

ZINC NEWS

THE MONTHLY HOUSE JOURNAL OF HINDUSTAN ZINC

VOL 41 | ISSUE 6 | JULY 2021

INNOVATING FOR A SUSTAINABLE FUTURE

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प्रि य साथियों,

पिछले कुछ वर्षों में कर्मचारियों और व्यापार भागीदारों के संयुक्त प्रयासों से हम अत्याधुनिक भूमिगत खनन कंपनी बन गये हैं। इस हेतु हमने सुरक्षा, अन्वेषण, डिजिटलीकरण और डेटा-संचालित निर्णय लेने पर जोर दिया। अपनी दक्षता, प्रौद्योगिकी और नवाचार पहल को मजबूत करने के लिये हमेशा तत्पर रहने वाली युवा सोच की टीम पर मुझे गर्व है जो कि अपने शेयरधारकों को मूल्य प्रदान करने के लिए प्रयासरत रहती है।

हम सर्वश्रेष्ठ-इन-क्लास तकनीकों को अपनाने में अग्रणी हैं जिसे हमने सर्वांगीण रूप से लागू किया है। हाल ही में, हमने राजपुरा दरीबा खदान में भूतल से 708 मीटर नीचे स्थित देश के पहले सीढ़ीनुमा आपातकालीन मार्ग को सरलता से विकसित कर नवाचार की संस्कृति का उदाहरण प्रस्तुत किया है। ऐसे कई और उदाहरण हैं जो हमारे सभी कर्मचारियों के समर्पण और प्रयासों का प्रमाण हैं जो हर दिन बेहतर करने का प्रयास करते हैं।

उच्च उत्पादन, लागत अनुकूलन, कुशल और सुरक्षित संचालन और उच्च मात्रा और ग्रेड की दिशा में चालू वर्ष के लिए हमारी प्रमुख रणनीतिक प्राथमिकताओं को ध्यान में रखते हुए, मैं आप सभी से सुरक्षित और प्रासंगिक रहने का आग्रह करता हूँ।

मैं अग्रणी बने रहने हेतु युक्तिमान और अमुख्य लक्ष्य के साथ अग्रसर होने के लिये उत्साहित हूँ।

धन्यवाद
अरुण मिश्रा
मुख्य कार्यकारी अधिकारी - हिंदुस्तान जिंक

Click the icon to engage
with our CEO on Twitter:





Dear Colleagues,

Over the last few years, with the joint efforts of employees and business partners, we have transformed into a modern underground mining company with strong focus on safety, exploration, digitalization and data-driven decision-making. I am proud of my team full of young minds always itching to strengthen our efficiency, technology & innovation initiatives and deliver value to our shareholders.

We continue to be at the forefront of adopting best-in-class technologies and have applied holistically rather than in individual functions. Recently, we have exemplified the culture of innovation by ingeniously developing India's first staircase type emergency escape route situated 708 meters below the earth at Rajpura Dariba Mine. There are many more such examples that are testament of dedication and efforts of all our employees who strive to do better every day.

While keeping up with our key strategic priorities for the current year towards higher production, cost optimization, efficient & safe operations and higher volume & grades, I urge you all to stay safe, be relevant and engaging. I am excited to continue this journey with you all with an inventive spirit & lateral thinking to stay ahead.

Thanks
Arun Misra
CEO - Hindustan Zinc

Click the icon to engage
with our CEO on Twitter:





INNOVATION

HINDUSTAN ZINC - LEADING THE WAY FOR INGENUOUS INNOVATIONS

We at Hindustan Zinc take pride in fostering an environment that encourages new and innovative ideas for establishing a robust and sustainable framework of business outcomes. Innovative thinking is not just an idea communicated within the organization but a culture that we have ingrained in everything we do.



Lead-ing Refinement

Innovating the Lead refinement process to get better quality & purer Lead (Pb)



Green Ventilation Underground

World's 1st Battery powered AC in underground mining vehicles



Lateral Thinking

Re-designing process of Raw Zinc Oxide treatment to get higher metal recovery



The Great & Quick Mine Escape

India's first emergency spiral staircase escape route in underground mines



Patenting Waste to Wealth Innovations

Reimagining waste to make it wealth for the company and the society



Incubating Innovation In-House

Zinc Technology Centre researching new ways to improve operations and processes



Diginnovation A Connected Network

Digitalizing operations and using technology for data driven decisions

Innovation is Insight in Action.



Lead - ing Refinement

The traditional process of Lead refining produced Lead bullion with slightly higher content of impurities (mainly cadmium). Even after increasing the cycle time to 4 - 5 days, reduction of these impurities to desired level could not be achieved and hence the product had to be sold at a discounted price. The Pyro team challenged themselves to think out - of - the - box and develop a solution for impurity removal.

Various in-house experiments, multiple trials and persistent efforts combined with technical expertise resulted in an innovative approach of process re-designing. The team had a eureka moment when they strategically changed a component in the copper dressing process through which the lead bullion could be purified further, that too in lesser time.

The final lead product which was earlier getting lower realization is now earning a premium.

The Innovators



Mr. Kamod Singh



Mr. H. N. Singh



Mr. Muthu Kumar



Mr. Kundan Singh



Green Ventilation Underground

Our core value of Caring for our people became the foundation for teams at Rampura Agucha Mine and Sindesar Khurd Mine, to develop environment friendly ideas for improving life in underground mines. The team, in partnership with M/S Caterpillar, conceptualized world's first battery powered AC in underground mining vehicles. This reduced diesel dependency in these vehicles, making it a green ventilation process. It has also set a global benchmark to cut down on massive carbon emissions, and built a green model that the world is emulating.

The Innovators



Mr. B. Shriharilal



Mr. Manish Gupta



Mr. Akhil Pandya



Mr. Manish
Motwani



Mr. Abhishek
Singh



Mr. Sanjay
Patel



Lateral Thinking

One of our noteworthy business innovations is the treatment of Raw Zinc Oxide (ZnO) in Fumer for higher metal recovery. In the conventional process, Raw ZnO was sent to imperial smelting furnace (ISF) but due to change in process from Zinc & Lead operation to Lead operation, it could not be used in ISF and realizing low value was not an attractive option.

The CLZS Fumer team & ZnTec team designed a unique customized process that treats Raw Zinc Oxide through Fumer plant which generates Zinc Sulphate solution and Lead cake which can be easily integrated with existing Zinc & Lead flowsheets. The Zinc Sulphate solution generated through this treatment is further purified and consumed in hydro smelters and the residual Lead is suitable for treatment in Lead Plant.

The overall process is now re-designed to recover 88 to 90% of metal from the Raw Zinc oxide that would otherwise remain as residue.

The Innovators



**Mr. R.
Krishnakumar**



**Mr. K.
Maheshkannan**



**Mr. Jitendra
Patel**



**Mr. Shittal
Joshi**



**Mr. Akshay
Walvekar**



**Mr. Ranadip
Roy**



**Mr. Abotulla
Ramesh**



**Mr. Neeraj
Jain**



**Mr. Vijay
Rana**



**Ms. Sheeba
Mashruwala**



**Mr. Kiran
Rokkam**



The Great & Quick Mine Escape

Our Rajpura Dariba Mine (RDM) has exhibited a culture of innovation by ingeniously innovating and building India's first spiral staircase emergency escape route, located 708 meters below the earth's surface. In comparison with the monkey ladder's average time of 30 minutes, this step marvel has effectively reduced the average time of climbing to just 5-10 minutes.

Safety is our topmost priority and innovation has always been the backbone to develop frameworks that mitigate risk and ensure safety of each employee.

The Innovators



Mr. S. K. Khator



Mr. P. S. Dhaibhai



Mr. Rakesh Khurana



Mr. Sawariyan Vaishnav



Mr. Sanjay Kumar



Mr. Ravi Prakash Sahu



Patenting Waste to Wealth Innovations

In our constant pursuit towards innovating for a sustainable future, a big milestone is the US granting patent for two of our sustainability technologies. The two patents - one for manufacturing Paver Blocks from process waste; and the other for the method of production of Potassium Antimony Tartrate (PAT) by utilizing Antimony bearing residues. Both of these were developed in-house by Hindustan Zinc's state-of-the-art research and development centre - ZnTech (CRDL).

These breakthrough technologies are not only aimed to create value from waste but also to support communities.

The Innovators



**Ms. Sheeba
Mashruwala**



**Mr. Kiran
Rokkam**



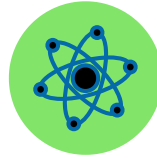
**Mr. Sundar
Sombhatia**



**Mr. Ashish
Kumar**



**Mr. K D.
Sharma**



Zinc Technology Centre - Incubating Innovation In-House

A first-of-its-kind, state-of-the-art Zinc Technology Centre (also known as Central Research & Development Laboratory) is at the heart of incubating innovations, discoveries, breakthrough ideas and strengthening R&D capabilities. The focus areas of the Centre include process improvements, new technology development & adaptation and waste-to-wealth initiatives. It is well-equipped to conduct research in the fields of mineral processing, geo-metallurgy, ore characterization, pyrometallurgy and hydrometallurgy.

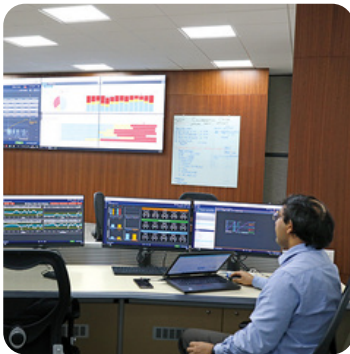
Since its inception in 1976, the Centre has come a long way and its new avatar is recognized by the Department of Scientific and Industrial Research, Government of India. Additionally, the research unit is also commended for its 5-S Workplace Management System. The ZnTech Centre has become an Innovation Hub continuously researching new ways to improve operations and processes for sustainable growth.





Diginnovation - A Connected Network

Digital Innovations are making us be future ready with best-in-class connected and automated operations. We continue to be at the forefront of adopting cutting edge technologies to gain and solidify our competitive moat in the mining industry, enhancing efficiencies and productivity along the way. The value of digital is multiplied when it is applied holistically rather than just in individual functions.



Digital Collaboration Centre - Connected Operations: Analyze, Predict, Optimize

As a pioneer in India, this Centre collates and analyses the entire operating data from our mines, mills, smelters and power plants on a single platform, leading to quick decision-making, backed by predicted outcomes and driven by data analytics.

North Star - Connected Workforce: Smart, Quick, Core

It has enabled redefining decision-making process by bringing visualization and big data analytics to the forefront. An in-house developed platform, it is engaging everyone in the company with information that guides each one to take timely, informed decisions and homogenize reporting methods across business verticals to drive tangible results.

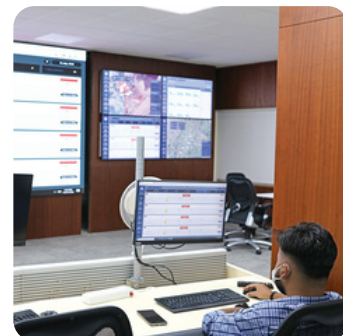


Drishti - Connected Mines: Real-time, Remote, Safe

With an objective to increase the operational equipment effectiveness and ore-to-metal index, Drishti is digitizing our mines and leading us to achieve global mine productivity benchmarks.

Sarathi - Connected Logistics: Robust, Dynamic

It has digitalized and automated our logistics supply chain with real time tracking to achieve secure transportation and faster turnaround time leading to better inventory planning & optimisation of working capital.

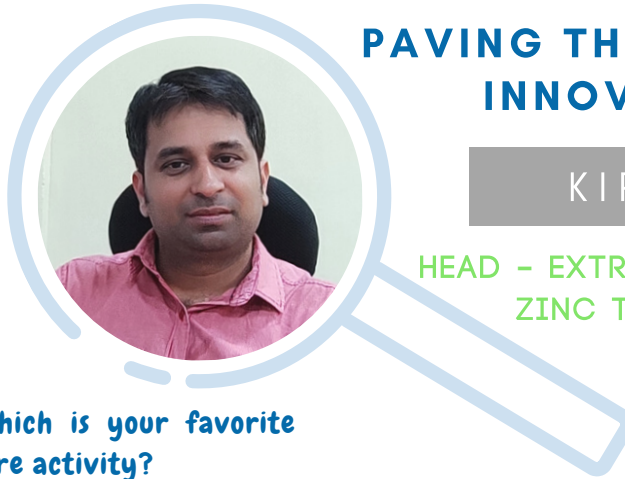


INNOVATION CAFES - OUR THINKTANK HUBS



You too can be an innovator!
Click here and come to our [Innovation Portal](#)
Submit your Ideas
Turn Thoughts into Reality

KNOW YOUR COLLEAGUES



PAVING THE WAY FOR AN INNOVATIVE FUTURE

KIRAN ROKKAM

HEAD - EXTRACTIVE METALLURGY
ZINC TECHNOLOGY CENTRE

Q: What inspires you?

A: Learning new things, connecting with people, overcoming challenges, finding smart solutions for solving problems

Q: Which is your favorite leisure activity?

A: Playing with kids and spending time with them gives me immense pleasure because they are always funny, jolly, bright and innovative.

Q: An incident that you feel was a turning point in your life

A: I was instrumental in the process development for HZL's first European patent 'Method for production of Potassium Antimony Tartarate by utilizing antimony bearing residues'. It is successfully commercialized and delivering business for our company. This is a global recognition for me as an inventor, and has made a huge positive impact on me.

Q: What is your mantra for success?

A: 3D - Determination, Dedication and Discipline

Q: What does innovation mean to you?

A: Implementing an idea to achieve a specific goal, and creating value and growth opportunity for both the company and the customer.

Q: A habit/culture that you would like to foster around you?

A: Positivity, forgiveness, composure and simplicity

Q: What is the goal that you have set for yourself as Head Extractive Metallurgy, Zinc Technology Centre?

A: Lead key R&D projects to support the business goals, Develop concepts, products and solutions by coordinating with smelter business units. Reduce the smelter COP by \$10 per MT metal production through R&D contributions. Convert all Zero Liquid Discharge (ZLD) plants to become Zero solid discharge (ZSD) fully and generate the revenue from the salt sale in next 12 to 18 months.

Q: A message for our readers

A: The main motive of technology center is to accomplish the business goals which help improve efficiency, find new customers, increase profits, cut down on the waste and minimize the carbon footprint. Innovation is in all of us and our company encourages creativity and thinking differently. I encourage all the young minds here to stay curious and keep sharing and working on new ideas, because an idea is just that, an idea, until you turn it into a reality.

THE CLICHED QUESTIONS

Q: If you were stranded on an island what 3 things will you want with you?

A: My Pet, Match Box and Music player

Q: Favorite Movie/ actor/ song

A: Athadu, Mahesh Babu, Vaalu Kanuladaanaa

Q: Biggest fear

A: Losing my uniqueness

Q: Favorite destination

A: New Zealand

Q: If you could have any superpower, what would it be?

A: Transform myself into whatever I want to be



CHANDERIYA LEAD ZINC SMELTER TO ENSURE 100 LAKH LITRE DRINKING WATER EVERYDAY FOR CHITTORGARH

WATER SECURITY

Our guiding principle has always been caring and giving back to the society. Chanderiya Lead Zinc Smelter (CLZS) team has come forward with the value of #HZLCares to ensure there is no water shortage for the communities around Chanderiya. CLZS inaugurated an 8.5 km pipeline from abandoned Banasti Mines to Ghosunda Dam which will supply 10 MLD drinking water everyday for the citizens of Chittorgarh.

District Collector, Chittorgarh - Mr. Tarachand Meena while inaugurating the pipeline appreciated Hindustan Zinc's efforts towards care for the community and especially the impact this initiative will have in tackling problems of availability of drinking water.



SPREADING AWARENESS ON VACCINATION THROUGH CHETNA RATH AMONG COMMUNITIES

WOMEN EMPOWERMENT

Under the umbrella of our Sakhi project, in convergence with Azim Premji Foundation, Chetna Rath was flagged off by Sakhi at Dariba and Zawar with an objective to spread COVID-19 vaccination awareness amongst community people. The vehicle covered over 50 villages twice a week, sensitizing the community through PA system and banners.



CELEBRATING INTERNATIONAL DAY AGAINST CHILD LABOR AT KAYAD

AWARENESS & SENSITIZATION



Kayad Mine team, under the Shiksha Sambal Project commemorated International Day Against Child Labor by organizing an informative guest lecture for more than 75 students in collaboration with the Ajmer Nodal Childline.

During the lecture, the students were sensitized about child labour, child rights and the role of Childline in ensuring their safety. Additionally, as a team activity, the students created posters to highlight the message against child labor.

EMPOWERING LIVES OF 2000+ FARMERS THROUGH SAMADHAN

FARM BASED SUSTAINABLE LIVELIHOOD

Under the SAMADHAN agriculture initiative, high quality seeds of maize, rice, soya beans, urad, till, and moong were distributed to farmers in Agucha, Dariba, Kayad, and Zawar. The farmers also participated in a special training on scientific techniques of sowing seeds to improve crop productivity and yield. Under the livestock initiative, two cattle health camps were organized in Agucha and Munji ka Kheda. These initiative by Hindustan Zinc engaged more than 2000 farmers across different locations to benefit the neighborhood agriculture community.



INTERNATIONAL YOGA DAY

HEALTH AND WELL BEING

On 21st June 2021, we celebrated International Yoga Day with Zinc Football boys, Shiksha Sambal students, and community members where yoga postures were demonstrated with the help of employee volunteers from the Dariba civil team.

Mrs. Pratima Mathur, Medical Officer, Yoga and Natural Health Research Centre, Ajmer, also led a session at the Kayad Mine. She emphasized on the benefits of balancing yoga and diet to prevent illnesses, especially in the current scenario.



STATE-OF-THE-ART 'FIELD HOSPITAL' SET UP AT DARIBA IN RAJASTHAN

The COVID Care hospital has 80 normal ward beds, 20 ICU beds with air conditioning facility, medical assistance and 24X7 Oxygen supply

COVID CARE

In the fight against the COVID-19 pandemic, a state-of-the-art, fully equipped COVID care field hospital at Dariba, Rajsamand was setup in a record time. This 8000 square meter hospital with an air-conditioned dome based on German technology has a capacity of 100 beds, including 20 ICU beds, to treat patients & provide them with essential COVID treatment and medical facilities.

The hospital was inaugurated by the Chief Guest - Mr. Arvind Kumar Poswal - District Collector, Rajsamand in the presence of Mr. Sudhir Chaudhary - SP, Rajsamand, Mr. Arun Misra - CEO, Hindustan Zinc along with senior government officials and employees of Hindustan Zinc. We are committed to fully support the Rajasthan government and local authorities in the providing priority medical care to the COVID-affected people.



A STEP BEYOND THE REGULAR

BREATH OF LIFE

Agucha

10 trainees of the Unarmed Security Guard from our SEDI Centre at Agucha joined the police stations at Bhilwara and Ajmer districts to help the authorities in COVID relief. They worked as Corona Warriors under the supervision and guidance of the local police authorities to ensure safety and security of the citizens.



Kayad

Through our Project Khushi, nutritious food is being provided to the children of anganwadis in Kayad. The flavoured porridge was specially distributed to identified malnourished children in order to eradicate the issue of malnourishment and protect them from COVID-19. Over a period of 2 months, 38 children with severe malnourishment were looked after and treated under the initiative.

Doswada

Essential 50 life saving medical equipment were handed over to the General Hospital at Tapi in Gujarat for the treatment of COVID patients.

An isolation centre to help prevent the spread of the virus in the community was also setup in the district for the local tribal villages.



BREAKING NEW GROUNDS AT PURVANCHAL BLOCK

NEW AVENUES

At Hindustan Zinc, we continuously explore opportunities to increase the efficiency of our operations through innovative, scientific and sustainable methods. Project Purvanchal is another step in this direction.



While exploring the ore blocks that were mined previously with the shrinkage stope method, we identified stopes that were not fully recovered. With mapping and tracing, correlations were made and surface and UG exploration machines were deployed and the Purvanchal project began its journey.

The Purvanchal Block will enable further opportunities to ramp up production of Balaria Mine. Additionally, by further exploring in the lower levels and with the addition of resources and reserves, it will open up more potential for Balaria in the near future.



A CULTURE OF CARE



Enhancing Mine Ventilation

A 40 Cum Chiller Unit at surface intake was successfully commissioned at SK Mine with an aim of enhancing underground mine ventilation. The chiller unit will now provide cool air at 12 degree centigrade and will also ensure a safer and more comfortable working environment.

#HeroesOfHZZL to the rescue!

A major fire broke out in Parax ABS, a huge factory in SIDCUL Industrial area and people were trapped. Our PMP's Fire & Safety team quickly responded to this emergency and supported the local administration to douse the fire and save lives. Our #HeroesOfHZZL were appreciated and applauded by the local authorities for their selfless service, preparedness and response management to the emergency.



ATM Service at the Doorstep

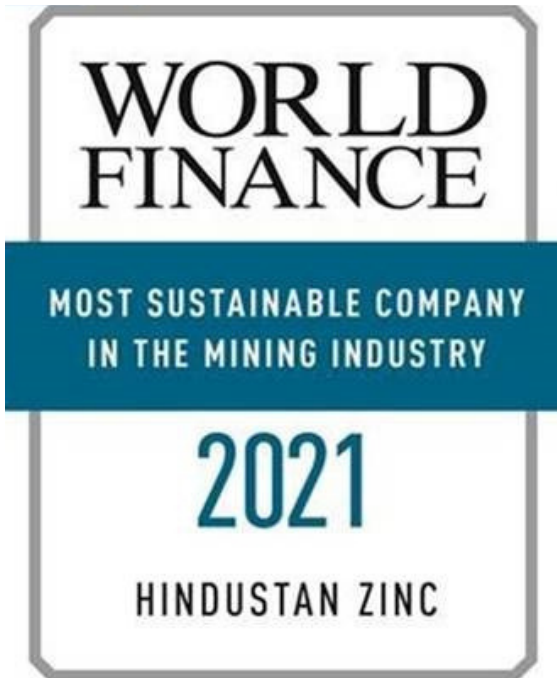
We are a 'people first' organization where the company takes care of even the smallest needs of its people. The company partnered with ICICI bank and has installed an ATM at the doorstep of its township at Udaipur. This ATM will not only make life easier for employees and their families but also for everyone in the area.

Celebrating Our Everyday Superheroes

National Doctor's Day was celebrated at Debari to appreciate the relentless services of the doctors and the medical team during the pandemic. A plant sapling was gifted to each doctor and medical staff as a token of gratitude.



GLOBAL LEADERS IN SUSTAINABLE MINING



MATTER OF PRIDE

It is a proud moment for us that we have been awarded the Most Sustainable Company in the Mining Industry by World Finance. This recognition has been given for our ESG disclosure, our ambitious Sustainability goals 2025, analysis of the environmental impact and responsible approach towards our business. It was also for our efforts towards GHG emissions reduction, water stewardship, circular economy, biodiversity conservation, zero harm, positive impact on local communities, diversity and equality and responsible sourcing.

OUR CAPTIVE POWER PLANTS WIN TRIPLE GOLD AT SEEM NATIONAL ENERGY AWARDS 2020

EXCELLENCE

This award recognizes our efforts towards improving energy efficiency and supporting India's journey towards managing climate change and sustainable development.

Hindustan Zinc bags 3 Gold for its Captive Power Plants at SEEM National Energy Management Awards!

Through innovative energy conservation and efficiency projects, these CPPs contributed to energy saving of 4 million units of electricity leading to carbon emission reduction of 12343 tCO₂e.

Congratulations to all the team members for their efforts in energy conservation and energy efficiency techniques, that display our commitment towards reducing carbon footprint.



ASSURANCE TO QUALITY AT EVERY STEP

MAINTAINING STANDARDS

NABL CERTIFICATE OF ACCREDITATION
 NATIONAL ACCREDITATION BOARD FOR TESTING AND CALIBRATION LABORATORIES
 CENTRAL LABORATORY, CHANDERIYA LEAD ZINC SMELTER, HINDUSTAN ZINC LIMITED
 has been assessed and accredited in accordance with the standard
 ISO/IEC 17025:2017
 "General Requirements for the Competence of Testing & Calibration Laboratories"
 for its facilities at
 PUTHOLA, CHITTOORGARH, RAJASTHAN, INDIA
 in the field of
TESTING
 Certificate Number: TC-6489
 Issue Date: 05/04/2021
 Valid Until: 04/04/2023
 This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
 (To see the scope of accreditation of the laboratory, you may also visit NABL website www.nabl-india.org)
 Name of Legal Entity: Hindustan Zinc Limited
 Signed for and on behalf of NABL
 N. Venkateswararao
 Chief Executive Officer

Rampura Agucha Assay Lab
 TC-9441TC-9441 - Ore & Mineral Testing
 ISO/IEC 17025

Chanderiya Lead Zinc Smelter Assay Lab
 TC-9409- FG CRL, RLC grade Lead metal & SHG Zinc Metal Testing
 ISO/IEC 17025

Zawar Mines Assay Lab
 TC-9401 - Ore & Mineral Testing
 ISO/IEC 17025

CRDL Coal Assay Lab
 TC-6987 - Solid Fuel / Coal Analysis
 ISO/IEC 17025

Pantnagar Metal Plant Assay Lab
 TC - 8850 - Zn metal SHG, Lead Metal CRL, Silver Metal
 ISO/IEC 17025

In our journey to maintain the highest standards of quality across our testing labs, we're pleased to share that the Assay Lab at Chanderiya Lead Zinc Smelter is the now the latest to be accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) with the standard ISO/IEC 17025:2017.

RAMPURA AGUCHA MINE WINS 'BEST APPLICATION & USES OF RENEWABLE ENERGY' AWARD

EFFICIENCY

Rampura Agucha Mine's innovative solar plant leveraged in-house engineering capabilities of the team to find a green solution that converted a dump yard into a treasure for the company and the environment. The 22MW solar project generated **48,083 MWh green energy** in FY21, contributing to **40% of RAM's total energy requirement** and leading to a **GHG saving of 45,528 tCO₂e**.



Kudos to the Agucha teams for their Green innovation that exemplifies Hindustan Zinc's commitment to Sustainable & Responsible Mining!

INDIAN FOOTBALL STALWARTS JOIN ZINC FOOTBALL!

Renedy Singh, Bembem Devi and Shaji Prabhakaran inducted to the ZF Advisory Board

FOOTBALL

Renedy Singh, former Indian Football Team Captain and President of Football Players' Association of India; Oinam Bembem Devi, Arjuna Awardee, recipient of the prestigious Padma Shri award and AIFF Women's Footballer of the Year award twice; Shaji Prabhakaran, President of Football Delhi and ex-South Central Asia Development Officer for FIFA have joined Zinc Football as part of the Advisory Board.



Renedy
Singh

Shaji
Prabhakaran

Bembem
Devi

WELCOME
to the Zinc Football family

#DeshKaSapnaGoalApna

The Zinc Football Advisory Board will provide invaluable guidance and counsel for the betterment of the Zinc Football initiative along with providing key inputs to the leadership team at Hindustan Zinc for the programme.

STRATEGY
Sustainability

Innovation and sustainability: setting global standards for responsible mining

Hindustan Zinc operates in the state of Rajasthan which faces the challenge of water scarcity. Hence it falls upon companies like Hindustan Zinc to lead and set an example when it comes to addressing the various challenges of sustainability by utilising digital technology and embracing innovation in all its operations



Arun Misra
CEO, Hindustan Zinc

The most important aspect of any sustainable company lies in its success in bringing relevant development to the communities that it gains from. Hindustan Zinc drives to conserve natural resources and adopt greener technologies wherever possible to meet its environmental footprint day-by-day. It is embedded on a digital transformation programme to drive a different way of working for a sustainable future, aimed at enhancing stakeholder value through exploration, innovation, safety, and sustainability, maintaining market leadership, and increasing customer delight.

Technology is the catalyst that is at the heart of making mining operations 'smarter', 'sustainable' and 'safer' by leveraging digital tools and processes that make operations intelligent, interconnected, and data-driven. Hindustan Zinc has increasingly been using technology for the automation of processes and has started integrating technology across the value chain to reduce waste, increase resource efficiency and drive up productivity while promoting the harnessing of renewable energy sources. Some of the emerging technology trends that we are fast integrating into our mines are in the areas of automation and remote operation, real-time data capture, telemetric data for predictive analysis, digital twins, drone, mine-to-mill process integration, and safety innovations.

Automation and remote operation use the mine's wireless network and allow the operator to perform the machine functions from a remote location. These functions include drilling, loading, remote bogging, traversing, and GPS-based navigation to increase the productivity, safety, and cost-efficiency of the process. Also, advances on the internet of things (IoT) technology are enabling a connected network of low-

cost, highly capable sensors to capture data in real-time and enable integrated planning, control, and decision support in our mines at Hindustan Zinc. Digital twins (digitised geological, engineering, and asset data) is an emerging technology that enables the creation of a digital model of the physical environment, constructed using geological, engineering, and asset information. This can be continuously updated with data from sensors and location-aware mobile devices enabling robust, real-time, data-driven decision-making. Additionally, the data collection, inspection, check control, condition, and safety monitoring, new and improved unmanned drones are also being used. Another noteworthy technological intervention that we have successfully utilised in our operations at Hindustan Zinc is the mine-to-mill process integration technology that maximises mine-to-mill material utilisation. We are continually adopting digital technologies and advanced process controls in our mills and smelters for process capability improvement. The organisation firmly believes that data is the new gold and has outlined a holistic strategy to digitise every aspect of the entire value chain of the business. The holistic view aims to upgrade, process, and connect key critical aspects of underground mines, mills, smelters and power plants through best-in-class technology while ensuring data security and data loss prevention measures are in place. The organisation has put all its effort into maximising productivity, efficiency, and equipment reliability through proven digital technologies. There are dedicated teams, and budgets allocated in line with business needs.

We are consciously working with our partners towards building and adopting these capabilities, because we look at it as an investment into the future of mining, where sustainability, safety, efficiency, and innovation are an integral part of operations. Increasingly, digital solutions are being developed and rolled into the offerings of the equipment manufacturers and service providers too.

Taking a holistic view
Hindustan Zinc is built on inherently sustainable principles. We believe in driving long-term sustainable economic development and value creation for our stakeholders by protecting the health and safety of our people and community, minimising the environmental impact of our operations, respecting human rights, and sharing benefits with the community. Our vision is to be the world's largest and most advanced zinc, lead and silver company.

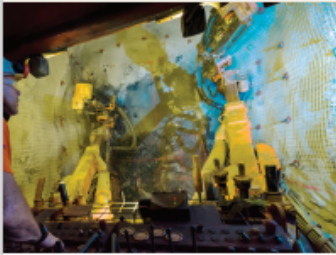
We have taken a holistic view in setting our sustainability goals for 2025, aligning them with UN Sustainable Global Goals. Following a formal materiality analysis process and extensive internal and external stakeholder dialogue in 2020, we identified the high priority material issues, and subsequently set ambitious sustainability goals for 2025. Over the next few years, we will focus on expanding the work towards creating positive changes.

An open goal for sustainability
Our 2025 targets include reducing our CO2 emissions, passing on our sustainability standards to our suppliers, reducing our dependency on freshwater, moving towards zero waste to landfill, improving the livelihoods of one million people and increasing diversity and inclusion in the workplace. With our goals, we are pursuing a comprehensive approach that includes the entire product life cycle, considering social, environmental, and economic aspects. Furthermore, we want to share our progress transparently with our stakeholders.

We have a well-structured sustainability governance strategy in place to drive our goals and our own executive sustainability committee, which is responsible for formulating sustainability strategy and long-term goals and targets. It plays a strategic role in all business



Working at Hindustan Zinc operations



Water scarcity and the non-availability of water is a key risk for our business.

OUR VISION IS TO BE THE WORLD'S LARGEST AND MOST ADVANCED ZINC, LEAD AND SILVER COMPANY

The sustainable journey so far
We have found that sustainability is vital to foster operational excellence and ensure business growth. By adhering to the Vedanta Sustainable Development Framework we have managed to integrate sustainability throughout our business management and our operational drivers of governance, safety, and social responsibility. Responsible sourcing, building strong relationships, strategic communication, as well as adding and sharing value, are the cornerstones of our sustainability framework.

Our policies, procedures, and best practices are all aligned to this strategy, which is why our employees have a clear understanding of their role in driving business success. With this approach, we predict a sustainable future for our business operations, one in which we continue to meet our growth targets and create long-term value for all our stakeholders. Protecting and enhancing biodiversity is also an integral part of Hindustan Zinc's commitment to sustainable development. The company has a separate policy on biodiversity and stays committed to preventing risk on biodiversity throughout our business. Renewable energy is a huge thrust area for us at Hindustan Zinc. We aim to be self-sufficient and green in fulfilling our energy requirements so as not to put any stress on the energy-starved state of Rajasthan, which plays host to a significant part of our operations. Our portfolio of over 268.54 MW of renewable energy generation is testimony to our philosophy of growing responsibly. We are already a significant wind power producer in India with a capacity of 273.1 MW across five states. We have been continually prioritising and emphasising the need to ensure compliance and improve our social and environmental performance. We have established stringent management systems centred on safety, health, the environment, and social performance. Our resilience was especially tested during the COVID-19 pandemic when we emerged with the highest ore and MPC production levels amongst returns to shareholders, all while remaining committed to our sustainable path.

Hindustan Zinc is on a journey, one which focuses on nurturing leaders, conserving resources, improving health, safety, and wellbeing. We look to be the example that others wish to emulate in our environmental performance, enhancing the quality of life, and fostering innovation.

STRATEGY
Sustainability

WORLD FINANCE MAGAZINE

Ex-India captain Renedy, Bembem join Zinc Football

TIMES NEWS NETWORK

Udaipur: Former India football captain Renedy Singh and one of the best-known woman footballers from the country Oinam Bembem Devi have joined Rajasthan's Zinc Football initiative, which operates a fully residential state-of-the-art academy at Zawar Mines near here.

Both Renedy and Bembem will become part of Zinc Football's advisory board along with Football Delhi president Shaji Prabhakaran, a statement from the organisation read. The advisory board, consisting of the three experts at its core, will be providing their invaluable guidance and counsel for the betterment of the Zinc Football initiative, backed by Hindustan Zinc.

The advisory board will be co-chaired by Hindustan Zinc CEO Arun Misra and Vedanta Football president Annanya Agarwal. The introductory meeting was conducted virtually between the advisors and Zinc Football team on Thursday, in view of the ongoing coronavirus pandemic.

Outlook THE NEWS SCROLL

Vedanta's Hindustan Zinc Sets-up State-of-the-Art Field Hospital to Fight Against COVID in Rajasthan

(Eds' Disclaimer: The following press release comes to you under an arrangement with Business Wire India. PTI takes no editorial responsibility for the same.) Udaipur, Rajasthan, India: Business Wire India • Mr. Arun Kumar Poonwal - District Collector, Rajasthan inaugurated Hospital in the presence of Mr. Arun Misra - CEO, Hindustan Zinc, other government officials and HZL employees • New field hospital in Darba, Rajasthan will have a capacity of 100 beds for Covid patients • The Covid Care hospital will have 80 manual ward beds, 20 ICU beds with air conditioning facility and medical assistants to the fight against COVID-19 pandemic, India's leading metals and oil and gas company, Vedanta, through its flagship company Hindustan Zinc and as part of Anil Agarwal Foundation Initiative has inaugurated state-of-the-art fully equipped COVID care field hospital at Darba, Rajasthan. This 800 square meter hospital has air-conditioning dome based on German technology with a capacity of 100 beds including 20 ICU beds to treat patients & provide them with essential COVID treatment and medical facilities. The hospital was inaugurated by the Chief Guest - Mr. Arun Kumar Poonwal - District Collector, Rajasthan in the presence of Mr. Sudhir Chaudhary - SP, Rajasthan, Mr. Arun Misra - CEO, Hindustan Zinc along with senior government officials and employees of Hindustan Zinc. Vedanta Limited has come out firmly in support of the Rajasthan government in its efforts to provide priority medical care to the Covid-affected people. The field hospital is situated in Hindustan Zinc's DAV School playground at Darba where world-class technology has been adopted ensuring strict adherence to safety. While sharing his thoughts during the ceremony, Mr. Arun Kumar Poonwal - District Collector, Rajasthan said, "In these distressful times, I appreciate the efforts of Vedanta, Anil Agarwal Foundation and Hindustan Zinc in coming up with 100 bed field hospital in a record time. This hospital will play a crucial role as Darba is centrally located from all nearby districts of Rajasthan, Chittorgarh and Udaipur. This state-of-the-art facility has all the basic & advanced medical amenities available to ensure best treatment to COVID patients. With this Vedanta Cares field hospital, we are ready to face & fight 3rd wave of Pandemic." Mr. Sunil Duggal - Group CEO, Vedanta said, "COVID-19 has affected lives of millions across the country and we at Vedanta Group continues to stand united with Nation in these unprecedented times. With strong probability of 3rd wave of pandemic, our state-of-the-art COVID field hospital in Rajasthan ensures support in providing medical care to ailing patients in Rajasthan. We have pledged to support the central and state governments in providing quality care to those affected by the virus. With

Hindustan Zinc awarded as Most Sustainable Company in the Mining Industry in 2021

The company said that it is committed towards reducing CO2 emissions, water conservation, and biodiversity management by innovating and adopting new greener technologies



UDAIPUR: Hindustan Zinc (HZL), the leading producer of Zinc, Lead, and Silver in India has been awarded the Most Sustainable company in the mining industry by World Finance. The company is committed to smart, safe, and sustainable mining operations. Hindustan Zinc strives to conserve natural resources and adopt greener technologies wherever possible to ensure its environmental footprint shrinks year on year.

TIMES OF INDIA

OUTLOOK INDIA

INDIA CSR

(TO VIEW MORE CLICK ON THE IMAGE)



जिंक की आगूंचा इकाई को ऊर्जा संरक्षण में मिला सम्मान

हराड़ा | हिंदुस्तान जिंक की रामपुरा-आगूंचा खान के 22 मेगावाट सोलर प्लांट ने सीआईआई के नेशनल एनर्जी एफिशिएंसी सर्किल कॉम्पिटिशन के 5वें एडिशन में पुरस्कार जीता है।

गोल्ड स्टैंडर्ड के इस सोलर प्लांट ने वित्तीय वर्ष 2021 में 45 हजार 528 टन कार्बन उत्सर्जन में कमी का योगदान दिया। वेस्ट टू वेल्थ की पहल के तहत वेस्ट यार्ड पर बने प्लांट ने यह पुरस्कार अपने नाम किया। इस उपलब्धि पर जिंक के मुख्य कार्यकारी अधिकारी अरुण मिश्रा ने कहा कि बेहतर और हरित भविष्य के लिए हमने नवाचारों को सशक्त बनाया है।

सोलर प्लांट इनोवेटिव विचारों और तकनीक का सटीक उदाहरण है। हम वर्ष 2025 तक



के 0.5 मिलियन टन के कार्बन उत्सर्जन को कम करने की ओर अग्रसर हैं।

जिंक के इंजीनियर प्रफुल्लकुमार पटेल, विनोथ जरोली, राजेश चौधरी और उपेंद्र तोतामल्ला की टीम ने बंजर भूमि का उपयोग करने के लिए योजना बनाई और स्वदेशी रूप से 22 मेगावाट का सोलर प्लांट स्थापित किया। यहां उत्पादित 48 हजार 083 हरित ऊर्जा इकाई की ऊर्जा आवश्यकता का 40 प्रतिशत है और 45 हजार 528 कार्बन

बनस्टी माइंस से घोसुंडा बांध में प्रतिदिन 100 लाख लीटर पानी पहुंचेगा



साढ़े आठ किमी की पाइपलाइन का शुभारंभ

बुझ सकेगी शहर की प्यास

पत्रिका न्यूज नेटवर्क patrika.com

चित्तौड़गढ़. बनस्टी माइंस से घोसुंडा डेम तक पाइपलाइन से शहर की प्यास बुझ सकेगी। पाइप लाइन का विधिवत उद्घाटन जिला कलक्टर ताराचंद मीणा एवं अतिरिक्त मुख्य अभियंता पीएचईडी ललित करोल एवं हिन्दुस्तान जिंक के उप मुख्य प्रचालन अधिकारी स्मेल्टर्स सी चंद्र ने पूजा अर्चना कर पंप का बटन दबा कर किया।

इस अवसर पर मुख्य अभियंता पीएचईडी शंजीराम, सहायक अभियंता सुरेश सेठी, मुख्य अभियंता एबीवीएनएल के.आर मीणा, सहायक अभियंता सीवी सिंह, हिन्दुस्तान जिंक से कमोद सिंह, कामाख्या सिंह, सुनिल साबला उपस्थित थे। इस अवसर पर मीणा ने कहा कि हिन्दुस्तान जिंक के सहयोग से बिछावी गयी इस पाइप लाइन के माध्यम से प्रतिदिन 10 एमएलडी पेयजल घोसुंडा बांध में पहुंचाया जाएगा। जिससे पानी की उपलब्धता



चित्तौड़गढ़ में घोसुंडा डेम से शहर को पानी की शुरुआत करते हुए।



चित्तौड़गढ़ में घोसुंडा डेम से शहर को पानी की शुरुआत करते जिला कलक्टर एवं अन्य।

वासियों की पेयजल की नियमित आपूर्ति संभव हो सकेगी। हिन्दुस्तान जिंक के उप मुख्य प्रचालन अधिकारी सी चंद्र ने कहा कि हिन्दुस्तान जिंक हमेशा आमजन एवं जिला प्रशासन के सहयोग के लिए तत्पर है। सीएसआर के तहत बिछाई गयी इस पाइप लाइन से भविष्य में भी शहर में पेयजल संकट के समय आपूर्ति हो सकेगी। शहर की पेयजल आपूर्ति का मुख्य स्रोत घोसुंडा बांध में वर्तमान में लगभग 40 एमसीएफटी पानी उपलब्ध है वहीं बनस्टी की अनुपयोगी तीन माइंस में 55 एमसीएफटी पानी है जिसे पाइप लाइन

प्रतिदिन औसतन 100 लाख लीटर पानी पहुंचाने की योजना है। जिसके बाद शहर को अभी 48 घंटे में होने वाली जलापूर्ति व्यवस्था जल्द नियमित होने की उम्मीद है। जिला कलक्टर ताराचंद मीणा की पहल पर हाईकोर्ट से अनुमति लेकर बनस्टी से घोसुंडा तक योजना क्रियान्वित किया गया। बनस्टी माइंस से घोसुंडा बांध तक साढ़े आठ किमी पाइपलाइन का कार्य हिन्दुस्तान जिंक ने जिला कलक्टर के निर्देशन में पीएचईडी के सहयोग से किया। बनस्टी माइंस की खदानों में 5 पंप एवं फ्लोटिंग डक की सहायता से

DAINIK BHASKAR

RAJASTHAN PATRIKA

हिंदुस्तान जिंक द्वारा टीकाकरण अभियान में अब तक 20 हजार से अधिक कर्मचारियों और परिवार के सदस्य लाभान्वित

अजमेर, भीलवाड़ा, चित्तौड़गढ़, राजसमंद और उदयपुर जिलों की कंपनियों की इकाइयों में वृहद स्तर पर टीकाकरण अभियान जारी

चित्तौड़गढ़। हिंदुस्तान जिंक द्वारा कंपनी से जुड़े लोगों के स्वास्थ्य और उनके हित को सुनिश्चित करने की अपनी प्रतिबद्धता को पूरा करते हुए, 100 प्रतिशत कर्मचारियों, उनके परिवार जनों और व्यावसायिक भागीदारों के लिये वृहद स्तर पर टीकाकरण अभियान प्रारंभ किया है। इस अभियान के तहत प्रदेश के 5 जिलों में कंपनी की इकाइयों में कार्यरत एवं उनसे जुड़े 20 हजार सदस्य अब तक टीकाकरण से लाभान्वित हो चुके हैं।

हिन्दुस्तान जिंक के मुख्य कार्यकारी अधिकारी अरुण मिश्रा ने भी इस अभियान के दौरान टीकाकरण



की दूसरी खुराक ली। उन्होंने कहा कि 'हम अपने कर्मचारियों, अनुबंधित

कर्मचारियों और उनके परिवारों को सुरक्षित और बेहतर भविष्य के लिये सदैव तत्पर हैं। टीके की सुरक्षित और आसान पहुंच सुनिश्चित करने के लिए, हमने अपने सभी कर्मचारियों, व्यावसायिक भागीदारों के कर्मचारियों और उनके परिवारों के लिए सभी निर्धारित दिशानिर्देशों और सावधानियों का पालन करते हुए टीकाकरण शिविर आयोजित किए हैं। हमारी चिकित्सा टीम हमेशा बेहतर संभव चिकित्सा उपचार एवं परामर्श प्रदान करने के लिए उपलब्ध है। मैं उन सभी से आग्रह करता हूँ कि सभी पात्र व्यक्ति टीकाकरण अवश्य करवाएं।

महामारी के दौरान हिंदुस्तान जिंक ने विभिन्न अनिवार्य मानदंडों और विनियमों का पालन किया है। कंपनी ने महामारी की प्रति जा के रूप में, कर्मचारियों के लिए सुरक्षित कार्य वातावरण सुनिश्चित करने के लिए काम करने के तरीके को बदलने के लिए विभिन्न उपाय भी किए हैं। कंपनी ने समूह कोरोना कवच पोलिसी की शुरुआत की है जिसमें राजस्थान और उत्तराखंड में पंतनगर में 25800 से अधिक अनुबंधित श्रमिक शामिल हैं। कंपनी द्वारा अपनी इकाइयों में सुरक्षित टीकाकरण के लिये हिन्दुस्तान जिंक के चिकित्सालयों में एवं

अन्य स्थानों पर कम समय में सुविधाजनक व्यवस्थाएँ की गयी हैं। टीकाकरण चिकित्सालय की कुशल टीम द्वारा किया जा रहा है। हिन्दुस्तान जिंक, वेदांता के चेयरमैन के गिर्विंग बेक टू कम्यूनिटी के विचार के लिए प्रतिबद्ध है, महामारी के खिलाफ राहत एवं बचाव के अपने प्रयासों में राजस्थान सरकार के साथ प्रतिबद्ध है। इस टीकाकरण अभियान का उद्देश्य न केवल अपने कर्मचारियों और उनके परिवारों को सुरक्षित बनाना है, बल्कि प्रशासन को महामारी की चुनौतियों का अधिक प्रभावी ढंग से मुकाबला करने में मदद करना है।

DAINIK BHASKAR

(TO VIEW MORE CLICK ON THE IMAGE)





Dear Employees,
Hope you enjoyed reading the July 2021 edition of Zinc News.

Now it is time for some quiz around it.

The correct answers will automatically enter a lucky draw and 3 winners will each get an exciting prize!

WINNERS OF LAST MONTH'S ZINC NEWS QUIZ



HIMANSHU SHARDA, DARIBA

ANKIT TRIPATHI, ZAWAR

MUKESH KUMAR TELI, CHANDERIYA

Congratulations! We will contact you soon regarding your prizes!

FROM THE EDITOR'S DESK

Dear Readers,

This edition is themed around some of the pioneering Innovations that we at Hindustan Zinc have incubated in-house. It salutes the spirit of curiosity and the drive to think out of the box and do things differently to improve our everyday working. It is a celebration of our intellectual capital that is transforming our business and making us stand apart as leaders that set global benchmarks.

Hindustan Zinc has a legacy of being pioneers on many fronts since its inception and we continue to collectively take this culture forward as we innovate and pioneer future legacies.

So to all the budding inventors, innovators, thinkers, entrepreneurs and the dreamers - Keep Innovating & Inspiring.

Take Care. Stay Safe.
Warm Regards,
Dipti Agrawal,
Head - Corporate Communication

Follow HZL on Social Media by clicking these icons:

