376 as at March 31, 2019

**4. Please indicate the number of permanent employees with disabilities**

Not tracked

**5. Do you have an employee association that is recognized by the management?**

Yes, there are recognised trade unions

**6. What percentage of your permanent employees are members of this recognized employee association?**

100% of all non-executives

**7. Please indicate the number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.**

Nil

S. No	Category	No of complaints filed during the financial year	No of complaints pending as on end of the financial year
1	Child labour/forced labour/involuntary labour	Nil. The Company does not hire child labour, forced labour or involuntary labour	Nil
2	Sexual Harassments	4	Nil
3	Discriminatory employment	The Company does not discriminate in the recruitment process. No reported case.	Nil

**8. What percentage of your under mentioned employees were given safety and skill up-gradation training in the last year?**

Category	Safety Training	Total (as on March 31, 2019)	%	Skill Upgradation Training	%
Permanent Executives*	3,061	4,199	NA	3,448	NA
Permanent Women Employees	70	330	NA	300	NA
Contractual Employees	94,887	17,384	NA	3,600	NA
Employees with Disability		Separate list not available			

\* Includes executives and non-executives

**PRINCIPLE 4: ENGAGING STAKEHOLDERS - SUSTAINING VALUE****1. Has the Company mapped its internal and external stakeholders? Yes/No**

Yes. Our primary stakeholders are our employees, vendors, customers, governments, shareholders and the communities around our operations. We continuously engage with each of our stakeholder groups on a pro-active basis and have different grievance redressal mechanisms and stakeholder engagement methodologies in place.

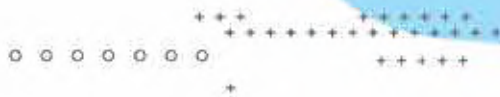
**2. Out of the above, has the Company identified the disadvantaged, vulnerable & marginalized stakeholders.**

Identification of the disadvantaged, vulnerable and marginalized stakeholders is an on-going process. In particular, for any new proposed project or expansion, we map and engage with all such stakeholders on a proactive

basis, particularly through our CSR activities. Further, we have stakeholder management and grievance mechanism in place at all our locations.

**3. Are there any special initiatives taken by the Company to engage with the disadvantaged, vulnerable and marginalized stakeholders? If so, provide details thereof, in about 50 words or so.**

Yes, we engage with the disadvantaged, vulnerable and marginalized stakeholders. Under our project "Jeevan Tarang Zinc Ke Sang" our vision is to create a more equal world for Persons with Disabilities (PwDs). We have joined hands with the institutions working with them near our locations in Ajmer, Bhilwara and Udaipur district and reached about 800 PwDs. We have also engaged Noida Deaf Society through which we have been able to carry out following major activities in these institutions for deaf:



- Indian Sign Language training has been integrated for hearing impaired students and their teachers
- Pre vocational training in computer and English for the differently abled students for senior classes.

Our intervention for the visually impaired (VI) involves Technology based learning for students by giving android smart phones to access books through Bookshare, world's largest online library for visually impaired.

Social gatherings were arranged where disability is not a barrier for being social and entertainment. Two such campaigns were Audio described format of the movie 'Hichki' was screened for visually impaired at Ajmer, Bhilwara and Udaipur. Please refer to the CSR section of this annual report for more details.

#### PRINCIPLE 5: RESPECTING AND PROMOTING HUMAN RIGHTS

##### 1. Does the policy of the Company on human rights cover only the Company or extend to the Group/Joint Ventures/Suppliers/Contractors/NGOs/Others?

Our Human Rights policy is aligned to the United Nations Guiding Principles on Business and Human Rights. The policy also covers all its suppliers, contractors and NGOs. The clauses of the Code of Conduct and SA 8000 standards extend to all business partners.

##### 2. How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management?

There have been no stakeholder complaints related to human rights. Please also refer to principle 1, point 2.

#### PRINCIPLE 6: NURTURING THE ENVIRONMENT

##### 1. Does the policy cover only the Company or extends to the Group/Joint Ventures/ Suppliers/Contractors/NGOs/ others?

All our Sustainability policies (HSE, Biodiversity, Energy and Climate change, Water Management, HIV/ AIDs, Human Rights and Supplier & Contractor Sustainability Management and CSR Policy) is applicable and extended to Suppliers/ Contractors/NGOs/others. We aim to propagate the principles of Sustainability throughout our Value chain and to all stakeholders. The Policy on 'Supplier & Contractor Sustainability Management' encourages resource efficiency in the supply chain which together with the 'Code of Conduct for Vendors and Service Providers' provide guidance to supply chain members and partners to adopt sustainable practices. Also, induction and refresher trainings are imparted to our contract employees and others to raise awareness on sustainability policies and standards. During the year Rolled out Tailings Management Policy to manage tailings and waste facilities in a manner that protects the health of our employees, community and the natural environment.

##### 2. Does the Company have strategies/initiatives to address global environmental issues such as climate change, global warming etc.? Y/N. If yes, please give details.

Majority of the manufacturing locations of HZL are certified as per ISO: 14001 Environment Management System and OSHAS 18001. Our Sindesar Khurd Mines, Pantnagar Metal plant and Rajpura Dariba mines have been certified as per ISO: 50001 Energy Management System and we are targeting ISO: 50001 Energy Management System certification for all units. There are several innovative technologies which have been implemented to reduce the energy consumption, to reduce our dependency on non-renewable energy sources we are optimizing renewable energy through solar power and wind power plant (38.9 MW of Solar power for captive use). We are also conducting energy audits and taking the measures to improve the energy efficiency continuously.

Energy and Climate Change Management policy and HSE policy guides the organization to proactively address the impact of climate change and other global environment issues through adopting and maintaining global best practices in Energy and Climate Change management, Water Management and to minimize greenhouse gas emissions. We are publically disclosing our Scope 1, Scope 2 and Scope 3 GHG emissions through climate change CDP disclosure.

We become signatory to Science Based Target initiative (SBTi) and committed to reduce absolute Scopes 1 and 2 GHG emissions 14% by 2026 from a 2016 base year and committed to reduce absolute Scope 3 GHG emissions 20% by 2026 from a base year 2016.

Most of our operations are in state of Rajasthan which is water scare region and we see a climate change as a material concern for our business and stakeholders. Our focus is on both climate mitigation and adaption measures. This includes the diversifying water and energy resources, securing alternative water source for the business, public private partnership for municipal water reuse / recycling, sustainable agriculture, energy use optimization, efficiency improvement, alternative source of energy use etc. We planted 1.5 Lacs saplings during the year to increase flora density in the surrounding areas of our operations.

The Company has undertaken several water conservation and harvesting initiatives for reduction in fresh water intake. These include continual improvement in specific water consumption; adoption of best practices to achieve zero discharge in the Company's operating units and the establishment of rainwater harvesting structures both within the Company's premises and in the catchment areas of its operations. These initiatives not only lower fresh water consumption but also maximize groundwater recharge. With the success of 20 million litres per day (MLD) Sewage Treatment Plant (STP), Phase-2 of 40 MLD STP is being planned, out of which 25 MLD commissioned during the year and treated water will be utilised in Dariba and this will bring the fresh water intake to minimum at our Rajpura Dariba complex.



We continuously monitor our greenhouse gas emission intensity for reduction and endeavor to minimize our carbon footprint and voluntarily participate in Carbon Disclosure Project program since 2011. We are also signatory of UNGC and FIMI and submit the communication of progress every year. We have also initiated the process of reporting our sustainability performance as per the GRI Standard in our Sustainability report. The Company is also computing its Greenhouse Gas inventory in line with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, which is being assured as per the ISAE 3000 standard, by a third-party assurance provider.

This year was significant with recognition at Global level as ranked 5<sup>th</sup> globally in Dow Jones Sustainability Index in metal and mining industries for our Sustainability Performance and ranked 1<sup>st</sup> globally in Environment dimension.

### 3. Does the company identify and assess potential environmental risks? Y/N

Yes, Environmental risks are regularly identified and assessed through the following:

- Environment and Social Impact Assessment (ESIA) studies carried out by recognized and approved third parties to identify risks and based on that mitigation plan is prepared in the form of Environmental and Social Management Plan, which is integral part of ESIA document.
- Environmental risks are being identified and assessed as part of Integrate Management system ISO: 14001.
- Risk register is maintained by all units under the guidance of Risk Management policy and major risks are reviewed periodically at corporate level.
- Hazard Identification and Risk assessment are also conducted as part of safety management system to identify potential environmental hazards and risks.
- Environment incidents are being captured through online module. Root cause analysis is being done through why-why analysis and learnings are being shared to all units to avoid the reoccurrence.

To effectively manage each of environmental risks, we have a set of Sustainability policies and management and technical standards. An integrated sustainability database management system implemented across the Company ensures monitoring and reviewing of sustainability performance through defined key performance indicators. We have Sustainability Assurance process in place for ensuring accuracy and verifiability of sustainability performance against the four pillars of our Sustainability Framework.

Hindustan Zinc received ICICI Lombard and CNBC TV 18 - India Risk Management Award 2019 for its Best Sustainability Risk Management System

### 4. Does the Company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if Yes, whether any environmental compliance report is filed?

The Company has 273.5 MW wind farms in five states across India which are registered under Clean Development Mechanism (CDM) program by United Nations Framework Convention on Climate Change (UNFCCC) and Verified Carbon Standard program by VEERA. These project also under registration at Gold Standard, the most rigorous certification standard globally for carbon offset projects supported by WWF.

For its captive use, the Company have solar power projects of 38.9 MW out of this 22 MW has been commissioned in current year. All the Solar Power Projects have been installed on waste land/dump yard at Dariba mine, Debari Zinc smelter and Agucha mine. The green power generated from it have reduced carbon footprint by 66,049 MT of CO<sub>2</sub> emission per annum. In addition, there is 34.4 MW of power capacity through waste heat recovery from roasters and steam turbo generator out of which 9.4 MW Waste Heat Recovery Boiler project is registered under CDM along with 21 TPH Low Calorific Value boilers for steam generation project. The Company is planning to further enhance its solar energy footprint in the coming year.

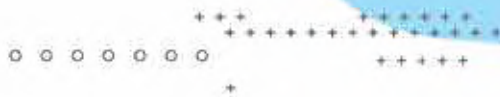
During the year, the Company produced solar power of 49.5 million units, waste heat energy of 114 million units and wind power of 465 million units.

#### Projects in pipeline:

- 30 MW solar power project at Dariba.
- 1 MW floating solar power project at Gosunda captive dam near Chanderia for utilization of available water surfaces
- 3 MW roof top solar power project
- Additional 50 MW wind power plant

The 10 UNFCCC registered projects have the potential to reduce the Company's carbon footprint by 583,685 MT of CO<sub>2</sub> emission per annum while unregistered projects provide reduction of 147,270 tons CO<sub>2</sub> emissions per annum. The new solar projects in pipeline will further reduce carbon footprint by 77,736 MT of CO<sub>2</sub> emission per annum.

- Renewable energy received Project Development Innovation of the year award at the 9<sup>th</sup> Annual edition of RE – Assets India 2019 conference EXPO award for 22 MW Agucha Solar projects.



**5. Has the Company undertaken any other initiatives on - clean technology, energy efficiency, renewable energy, etc.? Y/N. If yes, please give details.**

HZL has been working on climate change issues by improving its process efficiency and taking initiatives in energy efficiency, developing green zones at units and water conservation etc. We have installed 273.5 MW of wind power and 34.4 MW of waste heat recovery power plants to give an impetus to green energy. We have 38.9 MW of captive solar plants on waste lands of RAM, DSC and DZS. Wherever feasible we have introduced the solar or energy efficient lights. We focus on energy consumption reduction through various in-process innovations and adoption of best practices like machine productivity and improving throughput to reduce specific energy consumption.

The Corporate Office in Udaipur is a certified Green Building. Several green features are implemented to enhance the building performance.

**6. Is the Emissions/Waste generated by the Company within the permissible limits given by CPCB/SPCB for the financial year being reported?**

Yes, we are well within the prescribed limits by the relevant pollution control authorities. The Company continues to invest in reducing air emission levels through adoption of cleaner technologies/fuels, monitoring of combustion efficiencies and investments in state-of-the-art pollution control equipment, such as bag filters, electrostatic precipitators, etc. Regular monitoring of significant air emission parameters, such as Particulate Matter, Nitrogen Oxide and Sulphur Dioxide to ensure compliance with regulatory requirement. Majority of the units have online ambient air quality monitoring station and meet the National Ambient Air Quality standards. We also have online monitoring systems in place for monitoring of emission and effluent to transmit data from field instrument directly to CPCB/SPCB servers.

All wastes are being stored at earmarked places and timely disposed through the approved registered recyclers as per the Hazardous Waste Rule. The Company has laid down comprehensive guidelines on waste management for all its units, which cover hazardous as well as non-hazardous waste and monitoring of performance for each unit is carried out on a regular basis. The Company has measures across units to ensure waste minimization, segregation at source and recycling.

**7. Number of show cause/ legal notices received from CPCB/SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year.**

Nil

**PRINCIPLE 7: RESPONSIBLE POLICY ADVOCACY**

**1. Is your Company a member of any trade and chamber or association? If Yes, name only those major ones that your business deals with:**

Yes, the Company is a member of the following organisations:

- a) Federation of Indian Mineral Industries
- b) Confederation of Indian Industry
- c) Federation of Indian Chambers of Commerce and Industry
- d) Indian Chamber of Commerce
- e) Associated Chambers of Commerce and Industry of India
- f) India Lead Zinc Development Association

**2. Have you advocated/lobbied through above associations for the advancement or improvement of public good? Yes/No; if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others)**

Yes, for economic and mining reforms.

**PRINCIPLE 8: SUPPORTING INCLUSIVE DEVELOPMENT**

**1. Does the Company have specified programmes/ initiatives/projects in pursuit of this policy? If yes details thereof**

As a responsible corporate citizen, the Company focuses on community development through its CSR activities. Please refer to the CSR section of this annual report for more details.

**2. Are the programmes/projects undertaken through in-house team/own foundation/external NGO/ Government structures/any other organization?**

We undertake our CSR activities through all of the above routes.

**3. Have you done any impact assessment of your initiative?**

Yes, the same is done internally and also at times with external agencies once in 3 years. During the current year external impact assessment was done by Taru Leading Edge.

**4. What is your Company's direct contribution to community development projects - Amount in INR and the details of the projects undertaken?**

The total amount spent on all CSR activities and projects during the FY 2019 was ₹ 130.20 Crore. Please refer to the CSR section of this annual report for more details.





- 5. Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words, or so.**

Please refer to the CSR section of this annual report for details.

**PRINCIPLE 9: PROVIDING CUSTOMER VALUE**

- 1. What percentage of customer complaints/consumer cases are pending as on the end of financial year?**

Out of 29 complaints received during FY 2019, 5 complaints were pending as on March 31, 2019 for closure.

- 2. Does the Company display product information on the product label, over and above what is mandated as per local laws? Yes/No/N.A. /Remarks (additional information)**

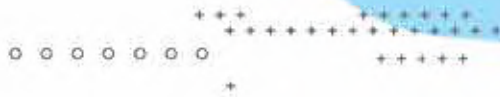
Yes, the Company displays the product name, batch number, grade, purity, date of production on the product label, as per industry practice.

- 3. Is there any case filed by any stakeholder against the Company regarding unfair trade practices, irresponsible advertising and/or anti-competitive behaviour during the last five years and pending as on end of financial year? If so, provide details thereof, in about 50 words or so.**

No.

- 4. Did your Company carry out any consumer survey/ consumer satisfaction trends?**

Yes, the Company carries out customer satisfaction survey periodically. The last survey conducted was in FY 2018. In FY 2018, the Company scored 82 on the total Customer Satisfaction Index as against 75 in FY 2015, with substantial improvement seen on the experience front.



# independent auditor's report

## TO THE MEMBERS OF HINDUSTAN ZINC LIMITED

### REPORT ON THE AUDIT OF THE IND AS FINANCIAL STATEMENTS

#### Opinion

We have audited the accompanying Ind AS financial statements of Hindustan Zinc Limited ("the Company"), which comprise the Balance Sheet as at March 31, 2019, the Statement of Profit and Loss, including the statement of Other Comprehensive Income, the Cash Flow Statement and the Statement of Changes in Equity for the year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory information.

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Ind AS financial statements give the information required by the Companies Act, 2013, as amended ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs of the Company as at March 31, 2019, its profit including other comprehensive income, its cash flows and the changes in equity for the year ended on that date.

#### Basis for Opinion

We conducted our audit of the Ind AS financial statements in accordance with the Standards on Auditing (SAs), as specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the 'Auditor's Responsibilities for the Audit of the Ind AS Financial Statements' section of our

report. We are independent of the Company in accordance with the 'Code of Ethics' issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the financial statements under the provisions of the Act and the Rules thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Ind AS financial statements.

#### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Ind AS financial statements for the financial year ended March 31, 2019. These matters were addressed in the context of our audit of the Ind AS financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have determined the matters described below to be the key audit matters to be communicated in our report. We have fulfilled the responsibilities described in the Auditor's Responsibilities for the Audit of the Ind AS Financial Statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the Ind AS financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the Ind AS financial statements.

Key audit matters	How our audit addressed the key audit matter
<p><b>Claims and exposure relating to taxation and litigation (as described in Note 3(III)(B) and 29 of the Ind AS financial statements).</b></p> <p>The Company is subject to a large number of legal and tax related claims which have been disclosed / provided for in the financial statements based on the facts and circumstances of each case. Taxation and litigation exposures have been identified as a key audit matter due to complexities involved in these matters, time-scales involved for resolution and the potential financial impact of these on the financial statements. Further, significant management judgement is involved in assessing the exposure of each case and thus a risk that such cases may not be adequately provided for or disclosed.</p>	<p>Our audit procedures included the following:-</p> <ul style="list-style-type: none"> <li>• Gained an understanding of the process of identification of claims, litigations and contingent liabilities and identified key controls in the process. For selected controls, we have performed tests of controls.</li> <li>• Obtained the summary of Company's legal and tax cases and critically assessed management's position through discussions with the Legal Counsel, Head of Tax and operational management, on both the probability of success in significant cases, and the magnitude of any potential loss.</li> <li>• Inspected external legal opinions, wherever considered necessary, and other evidence to corroborate management's assessment of the risk profile in respect of legal claims.</li> <li>• Engaged tax specialists to technically appraise the tax position taken by the management with respect to local tax issues.</li> <li>• Assessed the relevant disclosures made within the financial statements to address whether they appropriately reflect the facts and circumstances of the respective tax and legal exposures and the requirements of relevant accounting standards.</li> </ul>



Key audit matters	How our audit addressed the key audit matter
<p><b>Revenue recognition (as described in Note 3(I) (d) and 20 of the Ind AS financial statements)</b></p> <p>We have identified revenue recognition cut-off as a key audit matter, since the variety of terms that define when control is transferred to the customer, as well as the high value of the transactions near the period end, give rise to the risk that revenue is not recognised in the correct period.</p>	<p>Our audit procedures included the following:-</p> <ul style="list-style-type: none"> <li>• Considered the appropriateness of the Company's revenue recognition accounting policies and assessing compliance with the policies in terms of Ind AS 115.</li> <li>• Performed walkthroughs and test of controls, assisted by IT specialists, of the revenue recognition processes and assessed the design and operating effectiveness of key controls.</li> <li>• Selected a sample of sales made pre and post year end, and agreed the date of revenue recognition to the contract terms as per the agreement and third party delivery documents, such as bills of lading, to confirm sales are recognized according to contract conditions.</li> </ul>

We have determined that there are no other key audit matters to communicate in our report.

#### Information Other than the Financial Statements and Auditor's Report Thereon

The Company's Board of Directors is responsible for the Other Information. The Other Information comprises the information included in the Annual report, but does not include the Ind AS financial statements and our auditor's report thereon.

Our opinion on the Ind AS financial statements does not cover the Other Information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Ind AS financial statements, our responsibility is to read the Other Information and, in doing so, consider whether such Other Information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this Other Information, we are required to report that fact. We have nothing to report in this regard.

#### Responsibilities of Management for the Ind AS Financial Statements

The Company's Board of Directors is responsible for the matters stated in section 134(5) of the Act with respect to the preparation of these Ind AS financial statements that give a true and fair view of the financial position, financial performance including other comprehensive income, cash flows and changes in equity of the Company in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards (Ind AS) specified under section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015, as amended. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding of the assets of the Company and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal

financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Ind AS financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the Ind AS financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

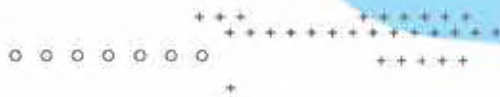
Board of Directors are also responsible for overseeing the Company's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Ind AS Financial Statements

Our objectives are to obtain reasonable assurance about whether the Ind AS financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Ind AS financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Ind AS financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.



- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the Company has adequate internal financial controls system in place and the operating effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Ind AS financial statements, including the disclosures, and whether the Ind AS financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Ind AS financial statements for the financial year ended March 31, 2019 and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

#### Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order, 2016 ("the Order"), issued by the Central Government of India in terms of sub-section (11) of section 143 of the Act, we give in the "Annexure 1" a statement on the matters specified in paragraphs 3 and 4 of the Order.
2. As required by Section 143(3) of the Act, we report that:
  - (a) We have sought and obtained all the information and explanations which to the best of our knowledge

and belief were necessary for the purposes of our audit;

- (b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books;
- (c) The Balance Sheet, the Statement of Profit and Loss including the Statement of Other Comprehensive Income, the Cash Flow Statement and Statement of Changes in Equity dealt with by this Report are in agreement with the books of account;
- (d) In our opinion, the aforesaid Ind AS financial statements comply with the Accounting Standards specified under Section 133 of the Act, read with Companies (Indian Accounting Standards) Rules, 2015, as amended;
- (e) On the basis of the written representations received from the directors as on March 31, 2019 and taken on record by the Board of Directors, none of the directors is disqualified as on March 31, 2019 from being appointed as a director in terms of Section 164 (2) of the Act;
- (f) With respect to the adequacy of the internal financial controls over financial reporting of the Company with reference to these Ind AS financial statements and the operating effectiveness of such controls, refer to our separate Report in "Annexure 2" to this report;
- (g) In our opinion, the managerial remuneration for the year ended March 31, 2019 has been paid / provided by the Company to its directors in accordance with the provisions of section 197 read with Schedule V to the Act;
- (h) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, as amended, in our opinion and to the best of our information and according to the explanations given to us:
  - i. The Company has disclosed the impact of pending litigations on its financial position in its Ind AS financial statements – Refer Note 29 to the Ind AS financial statements;
  - ii. The Company did not have any long term contracts including derivative contracts for which there were any material foreseeable losses;
  - iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company.

#### For S.R. Batliboi & Co. LLP

Chartered Accountants

ICAI Firm Registration Number: 301003E/E300005

#### per Raj Agrawal

Partner

Membership Number: 82028

Place of Signature: Gurugram

Date: May 02, 2019



# annexure 1

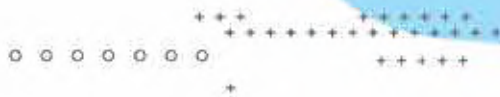
Referred to in paragraph 1 under the heading "Report on other legal and regulatory Requirement's of our report of even date

## RE: HINDUSTAN ZINC LIMITED ('THE COMPANY')

- (i) (a) The Company has maintained proper records showing full particulars, including quantitative details and situation of fixed assets.
- (b) All fixed assets have not been physically verified by the management during the year but there is a regular programme of verification which, in our opinion, is reasonable having regard to the size of the Company and the nature of its assets. No material discrepancies were noticed on such verification.
- (c) According to the information and explanations given by the management, the title deeds of immovable properties included in property, plant and equipment are held in the name of the Company.
- (ii) The management has conducted physical verification of inventory at reasonable intervals during the year and no material discrepancies were noticed on such physical verification.
- (iii) According to the information and explanations given to us, the Company has not granted any loans, secured or unsecured, to companies, firms, limited liability partnerships or other parties covered in the register maintained under section 189 of the Companies Act, 2013. Accordingly, the provisions of clause 3(iii)(a), (b) and (c) of the Order are not applicable to the Company and hence not commented upon.
- (iv) In our opinion and according to the information and explanations given to us, there are no loans, investments, guarantees, and securities given in respect of which provisions of sections 185 and 186 of the Companies Act 2013 are applicable and hence not commented upon.
- (v) The Company has not accepted any deposits within the meaning of sections 73 to 76 of the Act and the Companies (Acceptance of Deposits) Rules, 2014 (as amended). Accordingly, the provisions of clause 3(v) of the Order are not applicable.
- (vi) We have broadly reviewed the books of account maintained by the Company pursuant to the rules made by the Central Government for the maintenance of cost records under section 148(1) of the Act, related to the manufacture of products and generation of electricity, and are of the opinion that prima facie, the specified accounts and records have been made and maintained. We have not, however, made a detailed examination of the same.
- (vii) (a) The Company is regular in depositing with appropriate authorities undisputed statutory dues including provident fund, income-tax, sales-tax, service tax, duty of custom, duty of excise, value added tax, goods and services tax, cess and other statutory dues applicable to it. The provisions relating to employees' state insurance are not applicable to the Company.
- (b) According to the information and explanations given to us, no undisputed amounts payable in respect of provident fund, income-tax, service tax, sales-tax, duty of custom, duty of excise, value added tax, goods and services tax, cess and other statutory dues were outstanding, at the year end, for a period of more than six months from the date they became payable. The provisions relating to employees' state insurance are not applicable to the Company.
- (c) According to the records of the Company, the dues outstanding of income-tax, sales-tax, service tax, duty of custom, duty of excise, value added tax and cess on account of any dispute, are as follows:

Name of the statute	Nature of the dues	Amount (₹ in Crore)*	Period (Financial year) to which amount relates	Forum where the dispute is pending
Income tax act, 1961	Income tax	1,601	1997-98 to 2010-11, 2014-2015	Commissioner of Income Tax (Appeals)
		2,677	1988-1989 to 1990-1991, 1992-1993, 1997-98, 2007-2008, 2012-13 to 2013-14	Income Tax Appellate Tribunal
		2,765	1989-90 to 2011-12	High Court / Supreme Court
Customs Act, 1962	Customs duty	41	2008-09 to 2013-14	CESTAT
Central Excise Act, 1944	Excise duty	106	1989-90 to 1992-93, 1995-96 to 2016-17	CESTAT
		6	1999-02, 2002-03, 2006 to 2017-18	Commissioner (Appeals)
		7	1998-99, 2001-02 to 2014-15	High Court
Rajasthan sales tax act, 1994	Sales tax	62	1990-91 to 1991-92, 1994-95 to 2003-04, 2005-06 to 2015-16	Deputy Commissioner (Appeals)
		4	2007-08	High Court
Finance Act, 1994	Service tax	23	2002-03 to 2016-17	Commissioner (Appeals)
		26	1997-98, 2004-05 to 2015-16	CESTAT
		19	2004-05 to 2011-12	High Court

\*Net of amount paid under protest / adjusted against refunds



- (viii) In our opinion and according to the information and explanations given by the management, the Company has not defaulted in repayment of loans or borrowing to financial institutions or banks. The Company did not have any outstanding dues in respect of government and debenture holders during the year.
- (ix) According to the information and explanations given by the management, the Company has not raised any monies by way of initial public offer / further public offer / debt instruments or term loans and accordingly, reporting under clause 3(ix) is not applicable to the Company and hence not commented upon.
- (x) Based upon the audit procedures performed for the purpose of reporting the true and fair view of the financial statements and according to the information and explanations given by the management, we report that no material fraud on the Company by the officers and employees of the Company has been noticed or reported during the year.
- (xi) According to the information and explanations given by the management, the managerial remuneration has been paid / provided in accordance with the requisite approvals mandated by the provisions of section 197 read with Schedule V to the Act.
- (xii) In our opinion, the Company is not a nidhi company. Therefore, the provisions of clause 3(xii) of the Order are not applicable to the Company and hence not commented upon.
- (xiii) According to the information and explanations given by the management, transactions with the related parties are in compliance with sections 177 and 188 of Companies Act, 2013 where applicable and the details have been disclosed in the notes to the financial statements, as required by the applicable accounting standards.
- (xiv) According to the information and explanations given to us and on an overall examination of the balance sheet, the Company has not made any preferential allotment or private placement of shares or fully or partly convertible debentures during the year under review and accordingly, reporting requirements under clause 3(xiv) are not applicable to the company and hence not commented upon.
- (xv) According to the information and explanations given by the management, the Company has not entered into any non-cash transactions with directors or persons connected with him as referred to in section 192 of Companies Act, 2013.
- (xvi) According to the information and explanations given to us, the provisions of section 45-IA of the Reserve Bank of India Act, 1934 are not applicable to the Company.

**For S.R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration Number: 301003E/E300005

**per Raj Agrawal**

Partner

Membership Number: 82028

Place: Gurugram

Date: May 02, 2019



# annexure 2

To the Independent Auditor's Report of Even Date on the Financial Statements of Hindustan Zinc Limited

## **REPORT ON THE INTERNAL FINANCIAL CONTROLS UNDER CLAUSE (I) OF SUB-SECTION 3 OF SECTION 143 OF THE COMPANIES ACT, 2013 ("THE ACT")**

We have audited the internal financial controls over financial reporting of Hindustan Zinc Limited ("the Company") as of March 31, 2019 in conjunction with our audit of the financial statements of the Company for the year ended on that date.

### **MANAGEMENT'S RESPONSIBILITY FOR INTERNAL FINANCIAL CONTROLS**

The Company's Management is responsible for establishing and maintaining internal financial controls based on the internal control over financial reporting criteria established under the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO 2013 criteria), which considers the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by the Institute of Chartered Accountants of India. These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the Company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Companies Act, 2013.

### **AUDITOR'S RESPONSIBILITY**

Our responsibility is to express an opinion on the Company's internal financial controls over financial reporting based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting (the "Guidance Note") and the Standards on Auditing as specified under section 143(10) of the Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both issued by the Institute of Chartered Accountants of India. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls over financial reporting was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial controls system over financial reporting and their operating effectiveness. Our audit of internal financial controls over financial reporting included obtaining an understanding of internal financial controls over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the internal financial controls system over financial reporting.

## **MEANING OF INTERNAL FINANCIAL CONTROLS OVER FINANCIAL REPORTING**

A company's internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

## **INHERENT LIMITATIONS OF INTERNAL FINANCIAL CONTROLS OVER FINANCIAL REPORTING**

Because of the inherent limitations of internal financial controls over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls over financial reporting to future periods are subject to the risk that the internal financial control over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

## **OPINION**

In our opinion, the Company has, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial reporting were operating effectively as at March 31, 2019, based on the internal control over financial reporting in COSO 2013 criteria, considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by the Institute of Chartered Accountants of India.

### **For S.R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration Number: 301003E/E300005

### **per Raj Agrawal**

Partner

Membership Number: 82028

Place: Gurugram

Date: May 02, 2019

# balance sheet

as at March 31, 2019

Particulars	Notes	(₹ in Crore)	
		As at March 31, 2019	As at March 31, 2018
<b>ASSETS</b>			
<b>Non-current assets</b>			
a) Property, plant and equipment	4	14,668	11,181
b) Capital work-in-progress	4	2,254	3,220
c) Intangible Assets	5	110	121
d) Investments in a joint venture	32	-	-
e) Financial assets			
i) Loans	6	13	15
ii) Others	13	38	35
f) Deferred tax assets (net)	31	1,925	2,208
g) Other non-current assets	7	638	1,102
h) Income tax assets		1,240	907
<b>Total Non-current assets</b>		<b>20,886</b>	<b>18,789</b>
<b>Current assets</b>			
a) Inventories	8	1,544	1,379
b) Financial Assets			
i) Investments	9	19,488	20,222
ii) Trade receivables	10	196	184
iii) Cash and cash equivalents	11	2	173
iv) Other Bank balances	12	21	1,791
v) Loans	6	3	1
vi) Others	13	4	11
c) Other current assets	7	314	382
<b>Total Current assets</b>		<b>21,572</b>	<b>24,143</b>
<b>TOTAL</b>		<b>42,458</b>	<b>42,932</b>
<b>EQUITY AND LIABILITIES</b>			
<b>Equity</b>			
a) Equity share capital	14	845	845
b) Other equity		32,760	35,087
<b>Total Equity</b>		<b>33,605</b>	<b>35,932</b>
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
a) Financial liabilities			
i) Other financial liabilities	15	19	69
b) Other non-current liabilities	17	945	792
c) Provisions	16	145	134
<b>Total Non-current liabilities</b>		<b>1,109</b>	<b>995</b>
<b>Current liabilities</b>			
a) Financial liabilities			
i) Borrowings	18	2,538	-
ii) Trade payables	19		
a) Total outstanding dues of Micro, Small and Medium Enterprises		52	18
b) Total outstanding dues to creditors other than Micro, Small and Medium Enterprises		1,122	929
iii) Other financial liabilities	15	1,401	3,094
b) Other current liabilities	17	2,397	1,713
c) Provisions	16	74	86
d) Current tax liabilities		160	165
<b>Total Current liabilities</b>		<b>7,744</b>	<b>6,005</b>
<b>TOTAL</b>		<b>42,458</b>	<b>42,932</b>

See accompanying notes to financial statements.

As per our report on even date

For **S. R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration No.: 301003E/E300005

per **Raj Agrawal**

Partner

ICAI Membership No.: 82028

For and on behalf of the Board of Directors

**Sunil Duggal**

CEO & Whole-time Director

DIN: 07291685

Place: London

**Swayam Saurabh**

Acting Chief Financial Officer

Date: May 02, 2019

Place: Mumbai

**A. R. Narayanaswamy**

Director

DIN: 00818169

**R. Pandwal**

Company Secretary

ICSI Membership No.: A9377

Date: May 02, 2019

Place: Gurugram



# statement of profit and loss

for year ended March 31, 2019

(₹ in Crore)

Particulars	Notes	For the year ended March 31, 2019	For the year ended March 31, 2018
Revenue from operations (Net of excise duty)		20,834	21,776
Add: Excise duty		-	437
Revenue from operations (Gross of excise duty)	20A	20,834	22,213
Other Operating income	20B	284	306
Other income	21	1,782	1,716
<b>Total Income</b>		<b>22,900</b>	<b>24,235</b>
<b>Expenses:</b>			
(Increase)/Decrease in inventories of finished goods and work-in-progress	22	(64)	498
Employee benefits expense	23	905	776
Finance costs	24	113	246
Depreciation and amortization expense	25	1,883	1,483
Power and fuel		1,758	1,653
Mining Royalty		2,628	2,647
Excise duty on sale of goods		-	437
Other expenses	26	5,221	4,238
<b>Total expenses</b>		<b>12,444</b>	<b>11,978</b>
<b>Profit before exceptional item and tax</b>		<b>10,456</b>	<b>12,257</b>
Exceptional Items	27	-	240
<b>Profit before tax</b>		<b>10,456</b>	<b>12,497</b>
<b>Tax expense:</b>			
Current tax	31	2,220	2,647
Deferred tax (credit)/charge	31	280	574
<b>Total tax expenses</b>		<b>2,500</b>	<b>3,221</b>
<b>Profit for the year</b>		<b>7,956</b>	<b>9,276</b>
<b>Other comprehensive income</b>			
<b>A) Items that will not be reclassified to profit or loss in subsequent period</b>			
(a) Remeasurements of the defined benefit plans		(36)	3
(b) Tax expense / (credit)		13	(1)
<b>B) Items that will be reclassified to profit or loss in subsequent period</b>			
(a) Effective portion of gains on hedging instrument in cash flow hedges		95	(95)
(b) Tax expense / (credit)		(33)	33
(c) Net gain/(loss) on FVOCI investments		(150)	(23)
(d) Tax expense / (credit)		17	3
<b>Total other comprehensive income</b>		<b>(94)</b>	<b>(80)</b>
<b>Total comprehensive income for the year</b>		<b>7,862</b>	<b>9,196</b>
<b>Earnings per share (nominal value of shares ₹ 2)</b>			
- Basic earnings per share (₹)	28	18.83	21.95
- Diluted earnings per share (₹)	28	18.83	21.95

See accompanying notes to financial statements.

As per our report on even date

For **S. R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration No.: 301003E/E300005

per **Raj Agrawal**

Partner

ICAI Membership No.: 82028

Date: May 02, 2019

Place: Gurugram

For and on behalf of the Board of Directors

**Sunil Duggal**

CEO & Whole-time Director

DIN: 07291685

Place: London

**Swayam Saurabh**

Acting Chief Financial Officer

Date: May 02, 2019

Place: Mumbai

**A. R. Narayanaswamy**

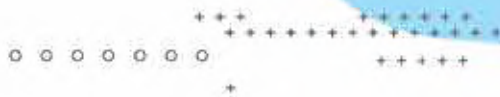
Director

DIN: 00818169

**R. Pandwal**

Company Secretary

ICSI Membership No.: A9377



# statement of cash flow

for the year ended March 31, 2019

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>(A) CASH FLOW FROM OPERATING ACTIVITIES:</b>		
Net profit before tax	10,456	12,497
<b>Adjustments to reconcile profit to net cash provided by operating activities:</b>		
Depreciation and amortization expense	1,883	1,483
Interest expense	113	246
Interest income	(801)	(460)
Amortization of deferred revenue arising from government grant	(69)	(48)
Net gain on investments measured at FVTPL	(550)	(774)
Net Loss/(Gain) on sale of PPE	(48)	(2)
Net Loss/(Gain) on sale of financial asset investments	(314)	(340)
Reversal of DMF provision	-	(291)
<b>Operating profit before working capital changes</b>	<b>10,670</b>	<b>12,311</b>
<b>Changes in assets and liabilities</b>		
(Increase)/Decrease in Inventories	(165)	557
(Increase)/Decrease in Trade receivables	(12)	(48)
(Increase)/Decrease in Other current assets	73	20
(Increase)/Decrease in Other non current assets	(59)	(11)
Increase/ (Decrease) in Trade payables	227	124
Increase/(Decrease) in Other current liabilities	605	(135)
Increase/(Decrease) in Non current liabilities	2	10
<b>Cashflows from operations</b>	<b>11,341</b>	<b>12,828</b>
Income taxes paid during the year	(2,560)	(3,028)
<b>Net cash flows from operating activities</b>	<b>8,781</b>	<b>9,800</b>
<b>(B) CASH FLOW FROM INVESTING ACTIVITIES:</b>		
Purchases of Property, Plant and Equipment (including intangibles, CWIP and Capital Advances)	(3,400)	(2,733)
Interest received	253	499
Purchase of current investments	(41,660)	(33,938)
Proceeds from sale of current investments	43,656	38,558
Proceeds from sale of Property, Plant and Equipment	59	10
<b>Net cash flows from/(used) in investing activities</b>	<b>(1,092)</b>	<b>2,396</b>



(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>(C) CASH FLOW FROM FINANCING ACTIVITIES:</b>		
Interest and other finance charges paid	(208)	(243)
Proceeds from short term borrowings	12,407	12,325
Repayment of short term borrowings	(9,871)	(20,225)
Dividend and tax paid thereon	(11,958)	(10,469)
<b>Net cash flows used in financing activities</b>	<b>(9,630)</b>	<b>(18,612)</b>
Net increase /(Decrease) in Cash and cash equivalents	<b>(1,941)</b>	<b>(6,416)</b>
Cash and cash equivalents at the beginning of the year	1,964	8,380
<b>Cash and cash equivalents at the end of the year (Refer Note 11)</b>	<b>23</b>	<b>1,964</b>

**Note:-**

1. The figures in brackets indicates outflows.
2. The above cash flow has been prepared under "Indirect method" as set out in Indian Accounting Standard (Ind AS -7) Statement of Cash Flows.
3. There are no non cash changes in liabilities arising from financing activities.

See accompanying notes to financial statements.

As per our report on even date

For **S. R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration No.: 301003E/E300005

per **Raj Agrawal**

Partner

ICAI Membership No.: 82028

Date: May 02, 2019

Place: Gurugram

For and on behalf of the Board of Directors

**Sunil Duggal**

CEO & Whole-time Director

DIN: 07291685

Place: London

**Swayam Saurabh**

Acting Chief Financial Officer

Date: May 02, 2019

Place: Mumbai

**A. R. Narayanaswamy**

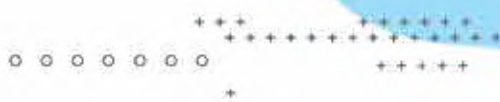
Director

DIN: 00818169

**R. Pandwal**

Company Secretary

ICSI Membership No.: A9377



# statement of changes in equity

for the year ended March 31, 2019

## A. EQUITY SHARE CAPITAL

Equity shares of ₹ 2 each issued, subscribed and fully paid	Numbers of shares (in Crore)	₹ in Crore
As at March 31, 2019 and March 31, 2018	423	845

## B. OTHER EQUITY

Particulars	Reserve and surplus			Items of other comprehensive income		Total
	Capital Reserve	Retained earnings <sup>(1)</sup>	General reserve <sup>(2)</sup>	Effective portion of cash flow hedge	Debt instruments through OCI	
<b>Balance as at the end of the year March 31, 2017</b>	<b>1</b>	<b>19,423</b>	<b>10,383</b>	-	<b>153</b>	<b>29,960</b>
Profit for the year	-	9,276	-	-	-	<b>9,276</b>
Other comprehensive income net of tax	-	2	-	(62)	(20)	<b>(80)</b>
<b>Total comprehensive income for the year</b>	-	<b>9,278</b>	-	<b>(62)</b>	<b>(20)</b>	<b>9,196</b>
Dividend declared - Paid	-	(1,595)	-	-	-	<b>(1,595)</b>
Dividend distribution tax - Paid	-	(324)	-	-	-	<b>(324)</b>
Dividend declared - Unpaid	-	(1,786)	-	-	-	<b>(1,786)</b>
Dividend distribution tax paid on unpaid dividend	-	(364)	-	-	-	<b>(364)</b>
<b>Balance as at the beginning of the year April 01, 2018</b>	<b>1</b>	<b>24,632</b>	<b>10,383</b>	<b>(62)</b>	<b>133</b>	<b>35,087</b>
Profit for the year	-	7,956	-	-	-	<b>7,956</b>
Other comprehensive income net of tax	-	(23)	-	62	(133)	<b>(94)</b>
<b>Total comprehensive income for the year</b>	-	<b>7,933</b>	-	<b>62</b>	<b>(133)</b>	<b>7,862</b>
Dividend declared - Paid	-	(8,451)	-	-	-	<b>(8,451)</b>
Dividend distribution tax - Paid	-	(1,738)	-	-	-	<b>(1,738)</b>
<b>Balance as at the end of the year March 31, 2019</b>	<b>1</b>	<b>22,376</b>	<b>10,383</b>	-	-	<b>32,760</b>

<sup>(1)</sup> During the year, Company has declared interim dividend of ₹ 8451 Crore (₹ 20.00 per share) in October 2018. During the previous year, Company had declared interim dividend of ₹ 845 Crore (₹ 2.00 per share) in October 2017 and ₹ 2,535 Crore (₹ 6.00 per share) in March 2018.

<sup>(2)</sup> General reserve: Under the erstwhile Companies Act 1956, general reserve was created through an annual transfer of net income at a specified percentage in accordance with applicable regulations. The purpose of these transfers was to ensure that if a dividend distribution in a given year is more than 10% of the paid-up capital of the Company for that year, then the total dividend distribution is less than the total distributable results for that year. Consequent to introduction of the Companies Act 2013, the requirement to mandatory transfer a specified percentage of the net profit to general reserve has been withdrawn. The balances in the general reserve, as determined in accordance with applicable regulations, was ₹ 10,383 Crore as at March 31, 2019 and March 31, 2018.

See accompanying notes to financial statements.

As per our report on even date

For **S. R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration No.: 301003E/E300005

per **Raj Agrawal**

Partner

ICAI Membership No.: 82028

For and on behalf of the Board of Directors

**Sunil Duggal**

CEO & Whole-time Director

DIN: 07291685

Place: London

**Swayam Saurabh**

Acting Chief Financial Officer

**A. R. Narayanaswamy**

Director

DIN: 00818169

**R. Pandwal**

Company Secretary

ICSI Membership No.: A9377

Date: May 02, 2019

Place: Gurugram

Date: May 02, 2019

Place: Mumbai



# notes to the financial statements

for the year ended March 31, 2019

## 1. COMPANY OVERVIEW

Hindustan Zinc Limited ("HZL" or "the Company") was incorporated on January 10, 1966 and has its registered office at Yashad Bhawan, Udaipur (Rajasthan). HZL's shares are listed on National Stock Exchange and Bombay Stock Exchange. The Company is engaged in exploring, extracting and processing of minerals.

HZL's operations include five zinc-lead mines, four zinc smelters, one lead smelter, one zinc-lead smelter, eight sulphuric acid plants, one silver refinery plant, six captive thermal power plants and three captive solar plants in the state of Rajasthan. In addition, HZL also has a rock-phosphate mine in Matoon, near Udaipur in Rajasthan and zinc, lead, silver processing and refining facilities in the state of Uttarakhand. The Company also has wind power plants in the states of Rajasthan, Gujarat, Karnataka, Tamil Nadu and Maharashtra and solar power plants in the state of Rajasthan.

## 2. BASIS OF PREPARATION OF FINANCIAL STATEMENTS

### A) BASIS OF PREPARATION

The financial statements of the company have been prepared in accordance with Indian Accounting Standards (Ind AS) notified under the Companies (Indian Accounting Standards) Rules 2015 (as amended from time to time) and presentation requirement of Division II of schedule III to the Companies Act 2013 (Ind AS compliant Schedule III), as applicable. The financial statements have been prepared on a historical cost convention on the accrual basis except for financial instruments which are measured at fair values (Refer note 3(a) below) and the provisions of the Companies Act, 2013 ('Act') (to the extent notified). The Ind AS are prescribed under Section 133 of the Act read with Rule 3 of the Companies (Indian Accounting Standards) Rules, 2015, as amended.

Accounting policies have been consistently applied except where a newly issued accounting standard is initially adopted or a revision to an existing accounting standard requires a change in the accounting policy hitherto in use.

The financial statements were authorised for issue in accordance with a resolution of Board of Directors on May 02, 2019.

### B) RECLASSIFICATION

- (i) The Company has revised the presentation of forward premium relating to derivative instruments to present it along with the mark-to-market gain/loss on these instruments, as these more appropriately reflect the substance of the forward premiums on derivative transactions. As a result of the change, forward premium expense amounting to ₹ 37 Crore (year ended March 31, 2019: ₹ 20 Crore) has been reclassified from 'Finance cost' to 'other income' for the comparative year ended March 31, 2018.
- (ii) The classification of export incentives from government has also been revised to present it under 'other

operating income', as the revised classification is more appropriate. As a result of the change, export incentives amounting to ₹ 97 Crore has been reclassified from 'revenue' to 'other operating income' for the comparative year ended March 31, 2018. Similarly, scrap sales and miscellaneous income amounting to ₹ 155 Crore and ₹ 54 Crore respectively have also been reclassified from 'revenue' to 'other operating income' for the comparative year ended March 31, 2018.

The above reclassifications have no effect on either the equity as at March 31, 2018 or on the profit or cash flows for the year ended March 31, 2018.

## 3.(I) SIGNIFICANT ACCOUNTING POLICIES

### A) FAIR VALUE MEASUREMENT

The Company measures financial instruments, such as, derivatives at fair value at each balance sheet date. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability"

The principal or the most advantageous market must be accessible by the Company.

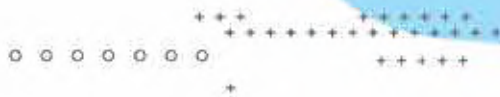
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their best economic interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Company uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities



Level 2 - Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

Level 3 - Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For the purpose of fair value disclosures, the Company has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

## B) CURRENT AND NON-CURRENT CLASSIFICATION

The Company presents assets and liabilities in the balance sheet based on current/ non-current classification.

An asset is treated as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Company classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

## C) FUNCTIONAL AND PRESENTATION CURRENCY

The financial statements are prepared in Indian Rupees (INR), which is the Company's functional currency. All financial information presented in INR has been rounded to the nearest crores.

## D) REVENUE RECOGNITION

### (i) Sale of goods

Revenue from contracts with customers is recognised when control of the goods or services is transferred to the customer which usually is on delivery of the goods to the shipping agent at an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. Revenue is recognised net of discounts, volume rebates, outgoing sales taxes/ goods and service tax and other indirect taxes excluding excise duty. Revenues from sale of by-products are included in revenue.

Certain of the Company's sales contracts provide for provisional pricing based on the price on the London Metal Exchange (LME), as specified in the contract. Revenue in respect of such contracts is recognised when control passes to the customer and is measured at the amount the entity expects to be entitled – being the estimate of the price expected to be received at the end of the measurement period. Post transfer of control of goods, provisional pricing features are accounted in accordance with Ind AS 109 'Financial Instruments' rather than Ind AS 115 and therefore the Ind AS 115 rules on variable consideration do not apply. These 'provisional pricing' adjustments i.e. the consideration received post transfer of control are included in total revenue from operations on the face of the Statement of Profit and loss. Final settlement of the price is based on the applicable price for a specified future period. The Company's provisionally priced sales are marked to market using the relevant forward prices for the future period specified in the contract and is adjusted in revenue.

Revenue from freight and insurance services is recognised over the period during which services are rendered.

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Company performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognised for the earned consideration when that right is conditional on Company's future performance.

A contract liability is the obligation to transfer goods or services to a customer for which the Company has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Company transfers goods or services to the customer, a contract liability is recognised when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognised as revenue when the Company performs under the contract.



The Company does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Company does not adjust any of the transaction prices for the time value of money.

**(ii) Sale of wind energy**

Revenue from sale of wind power is recognised when delivered and measured based on rates as per bilateral contractual agreements with buyers and at rate arrived at based on the principles laid down under the relevant Tariff Regulations as notified by the regulatory bodies, as applicable.

**(iii) Dividends**

Dividend income is recognized in the statement of profit and loss only when the right to receive payment is established, provided it is probable that the economic benefits associated with the dividend will flow to the Company, and the amount of the dividend can be measured reliably.

**(iv) Interest income**

Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably. Interest income is accrued on a time basis, with reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

**(v) Others**

Revenue relating to insurance claims and interest on delayed or overdue payments from trade receivable is recognized when no significant uncertainty as to measurability or collection exists.

**E) PROPERTY, PLANT AND EQUIPMENT**

**(i) Property, plant and equipment other than mining properties**

The initial cost of property, plant and equipment comprises its purchase price, including import duties and non-refundable purchase taxes, and any directly attributable costs of bringing an asset to working condition and location for its intended use. Plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. The present value of the expected cost for the decommissioning of an asset and mine restoration after its use is included in the cost of the respective asset if the recognition criteria for a provision are met. Major

machinery spares and parts are capitalized when they meet the definition of Property, Plant and Equipment. Expenditure incurred after the property, plant and equipment have been put into operation, such as repairs and maintenance, are normally charged to the Statement of Profit and Loss in the period in which the costs are incurred. Major inspection and overhaul expenditure is capitalized.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognized net within other income/other expenses in the Statement of Profit and Loss.

Assets held for sale are carried at lower of their carrying value or fair value less cost to sell.

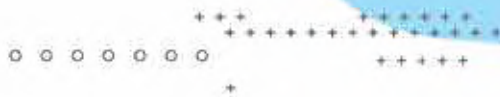
The cost includes the cost of replacing part of the plant and equipment when significant part of plant and equipment are required to be replaced at intervals, the Company depreciates them separately based on their specific useful lives. All other repairs and maintenance cost are recognized in the Statement of Profit and Loss as incurred.

Government grant related to fixed asset is capitalized along with the asset that it relates to and depreciated over the life of the primary asset.

**(ii) Mining properties**

The costs of mining properties, which include the costs of acquiring and developing mining properties are capitalized as Property, Plant and Equipment under the heading "Mining properties" in the year in which they are incurred. When a decision is taken that a Mining property is viable for commercial production (i.e. when the Company determines that the Mining Property will provide sufficient and sustainable return relative to the risks and the Company decided to proceed with the mine development), all further pre-production primary development expenditure other than land, buildings, plant and equipment is capitalized as developing asset until the mining property are capable of commercial production. Revenue derived during the project phase is adjusted from the cost incurred on the project from which such revenue is generated. With respect to open pit operations, waste removal costs that are incurred in the open pit operations during the operational phase of these mines which provide improved access are recognized as assets. The cost of normal on-going operational stripping activities are recognized in the Statement of Profit and Loss as and when incurred.

When the benefit from the stripping costs are realized in the current period, the stripping costs are accounted as charge in statement of profit and loss account in deferred mining expenses head. Deferred



stripping cost are included in mining properties within Property, Plant and Equipment and disclosed as a part of Mining properties. After initial recognition, the stripping activity asset is depreciated on a unit of production method over the expected useful life of the identified component of the ore body to which it improves access.

### (iii) Capital work in progress (CWIP)

Assets in the course of construction are capitalized in capital work in progress account. At the point when an asset is capable of operating in the manner intended by management, the cost of construction is transferred to the appropriate category of property, plant and equipment. Costs associated with the commissioning of an asset are capitalized in CWIP until the period of commissioning has been completed and the asset is ready for its intended use.

### (iv) Depreciation

Depreciable amount for assets is the cost of an asset, or other amount substituted for cost, less its estimated residual value. Depreciation on tangible property and other equipment has been provided on the straight-line method.

- Depreciation has been provided over remaining useful life of the respective property, plant and equipment in respect of additions arising on account of insurance spares, on additions or extension forming an integral part of existing plants and on the revised carrying amount of assets identified as impaired.
- Mining properties are amortized, from the date on which they are first available for use, in proportion to the annual ore raised to the remaining commercial ore reserves (on a unit-of-production basis) over the total estimated remaining commercial reserves of each property or group of properties and are subject to impairment review. Commercial reserves are proved and probable reserves and any changes affecting unit of production calculations are dealt with prospectively over the revised remaining reserves. In the year of abandonment of mine, the residual balance in mining properties are written off. Costs used in the computation of unit of production comprises the net book value of the capitalised costs plus the future estimated costs required to be incurred to access the commercial reserves.
- Based on technical evaluation, the management believes that the useful lives as given below best represent the period over which the management expects to use the asset.

Assets	Useful life in years
Factory buildings	30 years
Residential buildings	60 years
Roads (included in buildings)	5-10 years
Computers and data processing equipment	3-6 years
Plant and Equipment (Including captive power plant)	8 years to 40 years
Railway sidings	15 years
Office equipment	5 years
Furniture and fixtures	10 years
Vehicles	8-10 years

The useful lives of the above assets are in line with the useful lives as prescribed under Part C of schedule II of the Companies Act, 2013, except plant and equipment pertaining to wind energy segment. The Company based on technical assessment made by technical experts and basis management estimate, depreciates these assets over estimated useful lives of 27 years over which the asset is expected to be used. The management believes that these estimated useful lives are realistic and reflect fair apportionment of the period over which the assets are likely to be used.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year end and adjusted prospectively, if appropriate.

### v) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consists of interest and other costs than an entity incurs in connection with the borrowings of the funds.

## F) INTANGIBLE ASSETS

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses. Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the Statement of Profit and Loss when the asset is derecognized.

Intangible assets are amortized over their estimated useful life. Software is amortized on straight line method over the useful life of the asset or 5 years whichever is shorter. Amounts paid for securing mining rights are amortized over the period of mining lease of 20 years. The estimated useful life of the intangible assets and the amortization





period are reviewed at the end of each financial year and the amortization period is revised to reflect the changed pattern, if any.

#### G) IMPAIRMENT OF NON-FINANCIAL ASSETS

Impairment charges and reversals are assessed at the level of cash-generating units. A cash-generating unit (CGU) is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or group of assets.

Impairment tests are carried out annually for all assets when there is an indication of impairment. The Company conducts an internal review of asset values annually, which is used as a source of information to assess for any indications of impairment or reversal of previously recognized impairment losses. External factors, such as changes in expected future prices, costs and other market factors are also monitored to assess for indications of impairment or reversal of previously recognized impairment losses.

If any such indication exists then an impairment review is undertaken, the recoverable amount is calculated, as the higher of fair value less costs of disposal and the asset's value in use.

Fair value less costs of disposal is the price that would be received to sell the asset in an orderly transaction between market participants and does not reflect the effects of factors that may be specific to the entity and not applicable to entities in general. Fair value for mineral assets is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal, using assumptions that an independent market participant may take into account. These cash flows are discounted at an appropriate post tax discount rate to arrive at the net present value.

Value in use is determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset in its present form and its eventual disposal. The cash flows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which estimates of future cash flows have not been adjusted. Value in use is determined by applying assumptions specific to the Company's continued use and cannot take into account future development. These assumptions are different to those used in calculating fair value and consequently the value in use calculation is likely to give a different result to a fair value calculation.

The carrying amount of the CGU is determined on a basis consistent with the way the recoverable amount of the CGU is determined.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of

the asset or CGU is reduced to its recoverable amount. An impairment loss is recognized in the Statement of Profit and Loss.

Any reversal of the previously recognized impairment loss is limited to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had previously been recognized.

#### H) FINANCIAL INSTRUMENTS

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

##### Financial assets – recognition

All financial assets are recognized initially at fair value plus, in the case of financial assets not recorded at fair value through profit and loss, transaction costs that are attributable to the acquisition of the financial asset. Purchases or sales of financial assets except treasury investment that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Company commits to purchase or sell the asset. Treasury investments are accounted for when the amount is settled in Bank account. For purposes of subsequent measurement, financial assets are classified in three categories:

- Debt instruments at amortized cost

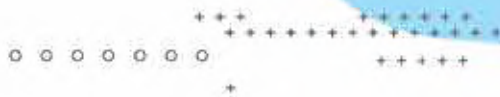
A 'Debt instrument' is measured at the amortized cost if both the following conditions are met:

- a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the Statement of Profit and Loss. The losses arising from impairment are recognized in the Statement of Profit and Loss. This category generally applies to trade and other receivables.

- Debt instruments at fair value through other comprehensive income (FVTOCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:



- a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- b) The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Company recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the profit and loss. On derecognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

- Debt instruments, derivatives and equity instruments at fair value through Statement of Profit or Loss (FVTPL)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Company may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (Referred to as 'accounting mismatch'). The Company has not invested in any equity instruments.

Debt instrument included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

### Financial assets - derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e. removed from the Company's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Company has transferred its rights to receive cash flows from an asset or has entered into a pass-through

arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Company continues to recognize the transferred asset to the extent of the Company's continuing involvement. In that case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained.

### Impairment of financial assets

In accordance with Ind AS 109, the Company applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets:

- Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and trade receivables
- Financial assets that are debt instruments and are measured as at FVTOCI

The Company follows 'simplified approach' for recognition of impairment loss allowance on trade receivables.

The application of simplified approach does not require the Company to track changes in credit risk. Rather, it recognizes impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Company determines whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the Company reverts to recognizing impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Company in accordance with the contract and all the cash flows that the entity expects to receive (i.e. all cash shortfalls), discounted at the original EIR.

ECL impairment loss allowance (or reversal) recognized during the period is recognized as income/ expense in the Statement of Profit and Loss (P&L). This amount is reflected under the head 'other expenses' in the Statement of Profit



and Loss (P&L). The balance sheet presentation for various financial instruments is described below:

- Financial assets measured as at amortized cost: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Company does not reduce impairment allowance from the gross carrying amount.
- Debt instruments measured at FVTOCI: Since financial assets are already reflected at fair value, impairment allowance is not further reduced from its value. Rather, ECL amount is presented as 'accumulated impairment amount' in the OCI.

For assessing increase in credit risk and impairment loss, the Company combines financial instruments on the basis of shared credit risk characteristics with the objective of facilitating an analysis that is designed to enable significant increases in credit risk to be identified on a timely basis.

#### **Financial liabilities – recognition and measurement**

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Company's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

#### **Subsequent measurement**

The measurement of financial liabilities depends on their classification, as described below:

- **Financial liabilities at fair value through profit or loss**  
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Company that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the Statement of Profit or Loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated as such at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk are recognized in OCI. These gains/losses are not subsequently transferred to Statement of Profit and Loss. However, the Company may transfer the cumulative gain or loss within equity. All other changes in fair value of such liability are recognized in the Statement of Profit and Loss.

- **Financial Liabilities at amortized cost (Loans and borrowings)**

After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the Statement of Profit and Loss.

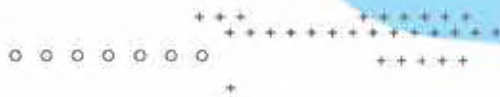
#### **Financial liabilities - derecognition**

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the Statement of Profit and Loss.

#### **Embedded derivatives**

An embedded derivative is a component of a hybrid (combined) instrument that also includes a non-derivative host contract – with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative. An embedded derivative causes some or all of the cash flows that otherwise would be required by the contract to be modified according to a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through Profit or Loss.

If the hybrid contract contains a host that is a financial



asset within the scope of Ind AS 109, the Company does not separate embedded derivatives. Rather, it applies the classification requirements contained in Ind AS 109 to the entire hybrid contract. Derivatives embedded in all other host contracts are accounted for as separate derivatives and recorded at fair value if their economic characteristics and risks are not closely related to those of the host contracts and the host contracts are not held for trading or designated at fair value through Profit or Loss. These embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss, unless designated as effective hedging instruments.

### Reclassification of financial assets

The Company determines classification of financial assets and liabilities on initial recognition. After initial recognition, no reclassification is made for financial assets which are equity instruments and financial liabilities. For financial assets which are debt instruments, a reclassification is made only if there is a change in the business model for managing those assets. Changes to the business model are expected to be infrequent. The senior management determines change in the business model as a result of external or internal changes which are significant to the group's operations. Such changes are evident to external parties. A change in the business model occurs when the group either begins or ceases to perform an activity that is significant to its operations. If the Company reclassifies financial assets, it applies the reclassification prospectively from the reclassification date which is the first day of the immediately next reporting period following the change in business model. The Company does not restate any previously recognized gains, losses (including impairment gains or losses) or interest.

### Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

## I) DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGE ACCOUNTING

### Initial recognition and subsequent measurement

In order to hedge its exposure to foreign exchange, interest rate, and commodity price risks, the Company enters into forward currency contracts, commodity contracts and other derivative financial instruments. The Company does not hold derivative financial instruments for speculative purposes.

Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

Any gains or losses arising from changes in the fair value of derivatives are taken directly to profit or loss, except for the effective portion of cash flow hedges, which is recognized in OCI and later reclassified to profit or loss when the hedge item affects profit or loss or treated as basis adjustment if a hedged forecast transaction subsequently results in the recognition of a non-financial asset or non-financial liability.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment
- Cash flow hedges when hedging the exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or the foreign currency risk in an unrecognized firm commitment

At the inception of a hedge relationship, the Company formally designates and documents the hedge relationship to which the Company wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes the Company's risk management objective and strategy for undertaking hedge, the hedging/ economic relationship, the hedged item or transaction, the nature of the risk being hedged, hedge ratio and how the entity will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an on-going basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Hedges that meet the strict criteria for hedge accounting are accounted for, as described below:

### (i) Fair value hedges

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

If the hedged item is derecognized, the unamortized fair value is recognized immediately in profit or loss. When an unrecognized firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognized as an asset or liability with a corresponding gain or loss recognized in the Statement of Profit and Loss.



**(ii) Cash flow hedges**

The effective portion of the gain or loss on the hedging instrument is recognized in OCI in the cash flow hedge reserve, while any ineffective portion is recognized immediately in the Statement of Profit and Loss.

Amounts recognized as OCI are transferred to Statement of Profit and Loss when the hedged transaction affects profit or loss, such as when the hedged financial income or financial expense is recognized or when a forecast sale occurs. When the hedged item is the cost of a non-financial asset or non-financial liability, the amounts recognized as OCI are transferred to the initial carrying amount of the non-financial asset or liability.

If the hedging instrument expires or is sold, terminated or exercised without replacement or rollover (as part of the hedging strategy), or if its designation as a hedge is revoked, or when the hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss previously recognized in OCI remains separately in equity until the forecast transaction occurs or the foreign currency firm commitment is met.

**J) GOVERNMENT GRANTS, SUBSIDIES AND EXPORT INCENTIVES**

Grants and subsidies from the government are recognized when there is reasonable assurance that (i) the Company will comply with the conditions attached to them, and (ii) the grant/subsidy will be received.

When the grant or subsidy relates to revenue, it is recognized as income on a systematic basis in the Statement of Profit and Loss over the periods necessary to match them with the related costs, which they are intended to compensate.

Where the grant relates to an asset, it is recognized as deferred income and released to income in equal amounts over the expected useful life of the related asset and presented within other income.

When the Company receives grants of non-monetary assets, the asset and the grant are recorded at fair value amounts and released to profit or loss over the expected useful life in a pattern of consumption of the benefit of the underlying asset i.e. by equal annual instalments.

When loans or similar assistance are provided by governments or related institutions, with an interest rate below the current applicable market rate, the effect of this favourable interest is regarded as a government grant. The loan or assistance is initially recognized and measured at fair value and the government grant is measured as the difference between the initial carrying value of the loan and the proceeds received. The loan is subsequently measured as per the accounting policy applicable to financial liabilities.

**K) INVENTORIES**

Inventories are valued at the lower of cost and net realizable value, less any provision for obsolescence.

Costs incurred in bringing each product to its present location and condition are accounted for as follows:

- (i) Ore, concentrate (mined metal), work-in-progress and finished goods (including significant by-products i.e. silver) are valued at lower of cost or net realizable value on weighted average basis.
- (ii) Stores and spares are valued at lower of cost or net realizable value on weighted average basis.
- (iii) Immaterial by-products, aluminium scrap, chemical lead scrap, anode scrap and coke fines are valued at net realizable value.

Net realizable value is determined based on estimated selling price, less further costs expected to be incurred to completion and disposal.

**L) TAXATION****Current tax**

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, at the reporting date.

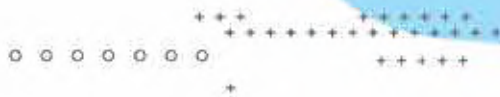
Current income tax relating to items recognized outside profit or loss is recognized outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognized in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

**Deferred tax**

Deferred tax is provided, using the balance sheet method, on all temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, when the timing of the



reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside profit or loss is recognised outside profit or loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

## M) RETIREMENT AND OTHER EMPLOYEE BENEFIT SCHEMES

### i. Short-term employee benefits

Employee benefits payable wholly within twelve months of receiving employee services are classified as short-term employee benefits. These benefits include salaries and wages, performance incentives and

compensated absences which are expected to occur in next twelve months. The undiscounted amount of short-term employee benefits to be paid in exchange for employee services is recognized as an expense as the related service is rendered by employees.

### ii. Post-Employment Benefits

#### Gratuity

In accordance with the Payment of Gratuity Act of 1972, the Company contributes to a defined benefit plan (the "Gratuity Plan"). The Gratuity Plan provides a lump sum payment to employees who have completed at least 5 years of service; at retirement, disability or termination of employment being an amount equal to 15 days' salary (based on the respective employee's last drawn salary) for every completed year of service.

Based on actuarial valuations conducted as at year end, a provision is recognized in full for the benefit obligation over and above the funds held in the Gratuity Plan.

In respect of defined benefit schemes, the assets are held in separately administered funds. In respect of defined benefit schemes, the cost of providing benefits under the plans is determined by actuarial valuation separately each year using the projected unit credit method by independent qualified actuary as at the year end.

Re-measurements, comprising of actuarial gains and losses, the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability and the return on plan assets (excluding amounts included in net interest on the net defined benefit liability), are recognized immediately in the balance sheet with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Re-measurements are not reclassified to the Statement of Profit and Loss in subsequent periods.

The Company recognizes the following changes in the net defined benefit obligation as an expense in the Statement of Profit and Loss:

- Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements; and
- Net interest expense or income

#### Provident Fund

The Company offers retirement benefits to its employees, under provident fund scheme which is a defined benefit plan. The Company and employees contribute at predetermined rates to 'Hindustan Zinc Limited Employee's Contributory Provident Fund' ('Trust') accounted on accrual basis and the conditions for grant of exemption stipulate that the employer



shall make good the deficiency, if any, between the return guaranteed by the statute and actual earning of the Trust. The contribution towards provident fund is recognized as an expense in the Statement of Profit and Loss.

#### Family Pension

The Company offers its employees benefits under defined contribution plans in the form of family pension scheme. Contributions are paid during the year into the fund under statutory arrangements. The contribution to family pension fund is made at predetermined rates by the Company based on prescribed rules of family pension scheme. The contribution towards family pension is recognized as an expense in the Statement of Profit and Loss. The Company has no further obligation other than the contribution made.

#### Superannuation

Certain employees of the Company, who have joined post disinvestment are members of the Superannuation plan. The Company has no further obligations to the Plan beyond its monthly contributions which are periodically contributed to a trust fund, the corpus of which is invested with the Life Insurance Corporation of India. The contribution is recognized as an expense in the Statement of Profit and Loss.

### iii. Other Long-Term Employee Benefits

#### Compensated absences

The Company has a policy on compensated absences which are both accumulating and non-accumulating in nature. The expected cost of accumulating compensated absences is determined by actuarial valuation performed by an independent actuary at each balance sheet date using projected unit credit method on the additional amount expected to be paid/availed as a result of the unused entitlement that has accumulated at the balance sheet date. Expense on non-accumulating compensated absences is recognized in the period in which the absences occur. Actuarial differences are recognised immediately in the Statement of Profit and Loss.

## N) PROVISION

Provisions are recognized when the Company has a present obligation (legal or constructive), as a result of past events, and it is probable that an outflow of resources, that can be reliably estimated, will be required to settle such an obligation. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each reporting date and are adjusted to reflect the current best estimate.

### (i) Provision for Decommissioning

The Company recognizes a provision for decommissioning costs of smelting and refining facilities. Decommissioning costs are provided at the present value of expected costs to settle the obligation using estimated cash flows and are recognized as part of the cost of the particular asset. The cash flows are discounted at pre-tax rate that reflects the risks specific to the liability. The unwinding of the discount is expensed as incurred and recognized in the Statement of Profit and Loss as a finance cost. Changes in the estimated future costs or in the discount rate applied are added to or deducted from the cost of the asset.

The Company recognizes provision for discontinuing of a smelting operation which is charged to the Statement of profit and loss. Management estimates are based on third party technical estimates. The actual costs and cash outflows may differ from estimates because of changes in laws and regulations, changes in prices, analysis of site conditions and changes in restoration technology. The estimated future costs of decommissioning are reviewed annually and adjusted as appropriate.

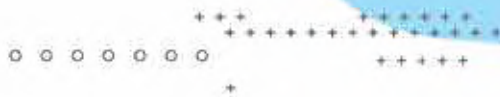
### (ii) Provision for Restoration, rehabilitation and environmental costs

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or on-going production of a mine. Such costs, discounted to net present value, are provided for and a corresponding amount is capitalized at the start of each project as mining properties, as soon as the obligation to incur such costs arises. These costs are charged to the Statement of Profit and Loss over the life of the operation through the depreciation of the asset and the unwinding of the discount on the provision (considered as finance cost). The cost of the related asset is adjusted for changes in the provision due to factors such as updated cost estimates, changes to lives of operations, new disturbance and revisions to discount rates. The adjusted cost of the asset is depreciated prospectively over the lives of the assets to which they relate as per the depreciation policy.

Costs for the restoration of subsequent site damage, which is caused on an on-going basis during production, are charged to the Statement of Profit and Loss as extraction progresses. Where the costs of site restoration are not anticipated to be material, they are expensed as incurred.

## O) FOREIGN CURRENCY TRANSLATION

The functional currency for the Company is determined as the currency of the primary economic environment in which it operates. For the Company, the functional currency is the local currency of the country in which it operates, which is Indian Rupee.



In the financial statements of the Company, transactions in currencies other than the functional currency are translated into the functional currency at the exchange rates ruling at the date of the transaction. Monetary assets and liabilities denominated in other currencies are translated into the functional currency at exchange rates prevailing on the reporting date. Non-monetary assets and liabilities denominated in other currencies and measured at historical cost or fair value are translated at the exchange rates prevailing on the dates on which such values were determined.

All exchange differences are included in the Statement of Profit and Loss except any exchange differences on monetary items designated as an effective hedging instrument of the currency risk of designated forecasted sales or purchases, which are recognized in the other comprehensive income.

#### **P) EARNINGS PER SHARE**

The Company presents basic and diluted earnings per share (“EPS”) data for its equity shares. Basic EPS is calculated by dividing the profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares outstanding during the period. Diluted EPS is determined by adjusting the profit or loss attributable to equity shareholders and the weighted average number of equity shares outstanding for the effects of all dilutive potential equity shares.

#### **Q) SEGMENT REPORTING**

Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Operating Decision-Maker i.e. CEO. Revenue and expenses are identified to segments on the basis of their relationship to the operating activities of the segment. Revenue, expenses, assets and liabilities which are not allocable to segments on a reasonable basis, are included under “Unallocated revenue/ expenses/ assets/ liabilities”.

#### **R) LEASES**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

##### **Company as a lessee**

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Company is classified as a finance lease. Finance leases are capitalized at the commencement of the lease at the inception date fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability so as to achieve a constant rate of interest

on the remaining balance of the liability. Finance charges are recognized as finance costs in the Statement of Profit and Loss, unless they are directly attributable to qualifying assets, in which case they are capitalized in accordance with the Company’s general policy on the borrowing costs. Contingent rentals are recognized as expenses in the periods in which they are incurred. Operating lease payments are recognized as an expense in the Statement of Profit and Loss on a straight-line basis over the lease term.

##### **Company as a lessor**

Leases in which the Company does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

#### **S) CASH AND CASH EQUIVALENTS**

Cash and cash equivalents comprise cash at bank and on hand and short-term money market deposits with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above and additionally includes unpaid dividend account.

#### **T) INVESTMENT IN JOINT VENTURE**

Investments representing equity interest in joint ventures are carried at cost. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

### **3.(II) CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES**

#### **NEW AND AMENDED STANDARDS**

The Company applied Ind AS 115 for the first time. The nature and effect of the changes as a result of adoption of these new accounting standards are described below.

Several other amendments and interpretations apply for the first time in March 2019, but do not have an impact on the financial statements of the Company.

#### **Ind AS 115 - Revenue from Contracts with Customers**

The Company has adopted Ind AS 115 Revenue from contracts with Customers with effect from April 01, 2018 which outlines a single comprehensive model for entities





to use in accounting for revenue arising from contracts with customers. The standard replaces most of the current revenue recognition guidance. The core principle of the new standard is for companies to recognize revenue when the control of the goods and services is transferred to the customer as against the transfer of risk and rewards. As per the Company's current revenue recognition practices, transfer of control happens at the same point as transfer of risk and rewards thus not effecting the revenue recognition. The amount of revenue recognised reflects the consideration to which the Company expects to be entitled in exchange for those goods or services.

Under this standard, services provided post transfer of control of goods are treated as separate performance obligation and require proportionate revenue to be deferred along with associated costs and to be recognized over the period of service. The Company provides shipping and insurances services after the date of transfer of control of goods and therefore has identified it as a separate performance obligation. As per the result of evaluation of contracts of the relevant revenue streams, it is concluded that the impact of this change is immaterial to the Company and hence no accounting changes have been done.

The Company has products which are provisionally priced at the date revenue is recognised. Revenue in respect of such contracts are recognised when control passes to the customer and is measured at the amount the entity expects to be entitled – being the estimate of the price expected to be received at the end of the measurement period. Post transfer of control of goods, subsequent movements in provisional pricing are accounted for in accordance with Ind AS 109 "Financial Instruments" rather than Ind AS 115 and therefore the Ind AS 115 rules on variable consideration do not apply. These 'provisional pricing' adjustments i.e. the consideration received post transfer of control has been included in total revenue from operations on the face of the Statement of Profit and loss. The accounting for revenue under Ind AS 115 does not, therefore, represent a substantive change from the Company's previous practice for recognising revenue from sales to customers.

The Company has adopted the modified transitional approach as permitted by the standard under which the comparative financial information is not restated. The accounting changes required by the standard are not having material effect on the Company's financial statements and no transitional adjustment is recognised in retained earnings at April 01, 2018.

#### **Prior period accounting policy: Revenue Recognition**

Revenues are measured at the fair value of the consideration received or receivable, net of discounts, volume rebates, outgoing sales taxes/ goods & service tax and other indirect taxes excluding excise duty.

#### **Sale of goods/rendering of services**

Revenues from sales of goods are recognised when all significant risks and rewards of ownership of the goods sold are transferred to the customer which usually is on delivery of the goods to the shipping agent. Revenues from sale of by-products are included in revenue.

Certain of the Company's sales contracts provide for provisional pricing based on the price on The London Metal Exchange ("LME"), as specified in the contract, when shipped. Final settlement of the price is based on the applicable price for a specified future period. The Company's provisionally priced sales are marked to market using the relevant forward prices for the future period specified in the contract and is adjusted in revenue.

Revenue from sale of wind power is recognised when delivered and measured based on rates as per bilateral contractual agreements with buyers and at rate arrived at based on the principles laid down under the relevant Tariff Regulations as notified by the regulatory bodies, as applicable.

#### **Amendment to Ind AS 23 Borrowing Cost**

The amendment clarifies that an entity considers any borrowings made specifically for the purpose of obtaining a qualifying asset as part of the general borrowings, when substantially all of the activities necessary to prepare that asset for its intended use or sale is complete. The amendment is applicable to borrowing costs incurred on or after the beginning of the annual reporting period in which the entity first applies those amendments. The amendment is effective from April 01, 2019. Since this amendment is clarificatory in nature, the Company has applied the amendment prospectively from the current reporting year i.e. for the borrowing costs incurred on or after April 01, 2018.

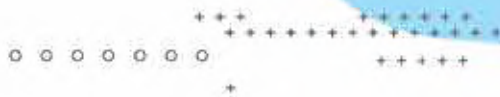
Based on the Amendment, the Company has now capitalized certain borrowing costs as general borrowings. This has resulted in capitalization of interest expenses of ₹ 103 Crore for the year ended March 31, 2019 under Capital work in progress. The consequent incremental impact on net profit (after tax) for the year was ₹ 67 Crores and on the basic and diluted earnings per share was ₹ 0.16/ share and ₹ 0.16/ share respectively.

The change did not have any significant impact on the Company's balance sheet and the statement of cash flows.

#### **Standards issued but not effective**

The amendments to standards that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below. The Company intends to adopt these standards, if applicable, when they become effective.

The Ministry of Corporate Affairs (MCA) has issued the Companies (Indian Accounting Standards) Second Amendment Rules, 2018 introducing/amending the following standards:



### (a) Ind AS 116- Leases

Ind AS 116, Leases, replaces the existing standard on accounting for leases, Ind AS 17. This standard introduces a single lessee accounting model and requires a lessee to recognize a 'right of use asset' (ROU) and a corresponding 'lease liability' for all leases with the exception of short-term (under 12 months) and low-value leases. Lease costs will be recognised in the income statement over the lease term in the form of depreciation on the ROU asset and finance charges representing the unwinding of the discount on the lease liability.

The Company plans to adopt Ind AS 116 from April 01, 2019 under the modified retrospective approach, and accordingly the comparative figures will not be restated. For contracts in place at this date, the Company will continue to apply its existing definition of leases under current accounting standards ("grandfathering"), instead of reassessing whether existing contracts are or contain a lease at the date of application of the new standard.

The Standard, in addition to increasing the Company's recognised assets and liabilities, impacts the classification and timing of expenses and consequently the classification between cash flow from operating activities and cash flow from financing activities. However, implementation of Ind AS 116 is not expected to have a material effect on the Company's Financial Statements.

Balance Sheet: For leases that have been classified to date as operating leases in accordance with Ind AS 17, the lease liability will be recognised at the present value of the remaining lease payments, discounted using the incremental borrowing rate as on April 01, 2019. The right-of-use asset will generally be measured at the amount of the lease liability adjusted for advance payments and accrued liabilities from the previous financial year.

Income Statement: Adoption of Ind AS 116 is not expected to have material effect on profit before tax (PBT)

Cash Flow Statement: The change in presentation of operating lease expenses will result in a corresponding improvement in cash flows from operating activities and a decline in cash flows from financing activities.

### (b) Amendments to standards

The following amendments are applicable to the Company from April 01, 2019. The impacts of these are currently expected to be immaterial:

Reference	Name/Brief
Annual Improvements to Ind AS (2018)	The amendments comprise of changes in Ind AS 103, Ind AS 111 and Ind AS 12
Ind AS 19	Employee benefits - Plan Amendment, Curtailment or Settlement
Ind AS 28	Investments in Associates and Joint Ventures - Long-term Interests in Associates and Joint Ventures
Ind AS 109	Financial Instruments - Prepayment Features with Negative Compensation
Ind AS 12	Income Taxes - Uncertainty over Income Tax Treatments

### 3(III) CRITICAL ACCOUNTING ESTIMATE AND JUDGEMENT

The preparation of the financial statements in conformity with Ind AS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amount of assets, liabilities, income, expenses and disclosures of contingent liabilities at the date of these financial statements. Actual results may differ from these estimates under different assumptions and conditions.

The management believes that the estimates used in preparation of the financial statements are prudent and reasonable. Information about estimates and judgments made in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements are as follows:

#### (A) SIGNIFICANT ESTIMATES

##### (i) Mining property and Ore reserve

Ore reserves and mineral resource estimates are estimates of the amount of ore that can be economically and legally extracted from the Company's mining properties. The Company estimates its ore reserves and mineral resources based on information compiled by appropriately qualified persons relating to the geological and technical data on the size, depth, shape and grade of the ore body and suitable production techniques and recovery rates. Such an analysis requires complex geological judgements to interpret the data. The estimation of recoverable reserves is based upon factors such as estimates of foreign exchange rates, commodity prices, future capital requirements and production costs, along with geological assumptions and judgements made in estimating the size and grade of the ore body.



**(ii) Restoration, rehabilitation and environmental costs:**

Provision is made for costs associated with restoration and rehabilitation of mining sites as soon as the obligation to incur such costs arises. Such restoration and closure costs are typical of extractive industries and they are normally incurred at the end of the life of the mine fields. The costs are estimated on annual basis on the basis of mine closure plans and the estimated discounted costs of dismantling and removing these facilities and the costs of restoration are capitalized when incurred reflecting the Company's obligations at that time.

The provision for decommissioning liabilities (Refer note 16) is based on the current estimate of the costs for removing and decommissioning producing facilities, the forecast timing of settlement of decommissioning liabilities and the appropriate discount rate.

**(iii) Assessment of Useful lives and consumption pattern of Property, Plant and Equipments:**

The Company reviews the useful lives and consumption pattern of Property, Plant and Equipment at the end of each reporting period.

**(B) SIGNIFICANT JUDGEMENT****Contingencies:**

In the normal course of business, contingent liabilities may arise from litigation, taxation and other claims against the Company. Where it is management's assessment that the outcome cannot be reliably quantified or is uncertain, the claims are disclosed as contingent liabilities unless the likelihood of an adverse outcome is remote. Such liabilities are disclosed in the notes but are not provided for in the financial statements.

While considering the possible, probable and remote analysis of taxation, legal and other claims, there is always a certain degree of judgement involved pertaining to the application of the legislation which in certain cases is supported by views of tax experts and/or earlier precedents in similar matters. Although there can be no assurance regarding the final outcome of the legal proceedings, the Company does not expect them to have a materially adverse impact on the Company's financial position or profitability.

## 4. PROPERTY, PLANT AND EQUIPMENT

(₹ in Crore)

Particulars	Freehold land	Buildings	Plant and equipment	Furniture and fixtures	Vehicles	Office equipment	Railway siding	Mining properties <sup>(2)</sup>	Total
<b>At Cost</b>									
<b>As at April 01, 2017</b>	<b>259</b>	<b>1,334</b>	<b>13,996</b>	<b>29</b>	<b>34</b>	<b>213</b>	<b>84</b>	<b>1,780</b>	<b>17,729</b>
Additions	37	59	1,567	2	7	24	9	1,097	2,802
Disposals/ adjustments	-	1	50	-	3	2	(1)	-	55
<b>As at March 31, 2018</b>	<b>296</b>	<b>1,392</b>	<b>15,513</b>	<b>31</b>	<b>38</b>	<b>235</b>	<b>94</b>	<b>2,877</b>	<b>20,476</b>
Additions <sup>(1)</sup>	32	221	2,602	3	8	21	-	2,491	5,378
Disposals/ adjustments	-	-	189	-	2	5	-	-	196
<b>As at March 31, 2019</b>	<b>328</b>	<b>1,613</b>	<b>17,926</b>	<b>34</b>	<b>44</b>	<b>251</b>	<b>94</b>	<b>5,368</b>	<b>25,658</b>
<b>Accumulated depreciation</b>									
<b>As at April 01, 2017</b>	-	<b>304</b>	<b>6,817</b>	<b>19</b>	<b>17</b>	<b>172</b>	<b>18</b>	<b>517</b>	<b>7,864</b>
Depreciation charge for the year <sup>(4)</sup>	-	54	674	2	4	15	5	726	1,480
Disposals/ adjustments	-	-	45	-	1	2	1	-	49
<b>As at March 31, 2018</b>	-	<b>358</b>	<b>7,446</b>	<b>21</b>	<b>20</b>	<b>185</b>	<b>22</b>	<b>1,243</b>	<b>9,295</b>
Depreciation charge for the year <sup>(4)</sup>	-	59	768	2	4	16	5	1,025	1,879
Disposals/ adjustments	-	-	178	-	1	5	-	-	184
<b>As at March 31, 2019</b>	-	<b>417</b>	<b>8,036</b>	<b>23</b>	<b>23</b>	<b>196</b>	<b>27</b>	<b>2,268</b>	<b>10,990</b>
<b>Net Book Value</b>									
<b>As at March 31, 2019</b>	<b>328</b>	<b>1,196</b>	<b>9,890</b>	<b>11</b>	<b>21</b>	<b>55</b>	<b>67</b>	<b>3,100</b>	<b>14,668</b>
<b>As at March 31, 2018</b>	<b>296</b>	<b>1,034</b>	<b>8,067</b>	<b>10</b>	<b>18</b>	<b>50</b>	<b>72</b>	<b>1,634</b>	<b>11,181</b>

**Capital work in progress<sup>(3)</sup>**

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Carrying amount of Capital work in progress	2,254	3,220

<sup>(1)</sup> Additions to plant & equipment includes finance cost capitalised of ₹ 60 Crores. (March 31, 2018: NIL)

<sup>(2)</sup> Additions to mining properties includes deferred stripping cost NIL (March 31, 2018: ₹ 44 Crore).

<sup>(3)</sup> During the year, the Company has transferred the following expenses which are attributable to the construction activity and are included in the cost of capital work in progress (CWIP). Consequently, expenses disclosed under the respective notes are net of such amounts.

(₹ in Crore)

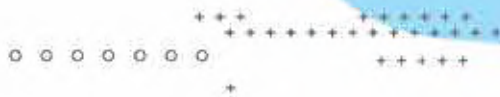
Particulars	As at March 31, 2019	As at March 31, 2018
Power and fuel charges	30	29
Repairs and Others	85	75
Consumption of stores and Spare parts	77	76
Employee Benefit Expenses	44	43
General Expenses	2	3
Insurance	3	2
Conveyance and travelling expenses	1	1
Finance Cost	103	1
<b>Total</b>	<b>345</b>	<b>230</b>

<sup>(4)</sup> During the year, the Company has capitalised depreciation attributable to certain assets under development of ₹ 10 Crore (March 31, 2018: ₹ 10 Crore). Accordingly depreciation reported in Note 25 is ₹ 1870 Crore (March 31, 2018: ₹ 1470 Crore).

**5. INTANGIBLE ASSETS**

(₹ in Crore)

Particulars	Computer software	Mining rights	Right to use asset (Refer note 33)	Total
<b>At Cost</b>				
<b>As at April 01, 2017</b>	<b>40</b>	<b>67</b>	<b>68</b>	<b>175</b>
Additions	5	-	1	6
Disposals	-	-	-	-
<b>As at March 31, 2018</b>	<b>45</b>	<b>67</b>	<b>69</b>	<b>181</b>
Additions	2	-	-	2
Disposals	-	-	-	-
<b>As at March 31, 2019</b>	<b>47</b>	<b>67</b>	<b>69</b>	<b>183</b>
<b>Amortization</b>				
<b>As at April 01, 2017</b>	<b>26</b>	<b>13</b>	<b>8</b>	<b>47</b>
Charge for the year	6	4	3	13
<b>As at March 31, 2018</b>	<b>32</b>	<b>17</b>	<b>11</b>	<b>60</b>
Charge for the year	6	4	3	13
<b>As at March 31, 2019</b>	<b>38</b>	<b>21</b>	<b>14</b>	<b>73</b>
<b>Net Book Value</b>				
<b>As at March 31, 2019</b>	<b>9</b>	<b>46</b>	<b>55</b>	<b>110</b>
<b>As at March 31, 2018</b>	<b>13</b>	<b>50</b>	<b>58</b>	<b>121</b>



## 6. LOANS

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
<b>Non-current</b>		
<b>Unsecured, considered good</b>		
Loans to employees	1	1
Security deposits	12	14
<b>Total</b>	<b>13</b>	<b>15</b>
<b>Current</b>		
<b>Unsecured, considered good</b>		
Loans to employees	3	1
<b>Total</b>	<b>3</b>	<b>1</b>

## 7. OTHER ASSETS

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
<b>Non-current</b>		
<b>Unsecured, considered good</b>		
Capital advances	245	751
Claims and other receivables <sup>(1)</sup>	260	213
Leasehold Land Prepayments	133	138
<b>Total</b>	<b>638</b>	<b>1,102</b>
<b>Unsecured, credit impaired</b>		
Claims and other receivables	12	11
Provision on doubtful deposits and claims	(12)	(11)
	-	-
<b>Total</b>	<b>638</b>	<b>1,102</b>
<b>Current</b>		
<b>Unsecured, considered good</b>		
Advance given to vendors for supply of goods and services	194	251
Balance with government authorities	76	30
Claims and other receivables <sup>(2)</sup>	39	96
Leasehold Land Prepayments	5	5
<b>Total</b>	<b>314</b>	<b>382</b>

<sup>(1)</sup> Includes ₹ 101 Crore as at March 31, 2019 (March 31, 2018: ₹ 101 Crore) paid under protest on account of Entry tax dispute (see note 29). Balance pertains to Indirect taxes and royalty deposited under dispute with respect to various matters currently litigated in court of law and at various levels of adjudication.

<sup>(2)</sup> Includes ₹ 21 Crore (March 2018: ₹ 76 Crore) export benefit incentive receivable and ₹ 18 Crore (March 2018: ₹ 20 Crore) prepaid expenses



**8. INVENTORIES \***

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
a. Raw material	-	1
b. Work in progress		
Ore <sup>(1)</sup>	25	141
Mined Metal	222	270
Others	490	288
c. Finished goods <sup>(1)</sup>	48	23
d. Fuel Stock	185	175
[Including goods in transit ₹ 78 Crore (March 31, 2018: ₹ 108 Crore)]		
e. Stores and spare parts	574	481
[Including goods in transit ₹ 32 Crore (March 31, 2018: ₹ 6 Crore)]		
<b>Total</b>	<b>1,544</b>	<b>1,379</b>

\* For method of valuation of inventories, Refer note 3(k)

<sup>(1)</sup> Inventory held at net realizable value amounted to ₹ 12 Crore (March 31, 2018: ₹ 18 Crore). The write down on this inventory of NIL (March 31, 2018: NIL) has been taken to Statement of Profit and Loss.

**9. INVESTMENTS**

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Measured at fair value through profit and loss</b>		
Investment in bonds-quoted	1,393	-
Investment in zero coupon bonds- quoted	9,378	2,273
Investment in mutual funds-quoted	6,552	9,775
Investment in mutual funds-unquoted	2,165	5,371
<b>Measured at fair value through other comprehensive income</b>		
Investment in bonds-quoted	-	1,580
Investment in zero coupon bonds- quoted	-	1,223
<b>Total</b>	<b>19,488</b>	<b>20,222</b>
Aggregate amount of quoted investment at market value thereof	17,323	14,851
Aggregate amount of unquoted investment	2,165	5,371

**10. TRADE RECEIVABLES<sup>(1)(3)</sup>**

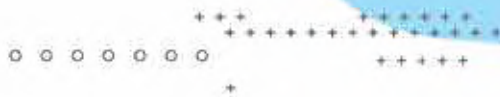
(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Unsecured</b>		
Considered good <sup>(2)</sup>	196	184
Trade receivables- credit impaired	1	1
Provision for doubtful trade receivables	(1)	(1)
<b>Total</b>	<b>196</b>	<b>184</b>

<sup>(1)</sup> The average credit period given to customer ranges from zero to ninety days. Interest is charged on trade receivables for the credit period, from the date of the invoice at 8.5% to 14.50% per annum on the outstanding balance.

<sup>(2)</sup> Unsecured considered good includes, ₹ 43 Crore (March 31, 2018: ₹ 69 Crore) due from wind energy segment's trade receivables. Unsecured trade receivable of ₹ 119 Crore (March 31, 2018: ₹ 82 Crore) are covered against Letter of credit and Bank Guarantees.

<sup>(3)</sup> Refer note 37 for details of related party balances and terms and conditions.



## 11. CASH AND CASH EQUIVALENTS

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Balances with banks		
On current accounts	2	173
<b>Total</b>	<b>2</b>	<b>173</b>
For the purpose of statement of cash flows, cash and cash equivalents comprises the following:		
Cash and cash equivalents as above	2	173
Earmarked unpaid dividend account (Refer note 12)	21	1,791
<b>Total</b>	<b>23</b>	<b>1,964</b>

## 12. OTHER BANK BALANCES

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Earmarked unpaid dividend accounts	21	1,791
<b>Total</b>	<b>21</b>	<b>1,791</b>

## 13. OTHER FINANCIAL ASSETS

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Non-current</b>		
<b>Unsecured, considered good</b>		
Security Deposits	38	35
Bank Deposits with more than 12 months maturity	-	-
<b>Unsecured, credit impaired</b>		
Security Deposits	27	27
Provision for doubtful deposits and claims	(27)	(27)
<b>Total</b>	<b>38</b>	<b>35</b>
<b>Current</b>		
<b>Unsecured, Considered Good</b>		
Interest accrued on deposits	3	3
Derivative assets (Refer note 35)	1	8
<b>Total</b>	<b>4</b>	<b>11</b>

## 14. EQUITY SHARE CAPITAL

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>A. Authorized equity share capital</b>		
Equity shares of ₹ 2 (March 31, 2018: ₹ 2) each.	1,000	1,000
No. of Shares (In Crore)	500	500
<b>B. Issued, subscribed and paid up</b>		
Equity shares of ₹ 2 (March 31, 2018: ₹ 2) each.	845	845
No. of Shares (In Crore)	423	423





(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>C. Equity shares held by Holding Company</b>		
Vedanta Limited		
No. of Shares (In Crore)	274	274
% of Holding	64.92%	64.92%
<b>D. No shares issued for consideration other than cash and shares bought back during the period of five years immediately preceding the reporting date</b>		
<b>E. Details of shareholders holding more than 5% shares in the Company</b>		
Vedanta Limited		
No. of Shares (In Crore)	274	274
% of Holding	64.92%	64.92%
Government of India - President of India		
No. of Shares (In Crore)	125	125
% of Holding	29.54%	29.54%

**F. Terms/Rights attached to equity shares**

The Company has one class of equity shares having a par value of ₹ 2 per share. Each equity shareholder is eligible for one vote per share held. Each equity shareholder is entitled to dividend as and when declared by the Company. Interim dividend is paid as and when declared by the Board. Final dividend is paid after obtaining shareholders' approval. Dividends are paid in Indian Rupees.

In the event of liquidation, the equity shareholders are eligible to receive the remaining assets of the Company after distribution of all preferential amount in proportion to their shareholding. The Company has a dividend policy to pay a minimum dividend of 30% of profit after tax or 5% of opening net worth which ever is lower.

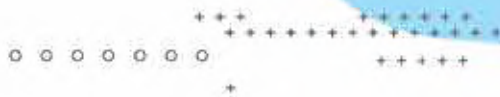
**15. OTHER FINANCIAL LIABILITIES**

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Non-current</b>		
Security deposits and other liabilities	11	10
Capital creditors	8	59
<b>Total</b>	<b>19</b>	<b>69</b>
<b>Current</b>		
Derivatives - Liabilities (Refer Note 35)	13	96
Capital Creditors <sup>(1)</sup>	948	765
Due to related party (Refer Note 37)	14	27
Deposits from vendors	94	160
Dividend payable	-	1,786
Unclaimed dividend <sup>(2)</sup>	21	4
Other liabilities (Includes employee benefits etc.)	311	256
<b>Total</b>	<b>1,401</b>	<b>3,094</b>

<sup>(1)</sup> Includes ₹ 2 Crore (March 31, 2018: ₹ 3 Crore) to related parties (Refer note 37).

<sup>(2)</sup> Represents the unclaimed dividend for a period less than 7 years.



## 16. PROVISIONS

### NON-CURRENT

(₹ in Crore)

Particulars	Provision for mine restoration <sup>(1)</sup>	Provision for decommissioning <sup>(2)</sup>	Total
<b>As at April 01, 2017</b>	<b>89</b>	<b>22</b>	<b>111</b>
Addition during the year	25	(6)	19
Unwinding of discount	4	-	4
Utilized	-	-	-
<b>As at March 31, 2018</b>	<b>118</b>	<b>16</b>	<b>134</b>
Addition during the year/(revision during the year)	13	-	13
Unwinding of discount	(2)	-	(2)
Utilized	-	-	-
<b>As at March 31, 2019</b>	<b>129</b>	<b>16</b>	<b>145</b>

<sup>(1)</sup> The provision for restoration, rehabilitation, and environmental cost represents the Company's best estimate of the costs which will be incurred in the future to meet the obligations under the laws of the land and the terms Referred to in the Company's mining arrangements. The principal restoration, rehabilitation and environmental provisions are the costs, which are expected to be incurred in restoring at the end of life of these mines at Rampura Agucha, Rajpura Dariba, Zawar Mines, Sindesar Khurd and Kayad.

<sup>(2)</sup> Provision for decommissioning is created to meet the obligation at decommissioned smelting facility at Vizag location basis an independent technical evaluation.

### CURRENT

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Provision for Gratuity (Refer note 27 & 30)	54	62
Provision for compensated absences (Refer note 30)	16	20
Provision for mine restoration	4	4
<b>Total</b>	<b>74</b>	<b>86</b>

## 17. OTHER LIABILITIES

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Non-Current</b>		
Deferred government grant <sup>(2)</sup>	945	792
<b>Total</b>	<b>945</b>	<b>792</b>
<b>Current</b>		
Advance from customers <sup>(3)</sup>	1,766	1,125
Statutory and other liabilities <sup>(1)</sup>	549	519
Deferred government grant <sup>(2)</sup>	82	69
<b>Total</b>	<b>2,397</b>	<b>1,713</b>

<sup>(1)</sup> Statutory and other liabilities mainly includes contribution to PF, Goods and service tax (GST), Excise duty, VAT, TDS, Service tax, amount payable to District Mineral Fund (DMF), National Mineral Exploration Trust (NMET) etc.

<sup>(2)</sup> Represents government assistance in the form of the duty benefit availed under Export Promotion Capital Goods (EPCG) Scheme on purchase of Property, Plant and Equipments accounted for as government grant and being amortised over the useful life of such assets.



- (3) Advance from customers are contract liabilities and include amounts received under short term supply agreements. The advance payment plus a fixed rate of return/ discount will be settled by supplying respective commodity over a period up to twelve months under an agreed delivery schedule as per the terms of the respective agreements. As these are contracts that the Company expects, and has the ability, to fulfil through delivery of a non-financial item, these are recognised as advance from customers and will be released to the income statement as respective commodity is delivered under the agreements. The increase in contract liabilities is due to additional amounts received during the year.

## 18. BORROWINGS

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Current<sup>(3)</sup></b>		
Commercial Paper (Unsecured) <sup>(1)</sup>	1,969	-
Working Capital Loans from banks (Unsecured) <sup>(2)</sup>	569	-
<b>Total</b>	<b>2,538</b>	<b>-</b>

- (1) Commercial Papers carry an effective interest rate in the range of 7.30%, and repayable in 87 days from the date of issue of commercial papers.

- (2) Working Capital Loans from banks carry an effective interest rate in the range of 8.75% to 8.85% and are repayable on demand.

### (3) Movement in borrowings during the year is provided below:

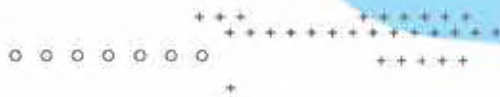
(₹ in Crore)

Particulars	Borrowings due within one year- Carrying value	Total
<b>As at April 01, 2017</b>	<b>7,908</b>	<b>7,908</b>
Cash flow	(7,900)	(7,900)
Other non cash changes	(8)	(8)
<b>As at March 31, 2018</b>	<b>-</b>	<b>-</b>
Cash flow	2,535	2,535
Other non cash changes	3	3
<b>As at March 31, 2019</b>	<b>2,538</b>	<b>2,538</b>

## 19. TRADE PAYABLES

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Total outstanding dues of Micro, Small and Medium Enterprises	52	18
Total outstanding dues to creditors other than Micro, Small and Medium Enterprises	1,122	929
<b>Total</b>	<b>1,174</b>	<b>947</b>



The disclosures relating to Micro, Small and Medium Enterprises have been furnished to the extent such parties have been identified on the basis of the intimation received from the suppliers regarding their status under the Micro, Small and Medium Enterprises Development Act, 2006. There is no interest paid/payable as at March 31, 2019 (March 31, 2018: NIL)

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
The principal amount and the interest due thereon remaining unpaid to any supplier as at the end of each accounting year.		
i) Principal amount due to micro and small enterprises	52	18
ii) Interest due on above	-	-
iii) The amount of interest paid by the buyer in terms of section 16 of the MSMED Act, 2006 along with the amounts of the payment made to the supplier beyond the appointed day during each accounting year.	-	-
iv) The amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act, 2006.	-	-
v) The amount of interest accrued and remaining unpaid at the end of each accounting year.	-	-
vi) The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under section 23 of the MSMED Act, 2006.	-	-

## 20. (A) REVENUE FROM OPERATIONS

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Sale of products (including excise duty) <sup>(1)</sup>	20,657	22,051
Income from wind energy	177	162
<b>Total Revenue<sup>(2)</sup></b>	<b>20,834</b>	<b>22,213</b>

<sup>(1)</sup> Sale of products includes excise duty collected from Customers of ₹ NIL (March 31, 2018: ₹ 437 Crore)

<sup>(2)</sup> Revenue is shown exclusive of GST and other indirect taxes other than excise, as these collections are not an inflow on entity's own account, rather it is collected on behalf of government authorities.

Revenue from sale of products for the year ended March 31, 2019 comprises of revenue from contracts with customers of ₹ 21685 Crore and a net loss on mark to market of ₹ 851 Crore on account of gains/losses relating to sales that were provisionally priced as at March 31, 2018 with the final price settled in the current year, gains/losses relating to sales fully priced during the year, and marked to market gains/losses relating to sales that were provisionally priced as at March 31, 2019. It further includes ₹ 1125 Crore for which contract liabilities existed at the beginning of the year.

## (B) OTHER OPERATING INCOME

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Sale of scrap and residuals	163	155
Export incentives	69	97
Others (unclaimed amount, carbon credits, liquidated damages etc.)	52	54
<b>Total</b>	<b>284</b>	<b>306</b>



**21. OTHER INCOME**

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Net gain on investments measured at FVTPL	550	774
Net gain on sale of current investments	314	340
Net gain on foreign currency transactions and translation	-	93
Amortization of deferred revenue arising from government grant	69	47
Gain on sale of fixed assets (net)	48	2
Interest Income on		
Bank deposits measured at amortized cost	-	3
Investments measured at FVOCI	-	258
Investments measured at FVTPL	705	101
Other financial assets measured at amortised cost	96	98
<b>Total</b>	<b>1,782</b>	<b>1,716</b>

**22. CHANGES IN INVENTORIES OF FINISHED GOODS AND WORK-IN-PROGRESS**

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Opening inventory</b>		
Finished goods	23	54
Work in progress:-		
Ore	141	307
Mined metal	270	525
Others (includes various semi-finished goods having Zinc, Lead & Silver content)	288	334
<b>Total</b>	<b>(A) 722</b>	<b>1,220</b>
<b>Closing inventory</b>		
Finished goods	48	23
Work in progress:-		
Ore	25	141
Mined metal	222	270
Others (includes various semi-finished goods having Zinc, Lead & Silver content)	491	288
<b>Total</b>	<b>(B) 786</b>	<b>722</b>
<b>Changes in Inventory</b>	<b>(A - B) (64)</b>	<b>498</b>

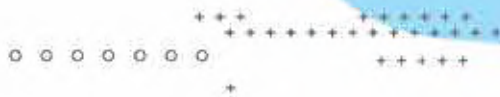
**23. EMPLOYEE BENEFIT EXPENSE**

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Salaries, wages and bonus <sup>(1)</sup>	742	625
Contribution to provident and other funds (Refer Note 30)	49	45
Share based compensation <sup>(2)</sup>	22	25
Staff welfare expenses <sup>(1)</sup>	92	81
<b>Total</b>	<b>905</b>	<b>776</b>

<sup>(1)</sup> Includes Corporate social responsibility expenditure of ₹ 3 Crore and ₹ 13 Crore (March 31, 2018: ₹ 3 Crore and ₹ 10 Crore) towards salaries, wages and bonus and Company run schools & hospitals respectively. Also, Refer note 33.

<sup>(2)</sup> The Company offers equity-based award plans to its employees, officers and directors through its holding Company, Vedanta Resources Limited [Vedanta Resources Long-Term Incentive Plan ("LTIP"), Employee Share Ownership Plan ("ESOP") and Performance Share Plan ("PSP")] collectively Referred as 'Vedanta Resources Limited ESOP' scheme and Vedanta Limited [Vedanta Limited - Employee Stock Option Scheme ("Vedanta Limited- ESOS")].



During the year, share-based incentives arrangement under Vedanta Resources Limited ESOP scheme and ESOS of Vedanta Limited (introduced effective December 2016) are provided to the defined management group. The maximum value of shares that can be awarded to members of the defined management group is calculated by reference to the individual fixed salary and share-based remuneration consistent with local market practice. ESOP scheme of Vedanta Resources Limited and Vedanta Limited are both tenure and performance based share schemes. The awards are indexed to and settled by Parent's shares (Vedanta Resources Limited shares or Vedanta Ltd shares as defined in the scheme). The awards have a fixed exercise price denominated in Parent's functional currency (10 US cents per share in case of Vedanta Resources Limited and ₹ 1 in case of Vedanta Limited), the performance period of each award is three years and is exercisable within a period of six months from the date of vesting beyond which the option lapses.

Further, in accordance with the terms of the agreement between the Parent and the Company, the cost recognised towards ESOP scheme is recovered by the Parent from the Company.

## 24. FINANCE COSTS

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Interest on financial liabilities at amortised cost	33	226
Other interest <sup>(1)</sup>	47	5
Bill discounting charges	22	13
Bank charges	5	2
Other finance costs	6	-
<b>Total</b>	<b>113</b>	<b>246</b>

<sup>(1)</sup> Interest expenses on income tax is ₹ 17 Crores (March 31, 2018 ₹ 5 Crores)

## 25. DEPRECIATION AND AMORTIZATION EXPENSES

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Depreciation on Property, Plant and Equipments	1,870	1,470
Amortization on intangible assets	13	13
<b>Total</b>	<b>1,883</b>	<b>1,483</b>

## 26. OTHER EXPENSES

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Consumption of stores and spare parts	1,274	1,310
Repairs and Maintenance:		
- Plant and equipment	1,326	1,044
- Building	86	57
- Others	1	1
Carriage inwards	214	207
Mine expenses	1,227	752
Other manufacturing and operating expenses	269	203
Rates and taxes	2	2
Conveyance and travelling expenses	48	41
Directors sitting fees and commission	1	1
Payment to auditors <sup>(1)</sup>	2	2
Carriage outwards	244	265
Grass root exploration expenses	116	80
Legal and professional expenses	66	55
Research and development expenditure	8	7



(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Corporate social responsibility (Refer Note 33)	106	71
Net loss on foreign currency transactions	50	-
Miscellaneous expenses	181	140
<b>Total</b>	<b>5,221</b>	<b>4,238</b>
<sup>(1)</sup> Remuneration to auditors:		
- Audit fees	1	1
- Other services	1	1
<b>Total</b>	<b>2</b>	<b>2</b>

## 27. EXCEPTIONAL ITEMS

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Reversal of District Mineral Foundation Provision <sup>(1)</sup>	-	291
Gratuity expense <sup>(2)</sup>	-	(51)
<b>Total</b>	<b>-</b>	<b>240</b>

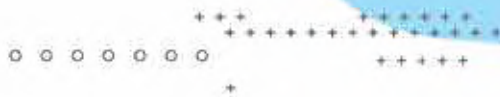
<sup>(1)</sup> During the year ended March 31, 2018, the Company had recognised the reversal of provisions of ₹ 291 Crore relating to contribution to the District Mineral Foundation. Effective January 12, 2015, the Mine and Minerals Development and Regulation Act, 1957 prescribed the establishment of the District Mineral Foundation (DMF) in any district affected by mining related operations. The provisions required contribution of an amount equivalent to a percentage of royalty not exceeding one-third thereof, as may prescribed by the Central Government of India. The rates were prescribed on September 17, 2015 for minerals other than coal, lignite and sand. The Supreme Court order dated October 13, 2017 had determined the prospective applicability of the contributions from the date of the notification fixing such rate of contribution and hence DMF would be effective from the date when the rates were prescribed by the central Government and pursuant to the aforesaid order, the Company had recognised a reversal of DMF provision for the period for which DMF was no longer leviable.

<sup>(2)</sup> The Company contributes to a defined benefit plan (the "Gratuity Plan") covering certain categories of employees and the maximum liability was capped at statutory prescribed limit of ₹ 10 Lakh. Consequent to the increase in the statutory limit to ₹ 20 Lakh, the increase in provision has been recognised as exceptional items.

## 28. EARNINGS PER SHARE

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Basic earnings per share (₹)	18.83	21.95
Diluted earnings per share (₹)	18.83	21.95
The earnings and weighted average number of equity shares used in the calculation of basic and diluted earnings per share are as follows:		
Profit after tax attributable to owners of the Company (in ₹ Crore)	7,956	9,276
Weighted average number of equity shares outstanding (Number in Crore)	423	423
Nominal Value per share (in ₹)	2	2



## 29. CONTINGENT LIABILITIES AND CAPITAL COMMITMENTS

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>A. CONTINGENT LIABILITIES<sup>(1)</sup></b>		
Claims against the Company not acknowledged as debts		
- Suppliers and contractors	90	19
- Ex-employees and others	12	8
- Land acquisition	6	6
- Mining cases <sup>(2)</sup>	334	334
- Government : Electricity Duty	9	9
: Road Tax	15	15
: Environmental Cess <sup>(3)</sup>	142	142
Guarantees issued by the banks (excluding financial guarantees)	196	170
Sales tax demands	62	38
Entry tax demands <sup>(4)</sup>	202	204
Income tax demands <sup>(5)</sup>	6,278	4,537
Excise Duty demands <sup>(6)</sup>	190	106

- <sup>(1)</sup> Future cash out flows in respect of the above matters are determinable only on receipt of judgments or decisions pending at various forums. Accordingly interest and penalty where applicable will be additionally payable.
- <sup>(2)</sup> The Department of Mines and Geology of the State of Rajasthan issued several show cause notices in August, September and October 2006 to HZL, amounting to ₹ 334 Crore. These notices alleged unlawful occupation and unauthorised mining of associated minerals other than zinc and lead at HZL's Rampura Agucha, Rajpura Dariba and Zawar mines in Rajasthan during the period from July 1968 to March 2006. HZL believes that the likelihood of this claim is not probable and thus no provision has been made in the financial statements. HZL had filed writ petitions in the High Court of Rajasthan in Jodhpur and had obtained a stay in respect of these demands. The High Court restrained the Department of Mines and Geology from undertaking any coercive measures to recover the penalty. In January 2007, the High Court issued another order granting the Department of Mines and Geology additional time to file their reply and also ordered the Department of Mines and Geology not to issue any orders cancelling the lease. The Company is currently awaiting listing of the said case in Rajasthan High Court.
- <sup>(3)</sup> The State of Rajasthan issued a notification in June 2008 notifying the Rajasthan Environment and Health Cess Rules, 2008, imposing environment and health cess on major minerals including lead and zinc. HZL and other mine operators resisted this notification and the imposition thereunder before the High Court of Rajasthan on the ground that the imposition of such cess and all matters relating to the environment fall under the jurisdiction of the Central government as opposed to the State government. In October 2011, the High Court of Rajasthan disposed the writ petitions and held the Rajasthan Environment and Cess Rules, 2008 that impose a levy of cess on minerals, as being constitutionally valid. An amount of ₹ 150 per metric ton of ore produced would be attracted under the Statute if it is held to be valid. HZL challenged this order by a special leave petition in December 2011 before the Supreme Court of India. The Supreme Court of India issued a notice for stay. Further direction was issued by the Supreme Court on March 23, 2012 not to take any coercive action against HZL for recovery of cess. The afore mentioned notification was rescinded via notification dated January 06, 2017, and hence no further obligation exists after that date.
- <sup>(4)</sup> The Company challenged the constitutional validity of the local statutes and related notifications in the state of Rajasthan pertaining to the levy of entry tax on the entry of goods brought into the state from outside. Nine judge constitution bench of the Supreme court of India in 2016 while upholding the constitutional validity of the levy maintained status quo with respect to all other issues which have been left open for adjudication by regular benches hearing the matters. Post the order of the nine judge bench, the regular bench of the Supreme Court proceeded with hearing the matters. The regular bench remanded the entry tax matters relating to the issue of discrimination against domestic goods from other States to the respective High Courts for final determination but retained the issue of jurisdiction on levy on imported goods, for determination by Supreme Court. The Company has filed writ petition before the Rajasthan High Court.
- <sup>(5)</sup> Tax demands have been raised mainly on account of disallowance of certain benefits under section 80IA and 80IC of the Indian Income Tax Act and on account of depreciation disallowances and interest thereon. Although, the Company has paid certain amounts in relation to these demands, which are pending at various levels of appeals, management considers these disallowances as not tenable against the Company, and therefore no provision for tax has been created.





- <sup>(6)</sup> Various demands raised on the Company towards CENVAT, service tax and excise for FY 1991-92 to 2016-17. The Company has paid an amount of ₹ 22 Crore (March 31, 2018: ₹ 40 Crore) against these demands under protest and is confident of the liability not devolving on the Company.

## B. COMMITMENTS

Estimated amount of contracts remaining to be executed on capital account and not provided for ₹ 2,426 Crore (March 31, 2018: ₹ 2,203 Crore).

## C. OTHER COMMITMENTS - EXPORT OBLIGATIONS

The Company had ₹ 1432 Crore export obligations (March 31, 2018: ₹ 1,416 Crore) on account of concessional rates of import duties paid on capital goods under the Export Promotion Capital Goods Scheme enacted by the Government of India (which is required to be fulfilled over the next six years from purchase). If the company is unable to meet these obligations, its liabilities currently not provided would be ₹ 239 Crore (March 31, 2018: ₹ 236 Crore) reduced in proportion to actual export. This liability is backed by the bonds executed in favour of Customs department amounting to ₹ 118 Crore (March 31, 2018: ₹ 217 Crore). Further, bonds amounting to ₹ 1258 Crore (March 31, 2018: ₹ 1129 Crore) will be released subject to verification of EODC (Export obligation discharge certificate) by the Customs department.

## 30. RETIREMENT AND OTHER EMPLOYEE BENEFIT SCHEMES

### A. DEFINED CONTRIBUTION SCHEMES

#### Family Pension Scheme

The contributions are based on a fixed percentage of the employee's salary, subject to a ceiling, as prescribed in the scheme. A sum of ₹ 6 Crore (March 31, 2018: ₹ 6 Crore) has been charged to the Statement of Profit and Loss during the year. There are no further obligations on the Company.

#### Superannuation fund

A sum of ₹ 3 Crore (March 31, 2018: ₹ 2 Crore) has been charged to the Statement of Profit and Loss in respect to contributions made to the superannuation fund. The Company has no further obligations to the plan beyond the monthly contributions.

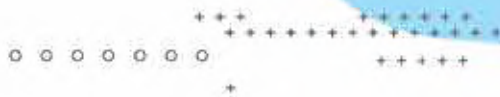
### B. DEFINED BENEFIT PLANS

For defined benefit schemes, the cost of providing benefits under the plans is determined by actuarial valuation each year for the plan using the projected unit credit method by independent qualified actuaries as at the year end. Remeasurements in the year are recognized in full in other comprehensive income for the year.

#### Provident fund

The Company offers its employees, benefits under defined benefit plans in the form of provident fund scheme which covers all employees. Contributions are paid during the year into 'Hindustan Zinc Limited Employee's Contributory Provident Fund' ('Trust'). Both the employees and the Company pay predetermined contributions into the Trust. A sum of ₹ 29 Crore (March 31, 2018: ₹ 24 Crore) has been charged to the Statement of Profit and Loss in this respect during the year.

The Company's Trust is exempted under section 17 of Employees Provident Fund Act, 1952. The conditions for grant of exemption stipulate that the employer shall make good the deficiency, if any, between the return guaranteed by the statute and actual earning of the Trust. Having regard to the assets of the Trust and the return on the investments, the Company does not expect any deficiency in the foreseeable future.



The details of fund and plan asset position are given below:

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
Plan assets fair valued	1,383	1,244
Present value of benefit obligation at period end	1,382	1,241
<b>Net Plan Assets*</b>	<b>1</b>	<b>3</b>
* Therefore, the net obligation is nil in the current and previous year		
<b>% allocation of plan assets by category</b>		
Central government securities	18%	21%
State government securities(including PSU Bond)	53%	54%
Private Sector Bonds, Mutual funds	29%	25%
<b>Principal actuarial assumptions</b>		
<b>Financial Assumptions</b>		
Discount rate	7.8%	7.7%
Expected statutory interest rate on the ledger balance	8.65%	8.55%
Expected short fall in interest earnings on the fund	0.05%	0.05%
<b>Demographic Assumptions</b>		
i) Retirement Age (Years)	58	58
ii) Mortality rates inclusive of provision for disability	<b>100% of IALM (2006 - 08)</b>	
iii) Withdrawal rates		
Up to 30 Years	3% - 16.8%	3% - 10.1%
From 31 to 44 years	2% - 4.6%	2% - 4.9%
Above 44 years	1%- 1.9%	1.0%

### Gratuity plan

The gratuity plan is governed by the Payment of Gratuity Act, 1972. Under the Act, an employee who has completed five years of service is entitled to specific benefit. The level of benefits provided depends on the member's length of service and salary at retirement age. The Company's defined benefit plans are funded with Life Insurance Corporation of India (LIC). The Company does not have any liberty to manage the fund provided to LIC.

The following tables set out the funded status of the gratuity plans and the amounts recognized in the financial statements.



**Principal actuarial assumptions**

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Principal actuarial assumptions used to determine the present value of the defined benefit obligation are as follows:		
<b>Financial Assumptions</b>		
Discount rate	7.8%	7.7%
Expected rate of increase in compensation level of covered employees	6% - 9.5%	6% - 9.5%
<b>Demographic Assumptions</b>		
i) Retirement Age (Years)	58	58
ii) Mortality rates inclusive of provision for disability	<b>100% of IALM (2006 - 08)</b>	
iii) Withdrawal rates		
Up to 30 Years	3% - 16.8%	3% - 10.1%
From 31 to 44 years	2% - 4.6%	2% - 4.9%
Above 44 years	1%-1.9%	1.0%
Amount recognized in the balance sheet consists of:		
Fair value of planned assets	228	208
Present value of defined benefit obligations	(282)	(270)
<b>Net assets/(Net unfunded liability)</b>	<b>(54)</b>	<b>(62)</b>
<b>% allocation of plan assets by category</b>		
Qualified Policy from Life Insurance Corporation of India (LIC)	100%	100%

The movement during the year of the present value of the defined benefit obligation was as follows:

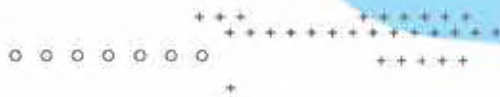
(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Opening Balance	270	216
Service cost	13	12
Benefits paid	(57)	(23)
Interest cost	21	17
Actuarial (Gain)/Loss on obligation	35	(3)
Past Service Cost (Refer note 27)	-	51
<b>Closing Balance</b>	<b>282</b>	<b>270</b>

The movement during the year in the fair value of plan assets was as follows:

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
Opening Balance	208	200
Employer Contributions	62	16
Benefits paid	(57)	(23)
Interest Income	16	16
Remeasurement gain/(loss) arising from return on plan assets	(1)	(1)
<b>Closing Balance</b>	<b>228</b>	<b>208</b>



Amounts recognized in Statement of Profit and loss in respect of defined benefit plan are as follows:

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Current service cost (including NIL (March 31, 2018: ₹ 51 Crore) recorded as an exceptional item)	13	63
Net Interest cost	5	2
<b>Total charge to Statement of Profit and Loss</b>	<b>18</b>	<b>65</b>

Amounts recognized in Other Comprehensive Income in respect of defined benefit plan are as follows:

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Remeasurement (Gain) / Loss arising from Change in Demographic Assumption	-	-
Remeasurement (Gain) / Loss arising from Change in Financial Assumption	(4)	(4)
Remeasurement (Gain) / Loss arising from Experience Adjustment	39	7
<b>Remeasurement of the net defined benefit liability</b>	<b>35</b>	<b>3</b>

Expected contribution for the next annual reporting period of March 31, 2020:

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Service Cost	14	13
Net Interest Cost	4	5
Expected contribution for the next annual reporting period of March 31, 2020	18	18

### Sensitivity analysis

Below is the sensitivity analysis determined for significant actuarial assumptions for the determination of defined benefit obligations and based on reasonably possible changes of the respective assumptions occurring at the end of the reporting period while holding all other assumptions constant.

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
<b>Impact of change discount rate</b>		
Increase by 0.50%	(7)	(7)
Decrease by 0.50%	7	7
<b>Impact of change in salary increase rate</b>		
Increase by 0.50%	7	5
Decrease by 0.50%	(7)	(5)

The above sensitivity analysis may not be representative of the actual benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

In presenting the above sensitivity analysis, the present value of defined benefit obligation has been calculated using the projected unit credit method at the end of reporting period, which is the same as that applied in calculating the defined obligation liability recognized in the balance sheet.



**Maturity Profile of Defined Benefit Obligation**

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Year:</b>		
0 to 1 Year	30	30
1 to 2 Year	7	7
2 to 3 Year	9	9
3 to 4 Year	9	8
4 to 5 Year	10	9
5 to 6 Year	11	9
6 Year onwards	206	199

**Risk analysis**

The Company is exposed to a number of risks in the defined benefit plans. Most significant risks pertaining to defined benefits plans and management estimation of the impact of these risks are as follows:

**Investment risk**

The Company's defined benefit plans are funded with Life Insurance Corporation of India (LIC). The Company does not have any liberty to manage the fund provided to LIC. The present value of the defined benefit plan liability is calculated using a discount rate determined by Reference to Government of India bonds for the Company's operations. If the return on plan asset is below this rate, it will create a plan deficit.

**Interest risk**

A decrease in the interest rate on plan assets will increase the plan liability, however this will be partially offset by increase in the return on plan debt investment.

**Longevity risk/ Life expectancy**

The present value of the defined benefit plan liability is calculated by Reference to the best estimate of the mortality of plan participants both during and at the end of the employment. An increase in the life expectancy of the plan participants will increase the plan liability.

**Salary growth risk**

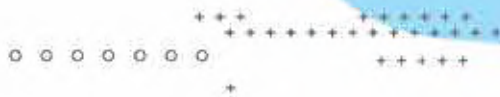
The present value of the defined benefit plan liability is calculated by Reference to the future salaries of plan participants. An increase in the salary of the plan participants will increase the plan liability.

**31. INCOME TAX EXPENSES**

The major components of income tax expense for the year ended March 31, 2019 are indicated below:

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>a. Tax charge recognised in Profit and Loss</b>		
<b>Current tax:</b>		
Current tax on profit for the year	2,230	2,647
Adjustment in respect of earlier years	(10)	-
<b>Total Current tax</b>	<b>2,220</b>	<b>2,647</b>



(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Deferred tax:</b>		
Reversal and origination of temporary differences	347	(178)
MAT credit asset (recognized)/ utilisation	(57)	686
Adjustment in respect of earlier years	(10)	66
<b>Total Deferred tax</b>	<b>280</b>	<b>574</b>
<b>Tax expense for the year</b>	<b>2,500</b>	<b>3,221</b>
<b>Effective income tax rate (%)</b>	<b>23.91%</b>	<b>25.77%</b>
<b>b. Statement of other comprehensive income</b>		
Deferred tax (credit) / charge on:		
Unrealized (gain)/loss on FVTOCI of financial instruments	16	(36)
Remeasurement of defined benefit obligation	(13)	1
<b>Total</b>	<b>3</b>	<b>(35)</b>

A reconciliation of income tax expense applicable to accounting profits before tax at the statutory income tax rate to recognized income tax expense for the year is as follows:

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Accounting profit before tax (after exceptional item)</b>	10,456	12,497
Statutory income tax rate	34.94%	34.61%
Tax at statutory income tax rate	3,654	4,325
Disallowable expenses	41	41
Non-taxable capital gains	(62)	(92)
Tax holidays and similar exemptions	(872)	(964)
Additional depreciation under income tax reversible within tax holiday period	2	33
Exempted Income	(36)	(38)
Impact of tax rate differences	(207)	(150)
Adjustments in respect of prior years	(20)	66
<b>Total</b>	<b>2,500</b>	<b>3,221</b>

There are certain income-tax related legal proceedings which are pending against the Company. Potential liabilities, if any have been adequately provided for and the Company does not currently estimate any probable material incremental tax liabilities in respect of these matters. (Refer note 29)

The Company is eligible for specified tax incentives which are included in the table above as 'tax holidays and similar exemptions'. These are briefly described as under:

#### The location based exemption

In order to boost industrial and economic development in undeveloped regions, provided certain conditions are met, profits of newly established undertakings located in certain areas in India may benefit from a tax holiday. Such a tax holiday works to exempt 100% of the profits for the first five years from the commencement of the tax holiday, and 30% of profits for the subsequent five years. This deduction is available only for units established up to March 31, 2012. However, such undertaking would continue to be subject to the Minimum Alternative tax ("MAT"). The Company has such types of undertakings at Haridwar and Pantnagar. The tax holiday benefit at Haridwar expired at March 2018 while in Pantnagar, the Company would continue to avail 30% tax holiday till March 2021.



### Sectoral Benefit - Power Plants

To encourage the establishment of certain power plants, provided certain conditions are met, tax incentives exist to exempt 100% of profits and gains for any ten consecutive years within the 15 year period following commencement of the power plant's operation. The Company currently has total operational capacity of 474 Mega Watts (MW) of thermal based power generation facilities, wind power capacity of 274 Mega Watts(MW) and solar power plants of 16 MW. However, such undertakings generating power would continue to be subject to the MAT provisions.

Significant components of deferred tax assets and (liabilities) recognized in the balance sheet are as follows:

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
Property, plant and equipment, Exploration and evaluation and intangible assets	(2,158)	(1,727)
Fair valuation of financial assets/liabilities	(286)	(372)
Voluntary retirement scheme	24	10
Other temporary differences	111	103
MAT credits entitlement	4,234	4,194
<b>Deferred Tax Assets (net)</b>	<b>1,925</b>	<b>2,208</b>

The reduction in deferred tax assets of ₹ 283 Crore (March 2018: ₹ 539 Crore) is represented as follows:

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Through Other Comprehensive Income</b>		
Fair value of financial instruments	16	(36)
Others	(13)	1
	<b>3</b>	<b>(35)</b>
<b>Through Profit and Loss</b>		
All other charges	280	574
<b>Total</b>	<b>283</b>	<b>539</b>

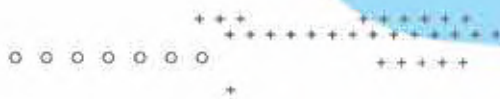
### 32. JOINT VENTURE

The Company had access of up to 31.5 million MT of coal as a partner in the joint venture 'Madanpur South Coal Company Limited' (Madanpur JV), a Company incorporated in India, where it holds 17.62% of ownership interest. During the year 2013-14, Honourable Supreme Court had passed the judgment cancelling all the coal blocks including Madanpur JV allocated since 1993 with certain exceptions and consequently the Company does not have any business to pursue. Accordingly, the Company had created 100% provision against its investment in Madanpur JV amounting to ₹ 2 Crore.

The Company's share of each of the assets, liabilities, income and expenses etc., related to its interests in Madanpur JV are:

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
<b>Investment in Joint venture</b>		
Madanpur South Coal Company Limited (at cost)	2	2
1,14,391 equity shares of ₹ 10 each <sup>(1)</sup> (March 31, 2018: 1,14,391 equity shares of ₹ 10 each)		
Less: Aggregate amount of impairment in the value of investment	(2)	(2)
<b>Total</b>	<b>-</b>	<b>-</b>

<sup>(1)</sup> The board of directors of Madanpur South Coal Company Limited have approved buy back of equity shares at a price of ₹ 96 per share. Accordingly HZL has exercised buy back option on 37,875 shares on August 12, 2017.



The Company's share of each of the assets, liabilities, income and expenses etc., related to its interests in Madanpur JV are:

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
Non-current assets (Includes Property, Plant and Equipment)	1	1
Current assets (Includes investments and deposits)	-	-

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Income	-	-
Expenses	-	-

The Company has not prepared consolidated financial statements as at March 31, 2019 & March 31, 2018 as the Company does not have any investment in subsidiaries or associates apart from the above investment in Madanpur JV. The operations of Madanpur JV has been discontinued pursuant to cancellation of coal allocation by Supreme Court and the investments in Madanpur JV are completely impaired. Accordingly, the profits, equity and cash flows on consolidation of Madanpur JV with the Company would remain consistent with the standalone financial statements.

### 33. CORPORATE SOCIAL RESPONSIBILITY EXPENSES

The Company is required to spend a gross amount of ₹ 204 Crore and ₹ 189 Crore for the year ended March 31, 2019 and March 31, 2018 respectively.

Particulars	(₹ in Crore)		
	For the year ended March 31, 2019		
	In- Cash	Yet to be Paid in Cash	Total
Amount spent during the year <sup>(1)</sup>	112	18	130
<b>Total amount spent</b>	<b>112</b>	<b>18</b>	<b>130</b>

Particulars	(₹ in Crore)		
	For the year ended March 31, 2018		
	In- Cash	Yet to be Paid in Cash	Total
Amount spent during the year <sup>(1)</sup>	81	11	92
<b>Total amount spent</b>	<b>81</b>	<b>11</b>	<b>92</b>

<sup>(1)</sup> Includes depreciation on the sewage treatment plant (STP) and related assets of ₹ 1 Crore (March 31, 2018: ₹ 1 Crore), amortisation expenditure on right to use the water of STP is ₹ 3 Crore (March 31, 2018: ₹ 3 Crore), employee benefit expenses of ₹ 16 Crore (March 31, 2018 ₹ 13 Crore) and other expenses on running the STP of ₹ 4 Crore (March 31, 2018: ₹ 4 Crore).

### 34. SEGMENT REPORTING

#### A. BASIS OF SEGMENTATION

The Company is engaged in exploring, extracting and processing minerals. The Company produces zinc, lead, silver and commercial power. The Company has three reportable segments: i) Zinc, Lead, (ii) Silver and (iii) Wind energy. The management of the Company is organized by its main products: Zinc, Lead and Silver and Wind energy. Each of the reportable segments derives its revenues from these main products and hence these have been identified as reportable segments by the Company's Chief Operating Decision Maker ("CODM"). Segment profit amounts are evaluated regularly by the CEO, who has been identified as the CODM, in deciding how to allocate resources and in assessing performance.

The accounting policies of the reportable segments are the same as the Company's accounting policies described in Note 3. The operating segments reported are the segments of the Company for which separate financial information is available. Segment profit (Earnings before interest, depreciation and amortization, and tax) amounts are evaluated regularly by the CEO who has been identified as its CODM in deciding how to allocate resources and in assessing performance. The Company's financing (including





finance costs and finance income) and income taxes are reviewed on an overall basis and are not allocated to operating segments. Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

Revenue and expenses directly attributable to segment are reported under each reportable segment. Expenses which are not directly identifiable to each reporting segment have been allocated on the basis of appropriate cost drivers of the segment.

Asset and liabilities that are directly attributable or allocable to segments are disclosed under each reportable segment. All other assets and liabilities are disclosed as unallocable.

The following table presents revenue and profit information and certain assets information regarding the Company's business segments for the period ended March 31, 2019.

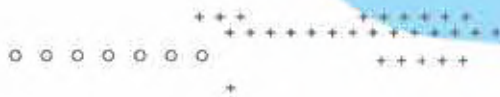
## B. INFORMATION ABOUT REPORTABLE SEGMENTS

### I. Information about primary segment

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Revenue</b>		
Zinc, Lead and others	18,089	19,903
Silver	2,568	2,148
Wind Energy	177	162
<b>Segment revenue</b>	<b>20,834</b>	<b>22,213</b>
<b>Segment Results</b>		
Zinc, Lead and others	6,606	8,995
Silver	2,208	1,822
Wind Energy	119	120
<b>Segment Results</b>	<b>8,933</b>	<b>10,937</b>
Less: Finance costs	113	246
Add: Interest income	803	460
Add: Other unallocable income net of unallocable expenditure	833	1,106
Profit before tax and exceptional items	10,456	12,257
Exceptional item	-	240
Profit before tax	10,456	12,497
Tax expenses	2,500	3,221
<b>Profit for the year</b>	<b>7,956</b>	<b>9,276</b>
<b>Depreciation &amp; amortisation Expense</b>		
Zinc, Lead, Silver and others	1,855	1,455
Wind Energy	28	28
<b>Total</b>	<b>1,883</b>	<b>1,483</b>

Below table summarises the disaggregated revenue from contracts with customers:

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	
Zinc	15,155	
Lead	3,332	
Silver	2,568	
Wind Energy	177	
Others	453	
<b>Revenue from contracts with customers</b>	<b>21,685</b>	
Gains/(losses) on provisionally priced contracts (net) (Refer Note 20)	(851)	
<b>Total Revenue</b>	<b>20,834</b>	



(₹ in Crore)

Particulars	Zinc, Lead and Silver	Wind energy	Unallocated	Total
<b>As at March 31, 2019</b>				
<b>Assets and liabilities</b>				
<b>Assets</b>				
Segment assets	19,106	659	17	19,782
Financial assets investments	-	-	19,488	19,488
Deferred tax asset (net)	-	-	1,925	1,925
Cash and cash equivalent	-	-	2	2
Other bank balance	-	-	21	21
Advance income tax (net of provision for tax)	-	-	1,240	1,240
<b>Total assets</b>	<b>19,106</b>	<b>659</b>	<b>22,693</b>	<b>42,458</b>
<b>Liabilities</b>				
Segment liability	6,110	14	2,569	8,693
Current Tax Liabilities (Net)	-	-	160	160
<b>Total liabilities</b>	<b>6,110</b>	<b>14</b>	<b>2,729</b>	<b>8,853</b>
<b>As at March 31, 2018</b>				
<b>Assets and liabilities</b>				
<b>Assets</b>				
Segment assets	16,911	698	22	17,631
Financial assets investments	-	-	20,222	20,222
Deferred tax asset (net)	-	-	2,208	2,208
Cash and cash equivalent	-	-	173	173
Other bank balance	-	-	1,791	1,791
Advance income tax (net of provision for tax)	-	-	907	907
<b>Total assets</b>	<b>16,911</b>	<b>698</b>	<b>25,323</b>	<b>42,932</b>
<b>Liabilities</b>				
Segment liability	5,034	11	1,790	6,835
Current Tax Liabilities (Net)	-	-	165	165
<b>Total liabilities</b>	<b>5,034</b>	<b>11</b>	<b>1,955</b>	<b>7,000</b>

**OTHER SEGMENT INFORMATION****Segment capital expenditure**

The below expenditure includes additions to property, plant and equipment, intangible assets, capital work in progress and capital advances:

(₹ in Crore)

Particulars	Zinc, Lead and Silver	Wind energy	Total
As at March 31, 2019	3,908	-	3,908
As at March 31, 2018	3,285	-	3,285



## II. Information based on Geography

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Geographical Segments</b>		
<b>Revenue by geographical segment</b>		
India	16,580	16,059
Asia	3,843	5,471
Rest of the World	411	683
<b>Total</b>	<b>20,834</b>	<b>22,213</b>

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Non-current assets<sup>(1)</sup></b>		
India	18,910	16,531
Asia	-	-
Rest of the World	-	-
<b>Total</b>	<b>18,910</b>	<b>16,531</b>

<sup>(1)</sup> Excluding financial instruments and deferred tax assets.

(₹ in Crore)

Particulars	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Segment capital expenditure</b>		
India	3,908	3,285
Asia	-	-
Rest of the World	-	-
<b>Total</b>	<b>3,908</b>	<b>3,285</b>

### Information about major customer

No single customer accounted for 10% or more of the revenue during the year.

## 35. FINANCIAL INSTRUMENTS

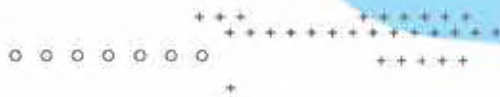
This section gives an overview of the significance of financial instruments for the Company and provides additional information on the balance sheet. Details of significant accounting policies, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognized, in respect of each class of financial asset, financial liability and equity instrument are disclosed in Note 2 and Note 3.

### FINANCIAL ASSETS AND LIABILITIES:

The accounting classification of each category of financial instruments, and their carrying amounts, are set out below:

(₹ in Crore)

Particulars	Fair Value through profit and loss	Fair Value through other comprehensive income	Amortized Cost	Total carrying value	Total fair value
<b>As at March 31, 2019</b>					
<b>Financial assets</b>					
Cash and cash equivalents	-	-	2	2	2
Other bank balances	-	-	21	21	21
Current investments	19,488	-	-	19,488	19,488



(₹ in Crore)

Particulars	Fair Value through profit and loss	Fair Value through other comprehensive income	Amortized Cost	Total carrying value	Total fair value
Trade receivables	-	-	196	196	196
Other Current financial assets and loans	1	-	6	7	7
Other Non-current financial assets	-	-	51	51	51
<b>Total</b>	<b>19,489</b>	<b>-</b>	<b>276</b>	<b>19,765</b>	<b>19,765</b>
<b>Financial liabilities</b>					
Short term borrowings	-	-	2,538	2,538	2,538
Trade payables	-	-	1,174	1,174	1,174
Other Current financial liabilities	13	-	1,388	1,401	1,401
Other Non-current financial liabilities	-	-	19	19	19
<b>Total</b>	<b>13</b>	<b>-</b>	<b>5,119</b>	<b>5,132</b>	<b>5,132</b>
<b>As at March 31, 2018</b>					
<b>Financial assets</b>					
Cash and cash equivalents	-	-	173	173	173
Other bank balances	-	-	1,791	1,791	1,791
Current investments	17,419	2,803	-	20,222	20,222
Trade receivables	-	-	184	184	184
Other Current financial assets and loans	8	-	4	12	12
Other Non-current financial assets	-	-	50	50	50
<b>Total</b>	<b>17,427</b>	<b>2,803</b>	<b>2,202</b>	<b>22,432</b>	<b>22,432</b>
<b>Financial liabilities</b>					
Trade payables	-	-	947	947	947
Other Current financial liabilities	1	95	2,998	3,094	3,094
Other Non-current financial liabilities	-	-	69	69	69
<b>Total</b>	<b>1</b>	<b>95</b>	<b>4,014</b>	<b>4,110</b>	<b>4,110</b>

The management assessed that Cash and cash equivalents, Other bank balances, Trade receivables, Trade payables, other current financial assets and liabilities approximate their carrying amounts largely due to the short term maturities of these instruments.

Fair value of the current instrument in bonds and zero coupon bonds are based on the price quotations at the reporting date. Fair value of current investments that are in the nature of 'close ended' mutual funds are based on market observable inputs i.e. NAV provided by mutual fund houses. [a level 2 technique].

Fair value of current investments that are in the nature of 'open ended' mutual funds are derived from quoted market prices in active markets [a level 1 technique].

The Fair value of non current financial assets and liabilities are estimated by discounting the expected future cash flows using a discount rate equivalent to the risk free rate of return adjusted for the appropriate credit spread.

The Company enters into derivative financial instruments with various counterparties, principally financial institutions with investment grade credit ratings. Forward foreign currency contracts are valued using valuation technique with market observable inputs. The most frequently applied valuation techniques for such derivatives include forward pricing using present value calculations. The models incorporate various inputs including the credit quality of counterparties, foreign exchange spot and forward rates, yield curves of the respective currencies, currency basis spreads between the respective currencies, interest rate curves and forward rate curves of the underlying currency (a level 2 technique). Commodity contracts are valued using the forward LME rates of commodities actively traded on the listed metal exchange i.e. London Metal Exchange, United Kingdom (U.K.) [a level 2 technique].



**FAIR VALUE HIERARCHY**

The table shown below analyses financial instruments carried at fair value, by measurement hierarchy. The different levels have been defined below:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

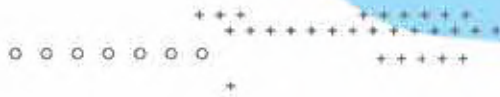
(₹ in Crore)

Particulars	Level-1	Level-2	Level-3
<b>As at March 31, 2019</b>			
<b>Financial Assets</b>			
At fair value through profit and loss			
Short term investment	2,165	17,323	-
Derivatives financial Assets*			
Commodity contracts	-	1	-
<b>Total</b>	<b>2,165</b>	<b>17,324</b>	<b>-</b>
<b>Financial Liabilities</b>			
At fair value through profit and loss			
Derivatives financial Liabilities*			
Forward foreign currency contracts	-	12	-
Commodity contracts	-	1	-
Fair value of liabilities carried at amortised cost			
Borrowings	-	2,538	-
<b>Total</b>	<b>-</b>	<b>2,551</b>	<b>-</b>

(₹ in Crore)

Particulars	Level-1	Level-2	Level-3
<b>As at March 31, 2018</b>			
<b>Financial Assets</b>			
At fair value through profit and loss			
Short term investment	5,371	12,048	-
Derivatives financial Assets*			
Forward foreign currency contracts	-	4	-
Commodity Contracts	-	4	-
At fair value through Other Comprehensive Income			
Short term investment	-	2,803	-
<b>Total</b>	<b>5,371</b>	<b>14,859</b>	<b>-</b>
<b>Financial Liabilities</b>			
At fair value through profit and loss			
Derivatives financial Liabilities*			
Commodity contracts	-	1	-
At fair value through Other Comprehensive Income			
Derivatives financial Liabilities*			
Commodity contracts	-	95	-
<b>Total</b>	<b>-</b>	<b>96</b>	<b>-</b>

\* Refer section - "Derivative financial instruments"



There is no financial instrument which is classified as level 3 during the year. There were no transfers between Level 1, Level 2 and Level 3 during the year.

## RISK MANAGEMENT FRAMEWORK

### Risk management

The Company's businesses are subject to several risks and uncertainties including financial risks. The Company's documented risk management policies act as an effective tool in mitigating the various financial risks to which the business is exposed to in the course of their daily operations. The risk management policies cover areas such as liquidity risk, commodity price risk, foreign exchange risk, interest rate risk, counterparty and concentration of credit risk and capital management. Risks are identified through a formal risk management programme with active involvement of senior management personnel and business managers. Each significant risk has a designated 'owner' within the Company at an appropriate senior level. The potential financial impact of the risk and its likelihood of a negative outcome are regularly updated.

The risk management process is coordinated by the Management Assurance function and is regularly reviewed by the Company's Audit Committee. The Audit Committee is aided by the Risk Management Committee, which meets regularly to review risks as well as the progress against the planned actions. Key business decisions are discussed at the periodic meetings of the Executive Committee. The overall internal control environment and risk management programme including financial risk management is reviewed by the Audit Committee on behalf of the Board.

The risk management framework aims to:

- improve financial risk awareness and risk transparency
- identify, control and monitor key risks
- identify risk accumulations
- provide management with reliable information on the Company's risk situation
- improve financial returns

### Treasury management

The Company's treasury function provides services to the business, co-ordinates access to domestic financial markets, monitors and manages the financial risks relating to the operations of the Company through internal risk reports which analyse exposures by degree and magnitude of risks. These risks include market risk (including currency risk, fair value interest rate risk and price risk), credit risk, liquidity risk and cash flow interest rate risk.

Treasury management focuses on capital protection, liquidity maintenance and yield maximization. The treasury policies are approved by the Board and adherence to these policies is strictly monitored at the Executive Committee meetings. Day-to-day treasury operations of the Company are managed by the finance team within the framework of the overall Company's treasury policies. A monthly reporting system exists to inform senior management about investments, currency and, commodity derivatives. The Company has a strong system of internal control which enables effective monitoring of adherence to Company's policies. The internal control measures are effectively supplemented by regular internal audits.

The investment portfolio at the Company is independently reviewed by CRISIL Limited and it has been rated as "Very Good" meaning highest safety.

The Company uses derivative instruments as part of its management of exposure to fluctuations in foreign currency exchange rates, interest rates and commodity prices. The Company does not acquire or issue derivative financial instruments for trading or speculative purposes. The Company does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forwards and these are subject to the Company's guidelines and policies.

### Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises interest rate risk, currency risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.



The sensitivity analyses in the following sections relate to the position as at March 31, 2019 & March 31, 2018. The sensitivity analyses have been prepared on the basis that the amount of net debt, the ratio of fixed interest rates of the debt and derivatives and the proportion of financial instruments in foreign currencies are all constant. The analyses exclude the impact of movements in market variables on: the carrying values of gratuity and other post-retirement obligations, provisions, and the non-financial assets and liabilities of foreign operations.

### Commodity price risk

The Company is exposed to the movement of base metal commodity prices on the London Metal Exchange. Any decline in the prices of the base metals that the Company produces and sells will have an immediate and direct impact on the profitability of the businesses. As a general policy, the Company aims to achieve the monthly average of the commodity prices for sales realization. Hedging is used primarily as a risk management tool and, in some cases, to secure future cash flows in cases of high volatility by entering into forward contracts or similar instruments. The hedging activities are subject to strict limits set out by the Board and to a strictly defined internal control and monitoring mechanism. Decisions relating to hedging of commodities are taken at the Executive Committee level and with clearly laid down guidelines for their implementation by the Company.

Whilst the Company aims to achieve average LME prices for a month or a year, average realized prices may not necessarily reflect the LME price movements because of a variety of reasons such as uneven sales during the year and timing of shipments.

Financial instruments with commodity price risk are entered into in relation to following activities:

- economic hedging of prices realized on commodity contracts.
- cash flow hedging on account of forecasted highly probable transactions.

The sales prices of zinc and lead are linked to the LME prices. The Company also enters into hedging arrangements for its Zinc and Lead sales to realize month of sale LME prices.

Total exposure on provisionally priced Zinc, Lead & Silver contracts as at March 31, 2019 were ₹ 189 Crore (March 31, 2018 ₹ 334 Crore), ₹ 80 Crore (March 31, 2018 ₹ 46 Crore) and Nil (March 31, 2018 ₹ 2 Crore) respectively. The impact on net profits for a 10% movement in LME prices of zinc, 5% movement in LME price of lead and 5% movement in LME price of silver that were provisionally priced as at March 31, 2019 is ₹ 19 Crore, ₹ 4 Crore, Nil respectively and as at March 31, 2018 is ₹ 33 Crore, ₹ 2 Crore and Nil respectively.

### Financial risk

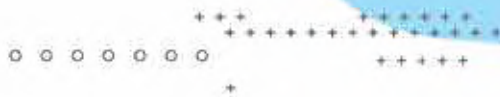
The Company's Board approved financial risk policies comprise liquidity, currency, interest rate and counterparty risk. The Company does not engage in speculative treasury activity but seeks to manage risk and optimize interest and commodity pricing through proven financial instruments.

#### a. Liquidity risk

The Company requires funds both for short-term operational needs as well as for long-term investment programme mainly in growth projects. The Company generates sufficient cash flows from the current operations which together with the available cash and cash equivalents and short-term investments provide liquidity both in the short-term as well as in the long-term.

The Company has been rated as 'AAA' / Stable for long term and A1+ for short term by CRISIL Limited during the current and previous financial years.

The Company remains committed to maintaining a healthy liquidity, gearing ratio and strengthening the balance sheet. The maturity profile of the Company's financial liabilities based on the remaining period from the date of balance sheet to the contractual maturity date is given in the table below. The figures reflect the contractual undiscounted cash obligation of the Company.



(₹ in Crore)

Payment due by years	<1 year	1-2 Years	2-5 Years	> 5 Years	Total
<b>As at March 31, 2019</b>					
Trade and other payables	5,100	17	2	-	5,119
Derivative financial liabilities	13	-	-	-	13
<b>Total</b>	<b>5,113</b>	<b>17</b>	<b>2</b>	<b>-</b>	<b>5,132</b>
<b>As at March 31, 2018</b>					
Trade and other payables	3,945	69	-	-	4,014
Derivative financial liabilities	96	-	-	-	96
<b>Total</b>	<b>4,041</b>	<b>69</b>	<b>-</b>	<b>-</b>	<b>4,110</b>

The Company had access to following funding facilities.

(₹ in Crore)

Funding facility	Total facility	Drawn	Undrawn
<b>As at March 31, 2019</b>			
Less than 1 year	2,800	1,357	1,443
More than 1 year	-	-	-
<b>Total</b>	<b>2,800</b>	<b>1,357</b>	<b>1,443</b>
<b>As at March 31, 2018</b>			
Less than 1 year	2,250	623	1,627
More than 1 year	-	-	-
<b>Total</b>	<b>2,250</b>	<b>623</b>	<b>1,627</b>

## b. Foreign exchange risk

Fluctuations in foreign currency exchange rates may have an impact on the Statement of Profit and Loss, where any transaction References more than one currency other than the functional currency of the Company.

The Company uses forward exchange contracts, to hedge the effects of movements in exchange rates on foreign currency denominated assets and liabilities. The sources of foreign exchange risk are outstanding amounts payable for imported raw materials, capital goods and other supplies denominated in foreign currency. The Company is also exposed to foreign exchange risk on its exports. Most of these transactions are denominated in US dollars. The policy of the Company is to determine on a regular basis what portion of the foreign exchange risk on financing transactions are to be hedged through forward exchange contracts and other instruments. Short-term net exposures are hedged progressively based on their maturity. A more conservative approach has been adopted for project expenditures to avoid budget overruns. Longer term exposures, are normally unhedged. The hedge mechanisms are reviewed periodically to ensure that the risk from fluctuating currency exchange rates is appropriately managed. The following analysis is based on the gross exposure as at the reporting date which could affect the Statement of Profit and Loss. The below table summarises the foreign currency risk from financial instrument and is partly mitigated by some of the derivative contracts entered into by the Company as disclosed under the section on "Derivative financial instruments."

(₹ in Crore)

Particulars	As at March 31, 2019		As at March 31, 2018	
	Financial Asset	Financial Liability	Financial Asset	Financial Liability
US Dollar	58	413	54	277
Australian Dollar	-	36	-	12
Euro	-	22	-	194
Others	-	6	-	6





The Company's exposure to foreign currency arises where a Company holds monetary assets and liabilities denominated in a currency different to the functional currency of the Company, with US dollar, JPY and Euro being the major non-functional currency. The value of a financial instrument may change as a result of changes in the interest rates, foreign currency exchange rate, liquidity and other market changes.

The results of Company operations may be affected largely by fluctuations in the exchange rates between the Indian Rupee, against the US dollar. The foreign exchange rate sensitivity is calculated by the aggregation of the net foreign exchange rate exposure with a simultaneous parallel foreign exchange rate shift in the currencies by 5% against the functional currency of the respective entities.

Set out below is the impact of a 5% strengthening/weakening in the INR on pre-tax profit/(loss) arising as a result of the revaluation of the Company's foreign currency financial assets/liabilities:

Particulars	Total exposure		Effect of 5% strengthening/ weakening of INR on pre-tax profit/(loss)	
	For the year ended March 31, 2019	For the year ended March 31, 2018	For the year ended March 31, 2019	For the year ended March 31, 2018
US Dollar	355	222	18	11
Australian Dollar	36	12	2	1
Euro	22	194	1	10

### c. Interest rate risk

Floating rate financial assets are largely mutual fund investments which have debt securities as underlying assets. The returns from these financial assets are linked to market interest rate movements; however the counterparty invests in the agreed securities with known maturity tenure and return and hence has manageable risk. Additionally, the investments portfolio is independently reviewed by CRISIL Limited, and it has been rated as "Very Good" meaning highest safety.

The exposure of the Company's financial assets to interest rate risk is as follows:

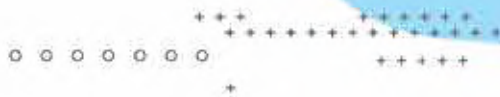
Particulars	Total	Floating rate	Fixed rate	(₹ in Crore)
				Non-interest bearing
<b>As at March 31, 2019</b>				
Financials assets	19,765	8,717	10,771	277
Financial liabilities	5,132	-	2,538	2,594
<b>As at March 31, 2018</b>				
Financials assets	22,432	15,146	5,111	2,175
Financial liabilities	4,110	-	-	4,110

Interest rate risk is the risk that the fair value of future cash flows of financial instruments will fluctuate because of changes in market interest rate. The Company does not have floating interest rate borrowing during the year ended March 31, 2019 & March 31, 2018 and it is not significantly exposed to interest rate risk.

Considering the net investment position as at March 31, 2019 and the investment in bank deposits, bonds and debt mutual funds, any increase in interest rates would result in a net increase and any decrease in interest rates would result in a net decrease. The sensitivity analysis below has been determined based on the exposure to interest rates for both derivative and non-derivative instruments at the balance sheet date.

The below analysis gives the impact of a 0.5% to 2.0% change in interest rate of floating investment on profit/(loss) and equity and represents management's assessment of the possible change in interest rates.

The impact of change (increase/(decrease)) in interest rate of 0.5%, 1.0% and 2.0% on profits for the period ended March 31, 2019 is ₹ 44 Crore, ₹ 87 Crore and ₹ 174 Crore and for year ended March 31, 2018 is ₹ 76 Crore, ₹ 151 Crore and ₹ 303 Crore respectively.



#### d. Counterparty and concentration of credit risk

Credit risk Refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Company. The Company has adopted a policy of obtaining sufficient collateral, where appropriate, as a means of mitigating the risk of financial loss from defaults. The Company is exposed to credit risk for receivables, cash and cash equivalents, short-term investments and derivative financial instruments. Credit risk on receivables is limited as almost all credit sales are against letters of credit and guarantees of banks of good financial repute.

Moreover, given the nature of the Company's business, trade receivables are spread over a number of customers with no significant concentration of credit risk. No single customer accounted for 10% or more of revenue on a % basis in any of the years indicated. The history of trade receivables shows a negligible provision for bad and doubtful debts. Therefore, the Company does not expect any material risk on account of non-performance by any of the Company's counterparties.

For short-term investments, counterparty limits are in place to limit the amount of credit exposure to any one counterparty. For derivative and financial instruments, the Company attempts to limit the credit risk by only dealing with reputable banks and financial institutions having high credit-ratings assigned by international credit-rating agencies. Defined limits are in place for exposure to individual counterparties in case of mutual funds schemes and bonds.

The carrying value of the financial assets represents the maximum credit exposure. The Company's maximum exposure to credit risk as at March 31, 2019 and March 31, 2018 are ₹ 19,765 Crore and ₹ 22,432 Crore respectively.

None of the Company's cash equivalents, including time deposits with banks, are past due or impaired. Regarding trade and other receivables, and other non-current assets, there were no indications as at March 31, 2019, that defaults in payment obligations will occur.

Of the year end trade receivables, loans and other financial assets, following balances were past due but not impaired as at March 31, 2019 and March 31, 2018:

Particulars	(₹ in Crore)	
	As at March 31, 2019	As at March 31, 2018
Neither impaired nor past due	190	111
Past due but not impaired		
Less than 1 month	25	76
Between 1-3 months	21	5
Between 3-12 months	16	49
Greater than 12 months	2	5
<b>Total</b>	<b>254</b>	<b>246</b>

Receivables are deemed to be past due or impaired with Reference to the Company's normal terms and conditions of business. These terms and conditions are determined on a case to case basis with reference to the customer's credit quality and prevailing market conditions. Receivables that are classified as 'past due' in the above tables are those that have not been settled within the terms and conditions that have been agreed with that customer.

The credit quality of the Company's customers is monitored on an on-going basis and assessed for impairment where indicators of such impairment exist. The solvency of the debtor and their ability to repay the receivable is considered in assessing receivables for impairment. Where receivables have been impaired, the Company actively seeks to recover the amounts in question and enforce compliance with credit terms.

#### Derivative financial instruments

The Company does not acquire or issue derivative financial instruments for trading or speculative purposes. The Company does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forward contracts and these are subject to the Company guidelines and policies.

All derivative financial instruments are recognized as assets or liabilities on the balance sheet and measured at fair value based on quotations obtained from financial institutions or brokers. The accounting for changes in the fair value of a derivative instrument depends on the intended use of the derivative and the resulting designation.



The fair values of all derivatives are separately recorded in the balance sheet within current assets and liabilities. Derivatives that are designated as hedges are classified as current depending on the maturity of the derivative.

The use of derivatives can give rise to credit and market risk. The Company tries to manage credit risk by entering into contracts with reputable banks and financial institutions. The use of derivative instruments is subject to limits, authorities and regular monitoring by appropriate levels of management. The limits, authorities and monitoring systems are periodically reviewed by management and the Board. The market risk on derivatives is mitigated by changes in the valuation of the underlying assets, liabilities or transactions, as derivatives are used only for risk management purposes.

### Embedded derivatives

Derivatives embedded in other financial instruments or other contracts are treated as separate derivative contracts and marked-to-market when their risks and characteristics are not clearly and closely related to those of their host contracts and the host contracts are not fair valued.

### Cash flow hedges

The Company also enters into commodity price contracts for hedging highly probable future forecast transaction and account for them as cash flow hedges and states them at fair value. Subsequent changes in fair value are recognized in equity until the hedged transaction occurs, at which time, the respective gains or losses are reclassified to the Statement of Profit and Loss.

### Fair value hedges

The fair value hedges relate to commodity price risks and foreign currency exposure. The Company's sales are on a quotational period basis, generally one month to three months after the date of delivery at a customer's facility. The Company enters into forward contracts for the respective quotational period to hedge its commodity price risk based on average LME prices. Gains and losses on these hedge transactions are substantially offset by the amount of gains or losses on the underlying sales. There were no fair value hedges for the period ended March 31, 2019.

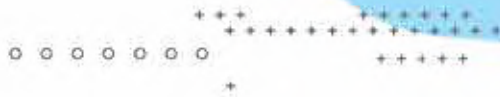
### Non-qualifying/economic hedges

Non-qualifying hedges related to commodity price risks and foreign currency exposure. The Company's sales are on a quotational period basis, generally one month after the date of delivery at a customer's facility. The Company enters into forward contracts for the respective quotational period to hedge its commodity price risk based on average LME prices. The Company enters into forward foreign currency contracts and commodity contracts (for the period ended March 31, 2019) which are not designated as hedges for accounting purposes, but provide an economic hedge of a particular transaction risk or a risk component of a transaction. Fair value changes on such forward contracts are recognized in the Statement of Profit and Loss.

The fair value of the Company's derivative positions recorded under derivative financial assets and derivative financial liabilities are as follows:

Derivative financial instruments	As at March 31, 2019		As at March 31, 2018	
	Assets	Liabilities	Assets	Liabilities
<b>Current</b>				
<b>Cash flow hedges*</b>				
Commodity contracts	-	-	-	95
<b>Non - qualifying hedges</b>				
Commodity contracts	1	-	4	-
Forward foreign currency contracts	-	12	4	1
<b>Total</b>	<b>1</b>	<b>12</b>	<b>8</b>	<b>96</b>

\*Refer Statement of Profit and Loss and Statement of Changes in Equity for the change in the fair value of cash flow hedges.



35. A. The following are the outstanding forward exchange contracts entered into by the Company and outstanding as at year end

(In Crore)

Currency	Foreign currency	Indian Rupees	Buy / Sell	Cross Currency
<b>As at March 31, 2019</b>				
AUD	0	11	Buy	INR
EUR	2	182	Buy	INR
SEK	1	6	Buy	INR
USD	28	1976	Buy	INR
AUD	1	44	Buy	USD
EUR	1	53	Buy	USD
GBP	0	4	Buy	USD
SEK	0	3	Buy	USD
JPY	9	6	Buy	USD

(In Crore)

Currency	Foreign currency	Indian Rupees	Buy / Sell	Cross Currency
<b>As at March 31, 2018</b>				
AUD	0	9	Buy	INR
EUR	3	221	Buy	INR
USD	5	296	Buy	INR
AUD	0	19	Buy	USD
EUR	3	227	Buy	USD
JPY	8	5	Buy	USD
SEK	2	19	Buy	USD

B. The following are the outstanding position of commodity hedging open contracts as at March 31, 2019:-

Zinc forwards/futures sale / buy for 10,125 MT (2018: 83,125 MT)

Lead forwards/futures sale/buy for 5,350 MT (2018: 17,275 MT)

Silver forwards/futures sale/buy for 1,183,591 Oz (2018: 9,06,652 Oz)

C. All derivative and financial instruments acquired by the Company are for hedging purposes.

D. Unhedged foreign currency exposure

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Debtors	58	54
Creditors	140	490



### 36. CAPITAL MANAGEMENT

The Company's objectives when managing capital is to safeguard, maintain a strong credit rating and healthy capital ratios in order to support its business and provide adequate return to shareholders through continuing growth. The Company's overall strategy remains unchanged from previous year. The Company sets the amount of capital required on the basis of annual business and long-term operating plans which include capital and other strategic investments. The funding requirements are met through a mixture of internal accruals, equity and short term borrowings. There are no long term borrowings outstanding as at end of the year. The Company monitors capital on the basis of net debt to equity. Equity comprises all components including other components of equity. The Company is not subject to any externally imposed capital requirement.

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
Equity	33,605	35,932
Cash and cash equivalents (See Note 11)	2	173
Short term investments (See Note 9)	19,488	20,222
Total cash (a)	19,490	20,395
Total debt (b)	2,538	-
Net debt (c = (b-a))	-	-
Total equity (equity + net debt) (See Statement of changes in Equity)	33,605	35,932
<b>Net debt to equity ratio (gearing ratio)</b>	<b>-</b>	<b>-</b>

### 37. RELATED PARTY

#### A. LIST OF RELATED PARTIES:

##### Particulars

##### (i) Holding Companies:

Vedanta Limited (Immediate Holding Company)  
Vedanta Resources Limited (Intermediate Holding Company)  
Volcan Investments Limited (Ultimate Holding Company)

##### (ii) Fellow Subsidiaries (with whom transactions have taken place):

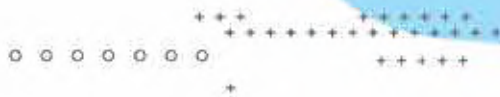
Bharat Aluminium Company Limited  
Sterlite Technologies Limited  
Sterlite Power Transmission Limited  
Malco Energy Limited  
Talwandi Sabo Power Limited  
Copper Mines of Tasmania Pty Limited  
Konkola Copper Mines Plc.  
Fujairah Gold FZC  
Black Mountain Mining (Pty) Limited  
Namzinc (Pty) Limited  
Vizag General Cargo Berth Private Limited

##### (iii) Related Party having a Significant Influence

Government of India - President of India

##### (iv) Other related party

Vedanta Foundation  
Madanpur South Coal Company Limited (jointly controlled entity)  
Hindustan Zinc Limited Employee's Contributory Provident Fund Trust  
Hindustan Zinc Limited Employee's Group Gratuity Trust  
Hindustan Zinc Limited Superannuation Trust

**B. TRANSACTIONS WITH KEY MANAGEMENT PERSONNEL:**

Compensation of key management personnel of the Company recognised as expense during the reporting period

Particulars	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
Short-term employee benefits <sup>(1)</sup>	10	8
Sitting fee and commission to directors	1	1
Share-based payment transactions	4	2
<b>Total compensation paid to key management personnel</b>	<b>15</b>	<b>11</b>

<sup>(1)</sup> Excludes gratuity and compensated absences as these are recorded in the books of accounts on the basis of actuarial valuation for the Company as a whole and hence individual amount cannot be determined.

**C. TRANSACTIONS WITH GOVERNMENT HAVING SIGNIFICANT INFLUENCE:**

Central government of India holds 29.54% shares in HZL. During the year, Company has availed incentives in the form of export incentive under Export promotion and credit guarantee scheme announced by the Government of India. Also, HZL has transactions with other government related entities (Public sector undertakings) including but not limited to sales and purchase of goods and ancillary materials, rendering and receiving services and use of public utilities.

**D. TRANSACTIONS WITH RELATED PARTIES:**

The details of the related party transactions entered into by the Company, for the period ended March 31, 2019 and March 31, 2018 are as follows

Nature of transactions	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Sale of Goods</b>		
Vedanta Limited	-	16
Sterlite Power Transmission Ltd	1	-
Fujairah Gold FZC	20	13
<b>Total</b>	<b>21</b>	<b>29</b>

Nature of transactions	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Sale of property, plant and equipment</b>		
Vedanta Limited	-	1
<b>Total</b>	<b>-</b>	<b>1</b>

Nature of transactions	(₹ in Crore)	
	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Purchase of property, plant and equipment</b>		
Vedanta Limited	0	0
Bharat Aluminium Company Limited	0	0
<b>Total</b>	<b>0</b>	<b>0</b>
<b>Interest Income</b>		
Konkola Copper Mines Plc.	0	-
<b>Total</b>	<b>0</b>	<b>-</b>



(₹ in Crore)

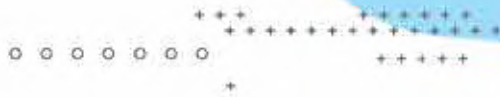
Nature of transactions	For the year ended March 31, 2019	For the year ended March 31, 2018
<b>Purchase of Goods</b>		
Vedanta Ltd	4	11
Bharat Aluminium Company Limited	21	25
Sterlite Technologies Ltd	-	1
Sterlite Power Transmission Ltd	1	10
<b>Total</b>	<b>26</b>	<b>47</b>
<b>Dividend</b>		
Vedanta Limited	5,486	2,195
Government of India	2,496	998
<b>Total</b>	<b>7,982</b>	<b>3,193</b>
<b>Other Expenses and other reimbursements</b>		
Vedanta Limited	111	104
Fellow Subsidiaries	0	0
<b>Total</b>	<b>111</b>	<b>104</b>
<b>Donations</b>		
Vedanta Foundation	0	0
<b>Total</b>	<b>0</b>	<b>0</b>
<b>Contribution to:</b>		
Hindustan Zinc Limited Employee's Contributory Provident Fund Trust	29	24
Hindustan Zinc Limited Employee's Group Gratuity Trust	62	16
Hindustan Zinc Limited Superannuation Trust	3	2
<b>Total</b>	<b>94</b>	<b>42</b>

All the transactions entered by the Company with the related parties are at arm's length price.

The balances receivable/payable as at year end:

(₹ in Crore)

Particulars	As at March 31, 2019	As at March 31, 2018
<b>Receivable From</b>		
Konkola Copper Mines Plc.	0	1
Vedanta Ltd.	0	10
Fujairah Gold FZC	5	13
Black Mountain Mining(PTY)Limited	0	-
Talwandi Sabo Power Limited	0	-
<b>Total</b>	<b>5</b>	<b>24</b>
<b>Payable To</b>		
Bharat Aluminium Company Limited	4	5
Vedanta Ltd.	10	22
Sterlite Power Transmission Limited	2	3
Hindustan Zinc Limited Employee's Contributory Provident Fund Trust	10	9
Hindustan Zinc Limited Employee's Group Gratuity Trust	54	62
Hindustan Zinc Limited Superannuation Trust	0	0
Vedanta Ltd (Dividend payable)	-	1,646
<b>Total</b>	<b>80</b>	<b>1,747</b>



- 38. No significant events have occurred subsequent to the balance sheet date which may require additional disclosures on any adjustments to the financial statements.
- 39. Previous year figures have been regrouped/reclassified where ever necessary, to conform to those of the current year presentation.

See accompanying notes to financial statements.

As per our report on even date

For **S. R. Batliboi & Co. LLP**

Chartered Accountants

ICAI Firm Registration No.: 301003E/E300005

per **Raj Agrawal**

Partner

ICAI Membership No.: 82028

Date: May 02, 2019

Place: Gurugram

For and on behalf of the Board of Directors

**Sunil Duggal**

CEO & Whole-time Director

DIN: 07291685

Place: London

**Swayam Saurabh**

Acting Chief Financial Officer

Date: May 02, 2019

Place: Mumbai

**A. R. Narayanaswamy**

Director

DIN: 00818169

**R. Pandwal**

Company Secretary

ICSI Membership No.: A9377





# corporate information

## BOARD OF DIRECTORS

**MS. KIRAN AGARWAL**

Chairman

**MR. NAVIN AGARWAL**

Director

**MR. A R NARAYANASWAMY**

Director

**MR. ARUN L TODARWAL**

Director

**MS. REENA SINHA PURI**

Director

**MS. FARIDA M NAIK**

Director

**MR. SUNIL DUGGAL**

Chief Executive Officer &amp; Whole-time Director

## BANKERS

IDBI Bank Limited

ICICI Bank Limited

HDFC Bank Limited

State Bank of Bikaner &amp; Jaipur

Yes Bank Limited

Standard Chartered Bank

## ACTING CHIEF FINANCIAL OFFICER

**MR. SWAYAM SAURABH**

## COMPANY SECRETARY

**MR. RAJENDRA PANDWAL**

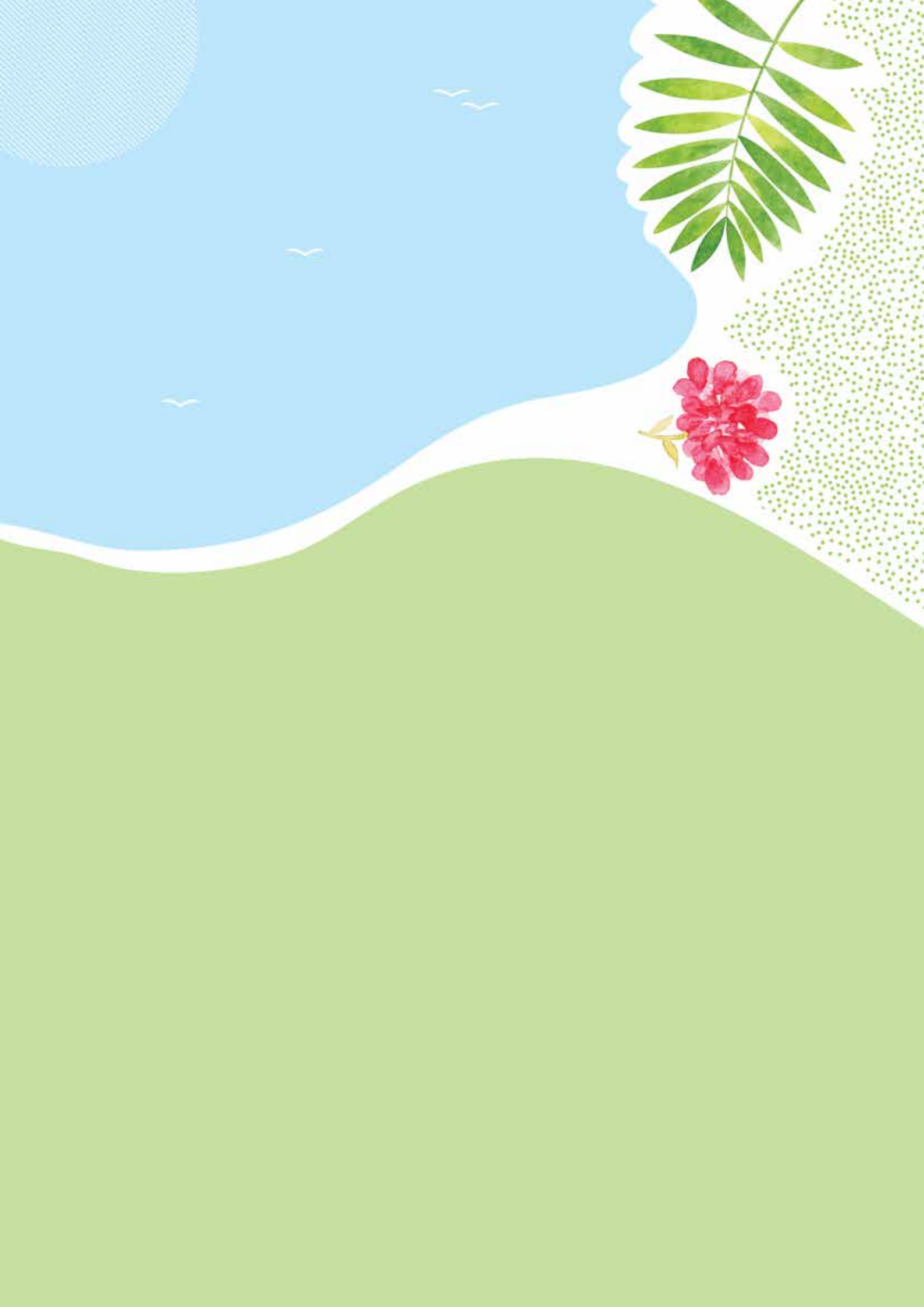
## REGISTERED OFFICE

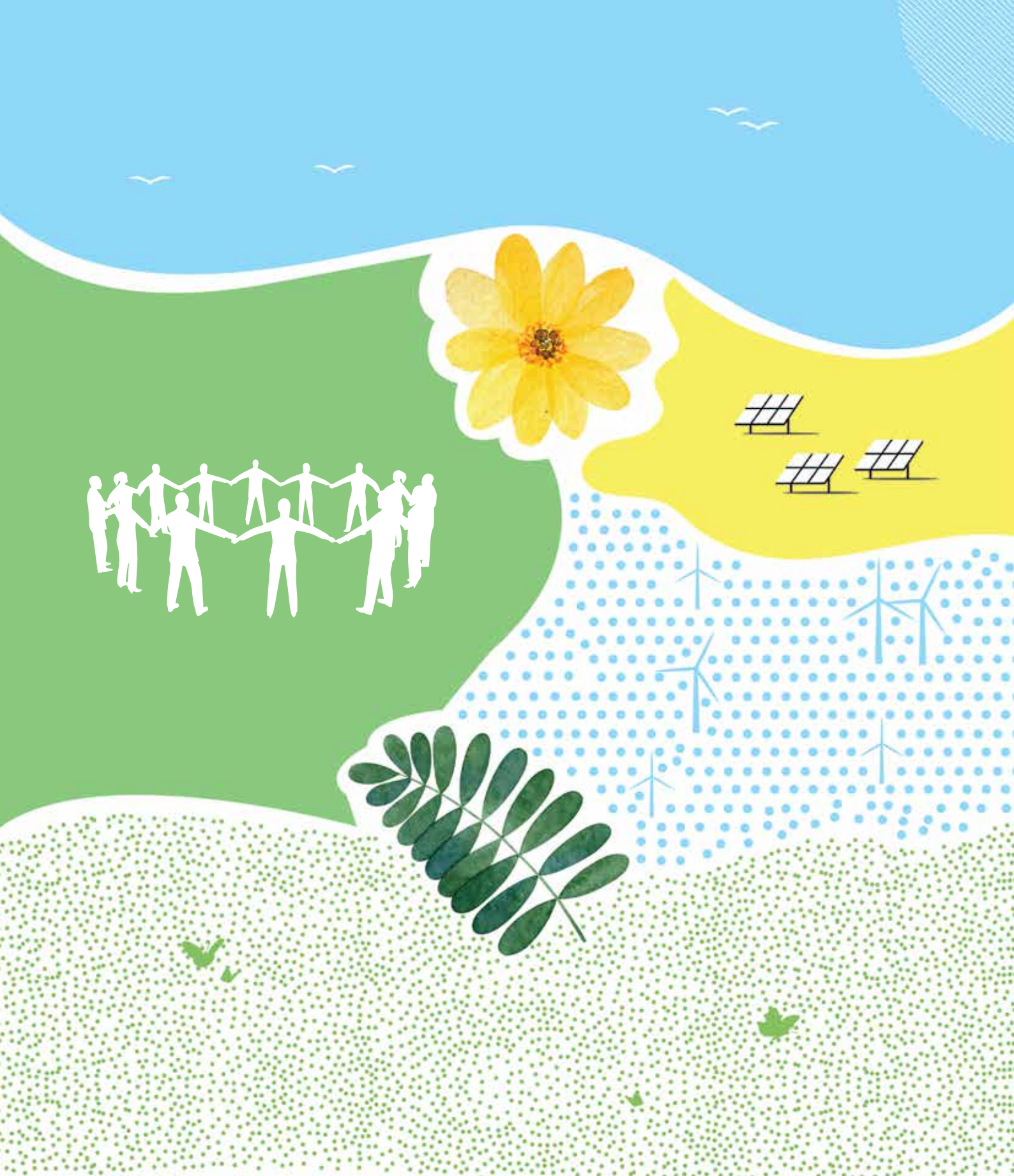
Yashad Bhawan  
Udaipur - 313004  
Rajasthan, India

## STATUTORY AUDITORS

**SR BATLIBOI & CO. LLP****Chartered Accountants**Golf View Corporate Tower-B  
Sector 42,  
Near DLF Golf Course,  
Gurgaon, Haryana - 122002







**HINDUSTAN ZINC LIMITED**

**Hindustan Zinc Limited**

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