

HZL/2023-SECY/

September 20, 2023

BSE Limited
P.J. Towers, Dalal Street,
Mumbai - 400001

National Stock Exchange of India Ltd.
“Exchange Plaza”
Bandra - Kurla Complex
Mumbai - 400051

Kind Attn: - General Manager,
Dept. of Corporate Services

Kind Attn: - Head - Listing & Corporate
Communications

Scrip Code: 500188

Trading Symbol: HINDZINC

Dear Sir(s),

Sub: Compliance under the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 (Listing Regulations, 2015)

In terms of the provisions of the Regulation 30 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and in continuation of our earlier letter No. HZL/2023-SECY/ dated September 18, 2023, please find attached the annual deck to be presented to the analysts.

This is for your information and record.

Thanking you,

Yours Sincerely,
For Hindustan Zinc Limited

Rajendra Pandwal
Company Secretary & Compliance Officer

Achieving More Milestones Chasing New Horizons

Hindustan Zinc Limited
Investor Presentation FY 2022-23



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This presentation contains 'forward-looking statements' - that is, statements related to future. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as 'expects', 'anticipates', 'intends', 'plans', 'believes', 'seeks', or 'will'. Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, uncertainties arise from the behaviour of financial and metals markets including the London Metal Exchange, fluctuations in interest and/or exchange rates and metal prices; from future integration of acquired businesses; and from numerous other matters of national, regional and global scale, including those of environmental, climatic, natural, political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements. We caution you that reliance on any forward-looking statement involves risk and uncertainties, and that, although we believe that the assumption on which our forward-looking statements are based are reasonable, any of those assumptions could prove to be inaccurate and, as a result, the forward-looking statement based on those assumptions could be materially incorrect.

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Corporate Overview

Hindustan Zinc Limited: Powered by Integration, Rooted in Strengths	4
From Goals to Glory: Reflecting a Journey of Accomplishments	5
Milestones Galore: Reflecting on FY 2022-23 Achievements	7
Excellence and Long-term Success with Operations Spanning Critical Areas	8
Extensive Operational Asset Base: Cornerstones of Our Long-term Success	9

Hindustan Zinc: Powered by Integration, Rooted in Strengths



A Vedanta Limited subsidiary

Headquartered in Udaipur, Rajasthan

Mining facilities across Rajasthan

Listed on the NSE and BSE

Five Decades of Excellence at Hindustan Zinc

India's Largest

Integrated producer of zinc, lead and silver

~75%

Market share in India's primary zinc industry

5th Largest

Silver producer globally¹

2nd Largest

Integrated zinc producer globally²

World's Largest

Underground zinc mining operations at Rampura Agucha²

Among India's Largest

Wind power producers with a generation capacity of 273.5 MW across 5 states

1st Quartile

Position in zinc cost curve; among the lowest globally²

25+ Years

Mine life³

The Six Pillars of Our Strong Foundation

Fully Integrated & Responsible Player

Sustainability Ethos

Focus on Value Creation

Robust Governance Framework

Technology & Innovation

Strong People Practices

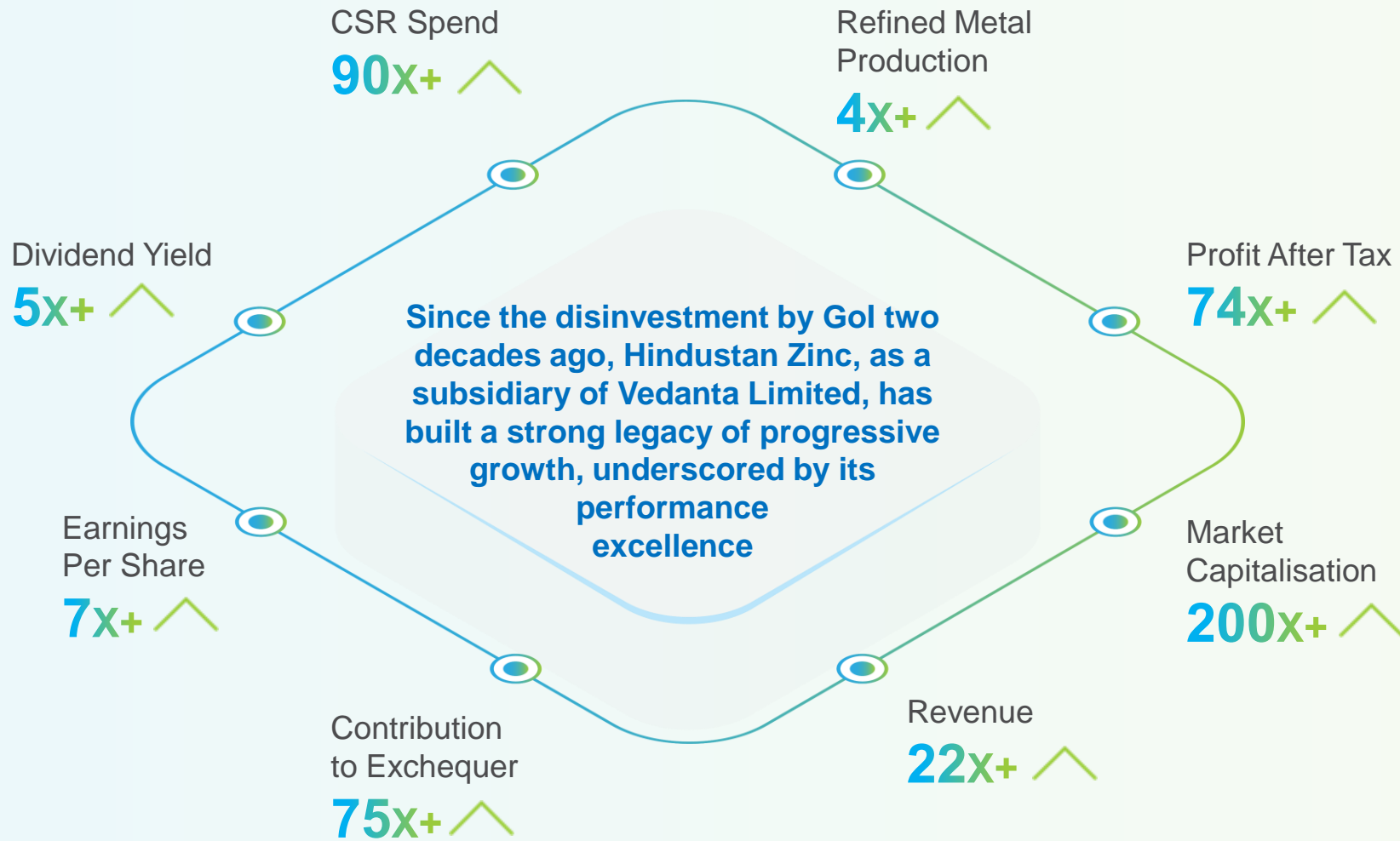
¹ World Silver Institute for silver producer rankings

² Wood Mackenzie for global mine/smelter rankings for zinc-lead mine and cost

³ Ore Reserves and Mineral Resources (R&R) at current rate of metal production



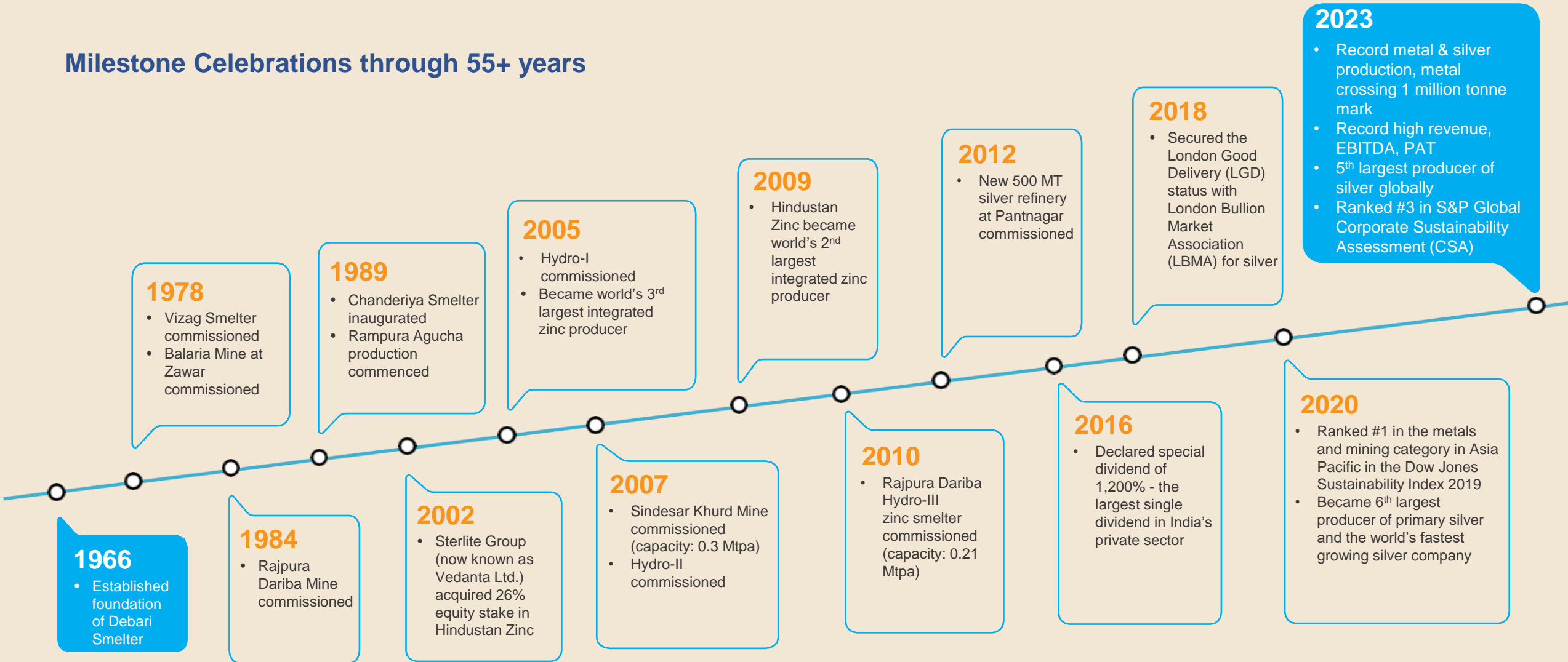
From Goals to Glory: Reflecting a Journey of Accomplishments



(During FY 2002-03 to FY 2022-23)

From Goals to Glory: Reflecting a Journey of Accomplishments

Milestone Celebrations through 55+ years



Milestones Galore: Reflecting on FY 2022-23 Achievements

S&P Global Corporate Sustainability Assessment*

#3 Globally and #1 in Asia-Pacific

S&P Global Sustainability Yearbook 2023*

Top 5% ESG score (6th consecutive featuring)

CDP 2022

- A/A- category in climate change and water security
- Supplier engagement leader

CII ITC Sustainability Award

Corporate Excellence (CLZS), Environment (ZSD)

26th Bhamashah Awards

Seven awards for educational initiatives/projects

3rd CII Climate Action Programme 2.0

'Oriented Award' category

Sword of Honour Award

5-Star Grading by British Safety Council to DSC

S&P Global Platts Global Metals Awards

'Industry Leadership Award - Base, Precious and Specialty Metals' and 'Corporate Social Responsibility'

GreenCo Rating

Gold to DSC and CLZS, Silver to ZSD, RAM and Zawar mines

CII EXIM Business Excellence Award 2022

Excellence across the value chain

TIOL 2022 Awards

JURY Award under 'Non-Deemed Corporate above ₹ 5,000 crore Turnover' category

Indian Bureau of Mines

Four mines won 5-Star Rating under 'A' list category

6th National Conclave of Mines and Minerals

5-Star Rating to Kayad mine

'Great Place to Work'

Certified for fifth consecutive year

People First HR Excellence Award

For diversity and inclusion initiatives and talent management

*Metals and Mining Sector

CLZS - Chanderiya Lead-Zinc Smelter; DSC - Dariba Smelting Complex; RAM - Rampura Agucha Mine; ZSD - Zinc Smelter Debari



Excellence and Long-term Success with Operations Spanning Critical Areas



Exploration

(Ore Reserves & Mineral Resources)

- Technology and innovation-driven mines with 25+ years of mine life
- Sustained delineation and upgradation

Total R&R
460.05 Mt



Mines

(Lead & Zinc)

- **Location:** Rajasthan (Rampura Agucha, Sindesar Khurd, Rajpura Dariba, Zawar and Kayad)
- World-class operations, cost efficiencies, safety, sustainability and trained workforce
- Underground operations for volume growth

Ore production
16.74 Mt



Smelters & Refineries

(Smelters: Hydrometallurgical Zinc, Lead, Pyrometallurgical Zinc-Lead)

- Smelters in Rajasthan (Chanderiya, Dariba and Debari); Zinc-Lead-Silver refineries in Pantnagar (Uttarakhand)
- Fully integrated with captive power
- Focus: smelter debottlenecking, VAP expansion and waste recycling/reuse

Metal capacity
1.12 Mt



Captive Power Plants (CPPs)

(Thermal, Solar, and Waste Heat Recovery Power Plants)

- Low-cost, reliable power supply
- Augment solar and thermal capacities

Total captive capacity
586.74 MW



Extensive Operational Asset Base: Cornerstones of Our Long-term Success

Mines

Mines	Reserve (Mt)	Resource (Mt)	Reserve Grade Zinc (%)	Reserve Grade Lead (%)
Rampura Agucha Mine	44.8	25.2	11.2	1.3
Sindesar Khurd Mine	43.4	67.2	3.0	2.0
Rajpura Dariba Mine	34.3	39.3	5.4	1.6
Bamnia Kalan	-	41.4	-	-
Kayad Mine	1.5	6.0	5.2	0.9
Zawar Mines	49.4	107.4	2.8	1.3

R&R Summary

Category	Tonnage (Mt)	Zinc (%)	Lead (%)	Silver (g/t)
Reserve	173.5	5.6	1.6	56
Mineral Resource - Measured and Indicated	126.7	4.6	1.8	62
Mineral Resource - Inferred	159.9	4.3	2.1	57

Smelters

Smelters	Pyrometallurgical Zinc Smelter (TPA)	Pyrometallurgical Lead Smelter (TPA)	Hydrometallurgical Zinc Smelter (TPA)	Lead Smelter (TPA)
Chanderiya Lead-Zinc Smelter	105,000	90,000	480,000	-
Dariba Smelting Complex	-	-	240,000	120,000
Debari Zinc Smelter	-	-	88,000	-

Smelting Capacity

Zinc Smelting 913,000 TPA	Lead Smelting 210,000 TPA	Silver Refining 800 TPA
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Power Capacity

Wind Power 273.50 MW	Thermal Power 505.50 MW	WHRB Power 40.67 MW	Solar Power 40.57 MW
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Strategic Review

Investment Case: Excellence Powering
Our Journey of Milestones 11

Advancing Priorities to Reach New Horizons
of Success 12

Centre of Excellence: Elevating Operational
Excellence with Technology, Automation
and Innovation 14

Investment Case: Excellence Powering Our Journey of Milestones



Portfolio of Mines with Long Life

- Enhance Ore Reserves and Mineral Resources: Innovative technology and advanced geophysics for exploration; replenishing each mined tonne

Investments Boosting Production Capacities

- Use of advanced tools and operational methods, global collaborations and skilled project execution
- Optimised resource use, commitment to net-zero emissions and low-carbon economy for sustainable growth

Global Cost Leadership through Fiscal Prudence, Agility & Resilience

- Integrated business model
- Strong financial position and performance with resilient capital deployment
- Business transformation while maintaining operational excellence
- Zinc CoP - **US\$ 1,257 per MT**
3-year Average EBITDA Margin - **53%**

#1

#2

#3

#6

#5

#4

Superior Returns to Shareholders

- Strategic project investments for above-average IRR and hedging to boost performance
- Digitalisation and automation for industry-leading growth, operational excellence and cost optimisation
- 5-year Average Dividend Pay-out - **149%**

Sustainability-driven Business with Focus on ESG and Community

- Carbon neutrality path, Sustainability & CSR Goals, Aatmanirbhar Bharat alignment, robust governance
- Pioneering battery electric vehicles in Indian mining
- 450 MW RE power sourcing agreement




Customer-centric De-Risked Business Model for Sustained Growth

- Diverse portfolio through innovation and customer collaboration, geographic expansion, strong distribution network and long-term relations
- New ventures: 30 kt alloy plant under HZAPL for value-added strategy; HZFPL for India's self-sufficiency
- Proportion of VAP - **15.5%**

HZAPL - Hindustan Zinc Alloys Private Limited; HZFPL - Hindustan Zinc Fertilisers Private Limited; VAP - Value-Added Products; RE - Renewable Energy; CoP - Cost of Production; IRR - Internal Rate of Return



Advancing Priorities to Reach New Horizons of Success

	 S1 Maintaining a Portfolio of Mines with Long Life	 S2 Expansion of Capacities	 S3 Strengthening Cost Leadership
STRATEGIC FOCUS	<ul style="list-style-type: none"> Mines longevity by converting resources to reserves and sustained replenishment through innovation and technology 	<ul style="list-style-type: none"> Continued organic and inorganic expansions Maintaining operational excellence with our vision to be the world's largest zinc-lead-silver company 	<ul style="list-style-type: none"> Leadership position in the first quartile of global zinc cost curve driven by increased volumes, improved grades, innovation, automation, digitalisation and cost rationalisation
WAY FORWARD	<ul style="list-style-type: none"> AI/ML and advanced geophysics for discovery Retain existing mining leases and acquire new areas 	<ul style="list-style-type: none"> New mining leases and UG mining ramp-up Smelter debottlenecking capacity expansion 	<ul style="list-style-type: none"> Enhance automation and digitalisation for higher volumes, improved efficiencies and productivity 450 MW RE sourcing at a fixed rate for next 25 years providing better cost visibility
TARGETS	<ul style="list-style-type: none"> Upgrade Ore Reserves to 42 Mt R&R to 500+ Mt Enhance Mineral Resource by 15 Mt ore (intermediately) and by 40 Mt (eventually) 	<ul style="list-style-type: none"> UG Mines from 1.2 Mtpa to 1.25 Mtpa (intermediately) & to 1.5 Mtpa (eventually) Smelters to 1.5 Mtpa Silver from 800 MT to 1,000 MT 	<p>Cost Target:</p> <ul style="list-style-type: none"> US\$ 1,125-1,175/tonne (FY 2023-24) <US\$ 1,000/tonne (long-term)

S - Strategic Priority; AI/ML - Artificial Intelligence/Machine Learning; UG - Underground; R&R - Ore Reserves and Mineral Resources



S4

Expansion of Product Portfolio through Customer Centricity

S5

Progressing Towards a Sustainable Future

STRATEGIC FOCUS

- Expanding VAP aligned to evolving customer needs, backed by new ventures - HZAPL and HZFPL - to evolve into a product-based company and meet domestic market needs

- Reduce carbon footprint and enhance sustainability via efficiency improvements, RE, responsible resource use, waste management and zero liquid discharge, aligning with UN SDGs and global ESG practices

WAY FORWARD

- Innovating in lead & zinc alloys for better margins
- Commissioning of: HZAPL to cater Indian and international demand; and 510 Ktpa HZFPL plant to utilise Sulphuric acid for fertiliser production

- Sourcing up to 450 MW RE power – over 50% of our energy requirements – with an estimated emission reduction of 2.7 mn tCO₂e
- 100% mechanised charging at ZM for safety, speed, and power
- Target of converting all diesel-run 900-odd mining vehicles into BEVs over the next few years
- Zero Liquid Discharge plants at RAM and ZM
- Commissioning of Fumer plant in CLZS to eliminate Jarosite generation from one hydro smelter

TARGETS

- VAP Share: **20%-25%**

- US\$ 1 billion** Investment Commitment for Decarbonisation Journey

S - Strategic Priority; HZAPL - Hindustan Zinc Alloys Private Limited; HZFPL - Hindustan Zinc Fertilisers Private Limited; VAP - Value-Added Products; RE - Renewable Energy; IRR - Internal Rate of Return; RAM - Rampura Agucha Mine; ZM - Zawar Mines; CLZS - Chanderiya Lead-Zinc Smelter



Centre of Excellence: Elevating Operational Excellence with Technology, Automation and Innovation

Smoke Hours Drilling via Automation for additional drilling (at SKM and RAM) during shift change



AI/ML-based Analytical Modules for hazard detection and inspecting finished goods quality

Drone-based Stack Health Inspection for monitoring inaccessible structures safely

LiDAR-based Ore-pass Scanning for capturing UG mine excavation data and optimising operations

IoT Sensors for reducing HEMM's diesel consumption by minimising idle time and for real-time monitoring of remote assets



Advanced Process Control at Mills for stable plant operations, consistent concentrate grade and throughput optimisation

Collision Avoidance System and Personnel Tracking for UG mining safety through real-time alerts and situational awareness

Predictive/Condition-based Maintenance & Real-time Reliability Health Index for improved availability, reliability and efficiency of critical assets

AR/VR-based Winder Training Simulator for accelerated and safe workplace training



Silver (Ag) Promoter at Zawar: enriching silver grade & recovery (~4%) for 6 TPA additional Ag MIC

Special High Grade (SHG) Zinc Production at ZSD through process changes, reducing lead impurity

Using efficient Non-hazardous Reagent for eco-friendly and cost-saving outcomes

Improving Electrowinning Efficiency at ZSD for desired electrolyte composition and increasing current efficiency by ~5%

In-house Na₂SO₄ Crystals used by ZSD plant in Jarosite Precipitation process for reducing costs

Model Workplaces at RAM, Zawar and SKM for improved availability (5%), equipment utilisation (44%) and OEE at mills (5%) and metal recovery



AI/ML - Artificial Intelligence/Machine Learning; RAM - Rampura Agucha Mine; SKM - Sindesar Khurd Mine; LiDAR - Light Detection and Ranging; IoT- Internet of Things; HEMM - Heavy Earth Moving Machinery; UG - Underground; AR/VR - Augmented Reality/Virtual Reality; MIC - Metal in Concentrate; ZSD - Zinc Smelter Debari; OEE - Overall Equipment Effectiveness; NABL - National Accreditation Board for Testing and Calibration Laboratories; LIMS - Laboratory Information Management System





Performance Review

Strong Financials, Profitability and Operating Metrics

16

Performance Excellence Across Portfolio with a Market-leading Position

18

Top-Class Operational Performance at Mines through Innovation and Efficiency

19

Reserve Enhancement and Sustainable Growth with Technology-driven Exploration

24

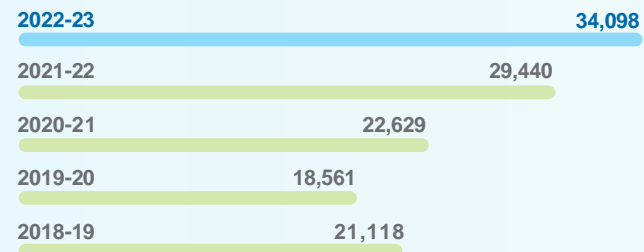
New Milestones and Vistas of Growth at Smelters and CPP

26

Strong Financials, Profitability and Operating Metrics

Revenue from Operations

(₹ crore) (including other operating income)

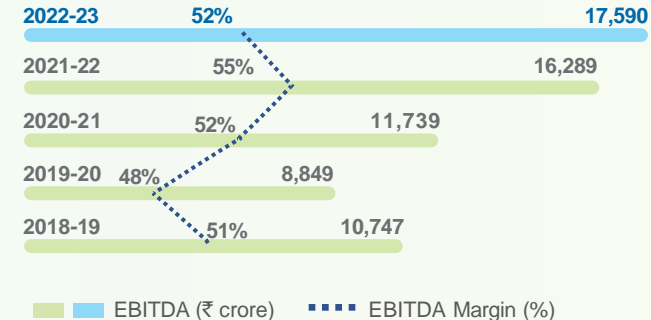


Revenue Mix (%)

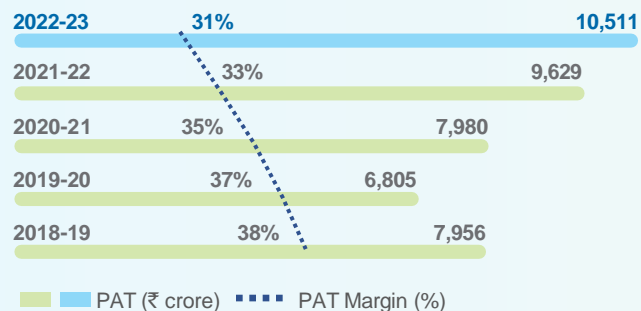


	2018-19	2019-20	2020-21	2021-22	2022-23
Zinc and Lead	85	84	78	81	82
Silver	12	13	20	14	13
Wind Energy	1	1	1	1	1
Others	2	2	1	4	4

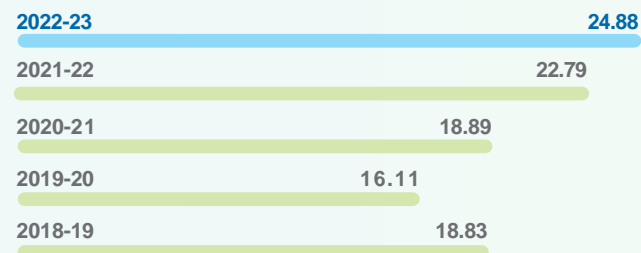
EBITDA & EBITDA Margin



PAT & PAT Margin



Earnings Per Share (₹)

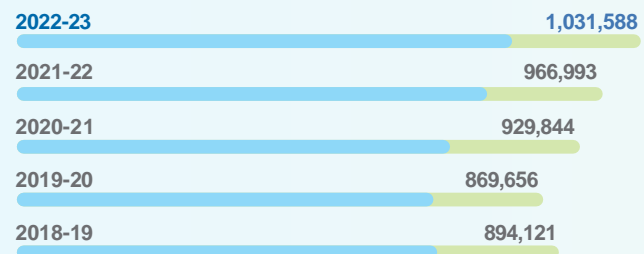


Dividend Per Share (₹)



Strong Financials, Profitability and Operating Metrics

Total Refined Metal* (tonnes)



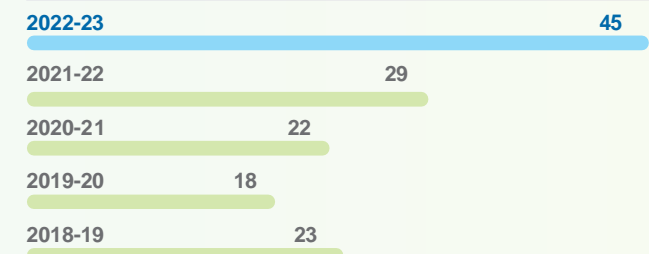
	2018-19	2019-20	2020-21	2021-22	2022-23
Zinc	696,283	688,286	715,445	775,808	820,898
Lead	197,838	181,370	214,399	191,185	210,690

Mined Metal (tonnes)

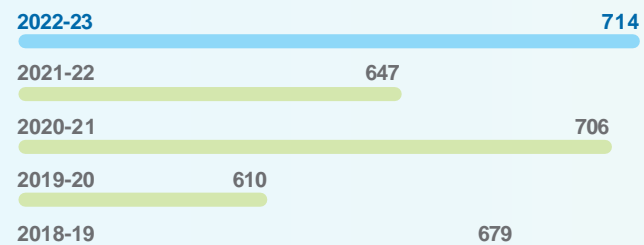


	2018-19	2019-20	2020-21	2021-22	2022-23
Zinc	728,498	720,060	755,849	801,035	839,051
Lead	207,190	197,041	216,127	216,023	223,038

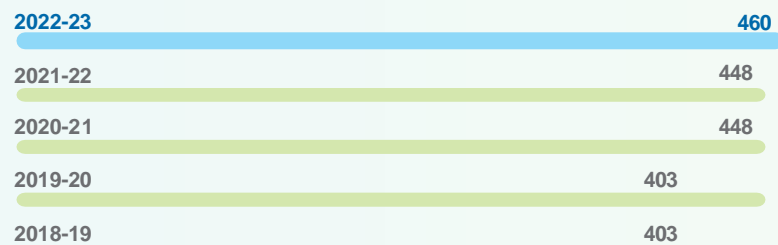
Return on Net Worth (%)



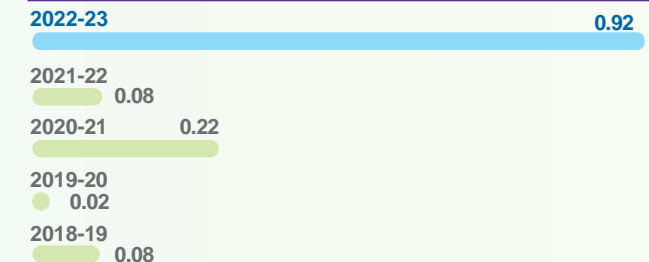
Refined Silver* (tonnes)



Total R&R (Mt)



Debt Equity Ratio (%)



* Excludes captive consumption



Performance Excellence Across Portfolio with a Market-leading Position

ZINC

Production Volume
821 kt

Revenue
₹ 24,180 crore

Portfolio: Special high grade, high grade, continuous galvanising grade, prime western, jumbo SHG & HG and other grades used in die-casting alloys

75% market share in India
(including alloys)

LEAD

Production Volume
211 kt

Revenue
₹ 3,913 crore

Portfolio: Lead ingots (99.99% purity) registered with LME

88% domestic market share; plan to increase to 100%

SILVER

Production Volume
714 MT

Revenue
₹ 4,388 crore

Portfolio: 30 kg bars, mini (1 kg) bars, silver powder

Sole silver producer in India;
100% domestic sales

SHG - Special High Grade; HG - High Grade; LME - London Metal Exchange



Top-Class Operational Performance at Mines through Innovation and Efficiency

Rampura Agucha Mine



Key Operational Milestones, FY 2022-23

Ore Production
4.80 Mt

Mined Metal Production
533.69 kt

Mine Development
30.78 km

Grade
12.77%

Key Developments

Expansion, Upgradation & Infrastructure Development

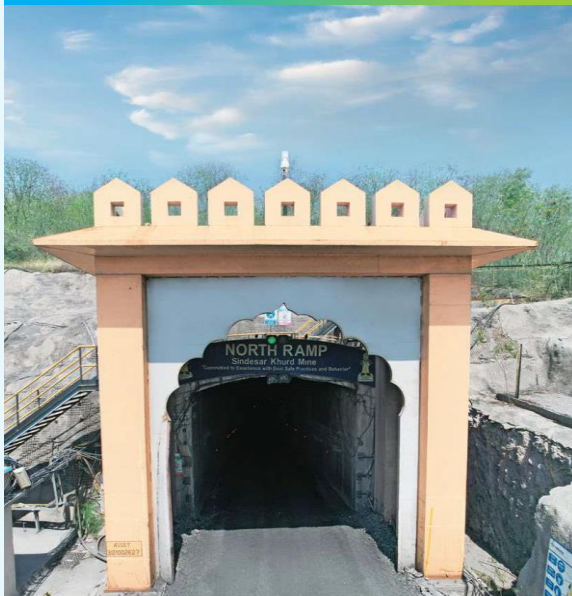
- 3rd silo at production shaft, storage increased to 7,500 MT for improved hoisting
- 2 MW south main ventilation fan, enhancing mine ventilation to 1,850 m³/sec
- Intermediate mud pumping station for better UG dewatering
- Established best-in-class UG training gallery at -430 mRL
- New UG ambulance, surface ambulance, and UG remote-controlled fire tender with foam capability
- Digital interventions in winder interlocks for safety and efficiency

Efficiency & Productivity Enhancements

- APC in beneficiation plants
- New lead press filter for improved recovery and water conservation
- Digital transformation: equipment tracking, collision avoidance, tele-remote equipment operation, and central control room process monitoring

Top-Class Operational Performance at Mines through Innovation and Efficiency

Sindesar Khurd Mine



Chasing New Horizons

Commissioned Normet Agitator SmartDrive EV in UG operations. A first-of-its-kind initiative in the Indian mining sector and will help decarbonise operations

Key Operational Milestones, FY 2022-23

Ore Production

5.60 Mt

Mined Metal Production

272.10 kt

Mine Development

25.11 km

Grade

5.05%

Key Developments

Expansion, Upgradation & Infrastructure Development

- Debottlenecked paste-fill plant-2 with installation of positive development pump for backfilling underground voids
- Started E-block ore production at a depth of 900+ metres
- 617 metres longest borehole commissioned for surface-to-underground shotcrete transfer
- Dewatering pump with 700 metres head boosting development in lower blocks

Efficiency & Productivity Enhancements

- APC: streamlined in beneficiation plants 2 and 3, added in plant 1
- Short interval control for improved stope TAT
- Upskilled operators with AR/VR simulators
- Automation drilling reduced time and shift changeover idling
- Real-time monitoring of UG geotechnical instruments using multiple tools for enhanced safety

Top-Class Operational Performance at Mines through Innovation and Efficiency

Rajpura Dariba Mine



Key Operational Milestones, FY 2022-23

Ore Production
1.39 Mt

Mined Metal Production
52.84 kt

Mine Development
9.97 km

Grade
6.41%

Key Developments

Expansion, Upgradation & Infrastructure Development

- Commissioning: 1.8 Mtpa paste-fill plant with UG reticulation, 2 MVA compact dry type electrical substation, Cabltec machine for ground support
- Upgrades: Main shaft cage winder drive system, belt conveyor drive motor gearbox and mill upgradation from 0.9 to 1.1 Mtpa capacity
- 100 mRL grizzly installed for UG ore transport
- Strengthened mine dewatering system and raised bore for ventilation improvement

Efficiency & Productivity Enhancements

- Skip handling system upgraded for higher capacity
- Direct loading at 3-way junction to boost productivity
- Video radio remote control (RRC) for stope recovery improvement
- Automation and digitalisation: CCTVs, pumps automation, biometric access control, etc.

UG - Underground; MVA - Mega Volt Ampere



Top-Class Operational Performance at Mines through Innovation and Efficiency

Zawar Mines



Key Operational Milestones, FY 2022-23

Ore Production

4.30 Mt

Mined Metal Production

165.20 kt

Mine Development

37.52 km

Record Exploration Drilling

271.45 km

Grade

4.19%

Key Developments

Expansion, Upgradation & Infrastructure Development

- Mochia Mine: First secondary stope mined, Central and West Mochia connected for enhanced production
- Zawarmala Mine: Started extraction from pillar posts, ongoing portal work for new production centre
- New production front opened in South of Baroi for increased production and cost reduction

Efficiency & Productivity Enhancements

- Balaria incline conveying improved to 2,500 tpd
- Deployed Charmec and bulk emulsion explosive for blast optimisation
- Centralised control room at Balaria
- Enhanced equipment utilisation through digital visibility
- Advanced mine communication using a leaky feeder
- StopeX-Automation in FLAC3D for efficient, accurate, and time-saving UG modeling at Zawar Mines

Top-Class Operational Performance at Mines through Innovation and Efficiency

Kayad Mine



Key Operational Milestones, FY 2022-23

Ore Production
0.66 Mt

Mined Metal Production
38.26 kt

Mine Development
7.45 km

Grade
6.28%

Key Developments

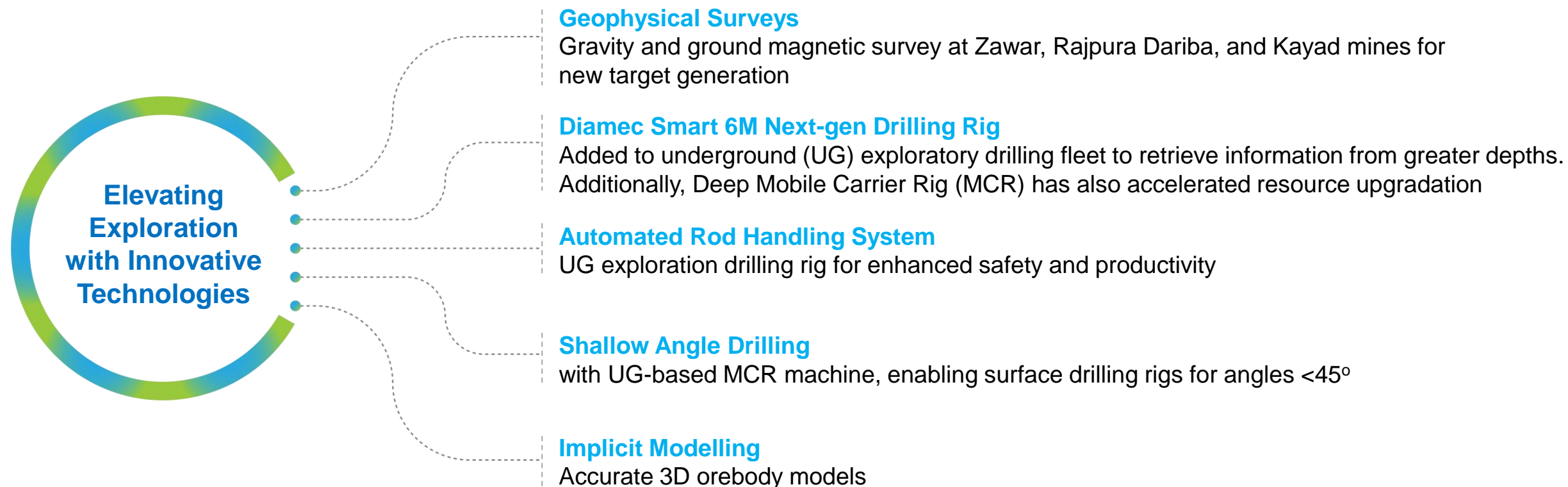
Expansion, Upgradation & Infrastructure Development

- New dewatering facility at north 95 mRL established
- Mining initiated in new production centre at block-S1

Efficiency & Productivity Enhancements

- Introduced biometric driver authentication and unmanned weightage system

Reserve Enhancement and Sustainable Growth with Technology-driven Exploration



Exploration Performance, FY 2022-23

Highest-ever Exploration Drilling
540.8 km
(205.2 km surface and 335.6 km UG)

Mineral Resource Addition
27.8 Mt



Reserve Enhancement and Sustainable Growth with Technology-driven Exploration

Ore Reserves and Mineral Resources (R&R), as on March 31, 2023 (based on Annual R&R audit by SRK (UK))

	Total Reserves					Measured & Indicated					Inferred				
	Mt	Zn%	Pb%	Ag g/t	Metal	Mt	Zn%	Pb%	Ag g/t	Metal	Mt	Zn%	Pb%	Ag g/t	Metal
Rampura Agucha	44.8	11.2	1.3	42	5.6	10.4	14.7	2.2	64	1.8	14.8	4.6	4.3	115	1.3
Sindesar Khurd	43.4	3.0	2.0	105	2.2	57.2	3.7	1.9	92	3.2	10.0	3.4	1.4	55	0.5
Rajpura Dariba	34.3	5.4	1.6	61	2.4	2.9	5.9	2.1	63	0.2	36.4	6.3	1.9	86	3.0
Zawar	49.4	2.8	1.3	22	2.0	32.2	3.4	1.9	27	1.7	75.2	3.6	2.2	36	4.4
Kayad	1.5	5.2	0.9	15	0.1	3.0	9.7	1.4	25	0.3	3.0	6.0	0.6	9	0.2
Bamnia Kalan	-	-	-	-	-	20.9	3.3	1.1	40	0.9	20.5	3.5	1.4	45	1.0
Total	173.5	5.6	1.6	56	12.3	126.7	4.6	1.8	62	8.1	159.9	4.3	2.1	57	10.3

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

Note: Metal R&R in kt



Smelters

New Milestones

1,032 kt

refined metal production crossing the 1 million tonne mark

Journey to New Vistas

- **Promoting Wealth from Waste:** Process modifications for copper sulphate quality enhancement and cost-effectiveness, improved ore recovery and less chemical use
- **Reduction in Pyro Inventory:** Efficient use of materials, sinter process control
- **ISF Dross Increase:** Briquetting plant modification, reducing breakdowns and optimal lead level management



ISF - Imperial Smelting Furnace

Captive Power Plant (CPP)

New Milestones

314.07 MW

Renewable power capacity

40.67 MW

WHRB capacity

505.50 MW

Captive thermal capacity

860.24 MW

Total power capacity

8.66 lakh tonnes

CO₂ emissions avoided

Journey to New Vistas

- **Towards Net Zero:** Agreement for 450 MW continuous renewable power, replacing coal with biomass, and improvements in turbine and ESP; Future projects - WHRB at Fumer, De-NOx system at Chanderiya and Kayad solar plant enhancement
- **Safety:** No man-machine interaction during coal handling, coal pipe hammering pilot and bottom ash auto-alignment
- **Efficiency:** Upgraded ESP, auger sampling commissioning and PLC upgrade
- **Augmenting Cost Efficiencies:** 10% inventory reduction and optimised coal blend



WHRB - Waste Heat Recovery Boiler; ESP - Electrostatic Precipitator ; PLC - Programmable Logic Controller





Sustainability Review

Charting New Horizons in Sustainability	29
FY 2022-23 Sustainability Performance at a Glance	31
Pioneering Efforts Towards Net-zero Journey	32
Sustainability in Action	33
Progressive Culture with Diversity and Inclusion	34
Contributing to the Holistic Growth of Communities	35

Consistently Setting New milestones in Sustainability Performance

External Assessment

Indices and Ratings	Best Possible Rating/Score	2022	2021	2020
Sustainalytics	Negligible Risk (0-10)	29.6	47.0	44.0
DJSI	100	80.0	77.0	74.0
CDP Climate	A	A	B	A
CDP Water	A	A(-)	A(-)	B
FTSE4Good	5	4.2	4.0	4.3
<i>Environment</i>		4.2	3.6	4.5
<i>Social</i>		4.0	4.0	4.0
<i>Governance</i>		4.6	4.3	4.6



Charting New Horizons in Sustainability

Focussed Approach to Reach Newer Milestones in Environment Performance



FY 2022-23 Sustainability Performance at a Glance

Climate Change	581,915 GJ cumulative energy savings	4.58 mn tCO₂e absolute emission (Scope 1 + 2) (4.81 mn tCO ₂ e)	4.44 MT GHG intensity (Scope 1 + 2) (4.97 MT)	41.53 GJ specific energy consumption per tonne of metal (48.46 GJ)
Water Stewardship	18.40 mn m³ absolute water recycled (19.22 mn m ³)	18.09 mn m³ fresh water consumption (16.78 mn m ³)	8.56 mn m³ STP water consumption (9.52 mn m ³)	24.67 m³ specific water consumption per tonne of metal (25.52 m ³)
Circular Economy	6.54 mn MT waste recycled (6.17 mn MT)	90.95% zinc and 81.15% lead mill recovery	95.90% zinc and 96.77% lead smelter recovery	
Diversity in Workforce	52% native employee percentage from Rajasthan (52%)	19.5% women in executive workforce (15.7%)		
Ensuring Zero Harm	0.70 Loss Time Injury Frequency Rate (0.81)	7 Fatality at site (4)	1.93 Total Recordable Injury Frequency Rate (2.22)	
Social Impact	₹ 276.3 crore CSR spend (₹ 190.9 crore)	₹ 24,892 crore contribution to exchequer* (₹ 15,676 crore)	1.72 million people across 237 villages benefited through sustained CSR initiatives	

*On gross basis | Figures in bracket represent FY 2021-22 numbers



Sustainability in Action

Pioneering Efforts Towards Net-zero Journey

Towards 1.5°C - focussed on renewable energy

- Revised emission targets (SBTi verification awaited); short-term goal to reduce Scope 1 & 2 by 50% and Scope 3 by 25% by 2030
- TCFD alignment for climate change risk assessment
- 100% green power sourcing by Pantnagar plant and turbine revamping
- 450 MW PDA signed (about 53% of our thermal power capacity) and focus on reducing coal by using biomass

Electrical Vehicle (EV) initiative

- First in India to introduce battery-operated EVs in mining operations - Agitator and Charmec
- US\$ 1 billion investment commitment; MoUs with Epiroc Rock Drills AB, Normet Group Oy and Sandvik AB for BEVs
- Electric mobility in supply chain: Piloting EV for concentrate transportation; business partners have started introducing EVs

SBTi - Science Based Targets initiative; TCFD - Task Force on Climate-Related Financial Disclosures; PDA - Power Delivery Agreement; BEV - Battery Electric Vehicle



Water Stewardship

- Water risk assessment across sites; actions initiated
- ZLD added: Dariba (3,200 KLD), Debari (3,000 KLD), and Chanderiya (600 KLD); ongoing ZLD at RAM (3,800 KLD) and Zawar mines (3,500 KLD) resulting in 90%+ water recovery

Circular Economy Models

- Piloted using mine waste to produce cement-like materials
- R&D for value-added products from Smelter Waste Residue; extracting zinc content of the ETP cake and recovering manganese
- Workshop on Circular Economy

Biodiversity Conservation

- Best practices in tailings dam management and sustainable site closure planning
- Assessed biodiversity impact and implemented site-specific plans
- Banned single-use plastic; published Environmental Product Declaration (EPD) for zinc products; Miyawaki plantation method at Dariba Complex and CLZS

Towards Zero Harm

- V-Unified HSE platform for improved information visibility and incident impact assessment
- VR-based simulator training for jumbo operators
- Underground drones for real-time monitoring and accurate surveying; LiDAR for 3D modelling
- Vihan, a critical risk management (CRM) initiative launched across all operations

Responsible Sourcing

- Defined ESG expectations for Business Partners
- Addressing 'priority' material issues; 3-tier governance structure, code of conduct, ESG integration and internal management process for effective supply chain
- Carbon pricing in procurement decisions

ZLD - Zero Liquid Discharge; R&D - Research & Development; ETP - Effluent Treatment Plant; CLZS - Chanderiya Lead-Zinc Smelter; LiDAR - Light Detection and Ranging; HSE - Health, Safety and Environment ; RAM - Rampura Agucha Mine; VR - Virtual Reality



Sustainability in Action

Progressive Culture with Diversity and Inclusion

Focus on Diversity, Equity & Inclusion (DEI) for Superior Performance

- Gender parity and equal opportunities across all levels
- Hiring LGBTQIA+ members in front-end roles
- Collaboration with academia, NGOs, and institutions to promote diversity of thought

At the Forefront of Driving Gender Diversity

Accelerated Career Path

CEO's guidance, Talent Review Council, and V-Build for monitoring top women employees' professional journey

Coaching

Coaching-based leadership development programmes for essential life skills and strategies

Diversity in Hiring

Diversity in campus hires, including partnerships with women's colleges

Development Dialogue

'Ambavgarh Dialogue', a leadership forum for nurturing women professionals

V-Lead

To train, develop, and empower women leaders for CXO roles



52%
Native Employee
Percentage (Rajasthan)

19.5%
Women
in Executive Workforce



Sustainability in Action

Contributing to the Holistic Growth of Communities

Social Interventions in FY 2022-23

Sustainable Livelihood for Farmers and Youth



- Supported 29,000+ farmer families
- Formed 5 FPOs and 2 microenterprises, generating ₹ 2.9+ crore revenue
- Trained 1,771 youths, 77% successful placement/entrepreneurship

Educating Underprivileged



- 227,000+ children covered under various programmes

Nurturing Sports and Culture



- 28,000+ youths benefitted from diverse sports initiatives
- 382,000+ people covered via regional to international level cultural programmes

Access to Healthcare and Water



- 200,000+ patients supported with enhanced medical facilities, mobile health vehicle services and heart ailment assistance
- 229,000+ benefitted from various water-related projects

Environment and Safety Proposition



- 60 MLD STP and 59,000+ saplings planted, benefiting 95,000+ people
- Safety promotion: 180+ master trainers for Community Cadre Development training 21,000+ people; reached 6,000+ people during National Road Safety Week
- 11,531.5 hours of employee volunteering

Empowering Women



- Financial and individual independence to 27,000+ women across 200 villages
- 12 microenterprises developed generating revenue of ₹ 1.29 crore

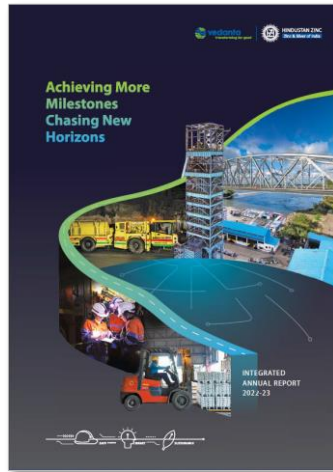
Creating Community Assets



- 130,000+ people benefitted across 6 locations in Rajasthan through infrastructure creation for livelihood, water, sanitation, education, and health improvement



Comprehensive Reporting Suite



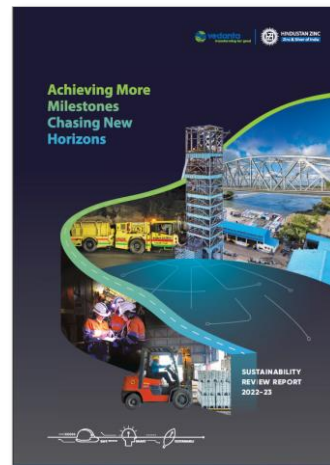
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