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President's Message.....

Dear Members,

Greetings...

I am very happy to state that the preceding month was full of activities and learnings for our members and delighted to share that:

- Our Bhubaneswar Chapter had organized a “Knowledge Sharing Session” on 10th August at Chrome Valley Club, Sukinda Chromite Mine of Tata Steel Mining Limited in physical mode. This session covered all the vital aspects of mine, machinery and fleet maintenance themed on **“Best Practices of Mechanical Maintenance”**.
- Two-day Training Cum Workshop on **“Remote Sensing, GIS & Drone Survey”** was conducted successfully on 9-10 September by the Jaipur Chapter at the Mining Welfare Centre. Mining Engineering, Geology and Survey professionals, students of Mining Engineering, participants from Rajasthan, Haryana and Gujarat attended the training program.
- A one-day workshop was organized on 10th September at “Tarangini”, UltraTech Cement Limited, APCW, Tadipatri by Rayalaseema Chapter, in association with Datamine International Limited, Smartchem Technologies Limited and Garware Technical fibers.
- Rajasthan Chapter-Jodhpur organized a Field excursion cum Workshop on 10th September for students & members of MEAI and other professionals and made a provision to visit the large Opencast Mine of M/S Shree cement Limited.
- As a part of our MEAI TECH SERIES (MTS) program, **“Innovation for better productivity in Gold Exploration and Mining Sector in India”** by Dr. Prabhakar Sangurmath was conducted on 17th September. The presentation was very interesting and well received with good participation and interactions. MTS is a continuous program which is held every month. Request all the mineral industry professionals to utilise this opportunity.
- Our Belgaum Chapter had organized a five-day National Level workshop on Natural Disaster Management: issues & Challenges on 21-25 September. Overwhelming response from the participants was seen at this workshop.
- Bellary-Hospet Chapter Conducted a nature walk and plantation drive, involving MEAI members & families. Both the events witnessed huge participation from the members, who got an opportunity to share lighter moments with families and friends. I appeal to all Chapters leadership to organize such events also for members' wellbeing and allow the members to spend quality time with families.
- Happy to share that we have successfully completed the **MPDP- 2 Course** from 9th September to 25th September. There is fantastic response from participants to this program and the participants wished to attend such programs if held regularly.

It gives me immense pleasure to share the upcoming event announced by Ballary-Hospet Chapter about organizing a one-day workshop on Explosives & Blasting Techniques, Drilling Technology and Best Practices for the benefit of mining mates, blasters working in quarries and various iron ore, limestone mines etc.

I congratulate all the Chapters for their activities in all areas. Such activities will create awareness on technical updates and help to attain the objectives of MEAI and encourage other Chapters to improve themselves and create new benchmarks.

I request our members to participate in these programs in large numbers and make them a grand success.

Wish you all happy Dasara and Deepavali.

Regards,

K. MADHUSUDHANA
President



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EDITOR'S DESK



Dr. P.V. Rao
Editor, MEJ

This is an abridged version of an article entitled 'Attracting and retaining the next generation of mining and minerals talent' published by John Vagenas FAusIMM in the AusIMM August 2022 issue.

The international mining sector is facing a growing challenge when it comes to attracting and retaining the next generation of skilled and talented workers. Why is this happening and what steps should mining and minerals organisations be taking to attract the next generation of talent, and closing the growing skills gap?

A key reason is the mining sector's reputation as being dated and unsustainable, and lagging with its digital transformation – an issue that needs to be addressed if the sector is to thrive into the future. Rutendo Munatsirei, former co-editor of Mining.com, wrote in a LinkedIn article that what we do know about mining is shaped by news headlines, which often highlight the negative socioeconomic impacts and environmental concerns in the industry. So, in general, mining is not a popular topic of conversation among young people. McKenzie suggests that Younger generations have become more interested in purpose-driven work, and hold strong views about many of the environmental issues the industry is struggling to address. To address the growing problem of finding and retaining talented and committed young workers, some key steps can be taken by the organisations.

Environmental, Social and Governance (ESG) issues have become increasingly important the world over, both broadly and in the mining and minerals sector. In fact, in a recent global report, 45 per cent of mining decision-makers said ESG issues represented the biggest risk to the sector today – far greater even than issues relating to Covid-19. EY's most recent report in the sector validates this sentiment, with the majority of mining and minerals executives interviewed between June and September of 2021 saying ESG was their number one risk, followed by decarbonization and Licence to operate. Increasingly, mining and minerals companies are being called on to improve their ESG capabilities — enhancing their disaster management, improving worker protection and health, and demonstrating greater care to the communities in which they operate. To attract and retain young people – and in fact, utilize their skills to reverse this trend – mining and minerals organisations need to proactively demonstrate their commitment to ESG. A key part of this is investing in digital tools that enable the organisations to accurately measure – and subsequently reduce – emissions. This will play a key role in overcoming these negative impressions, and ensuring that young, talented people are drawn into establishing and retaining careers in the mining sector.

As well as a focus on ESG performance, it's also becoming critically important that mining and minerals organisations invest in modern and robust digital tools – both to improve their overall operating efficiency and to attract and retain young, technologically astute talent. Mining and minerals processing firms are under pressure right now from customers, stakeholders and regulators to be part of what's known as 'Industry 4.0' – or the 'fourth industrial revolution' – a term that refers to the digital transformation of industries like mining, processing and manufacturing. In a society where our social currency is heavily reliant on trends and likes, there is not enough publicity about major technological developments in the industry. The lack of talented people is a real obstacle to this digital transformation.

The International Council of Mining and Metals (ICMM), in a report in 2021, suggests that 73% of companies identified skills gaps in the local labour market as the biggest barrier to the adoption of such technology, and that an average of 48% existing employees would require reskilling/upskilling in the next four years to meet the evolving skills required for the tasks they would have to perform. For bright young people with specialized skills, mining and minerals should be seen as a chance to drive positive change.

As well as attracting new workers, it's also imperative that organisations focus on retraining and developing the skills of their existing workforce. Of the companies recently surveyed by the ICMM, 90% said they were likely or highly likely to adopt robots and non-humanoid technology; internet of things (IoT) and connected devices; and big data analytics in the next four years. As a result, it's predicted that the average employee's skillset will change by 40%, and most companies will expect existing employees to pick up skills on the job. To keep employees loyal and retained, providing high-quality, and ongoing learning and development opportunities is vital.

- Editor

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NEWS FROM THE MINING WORLD

► **Coal ministry to e-auction 10 reserves on Sep 13 for commercial mining**

Till now, the Coal Ministry has auctioned 43 coal mines with peak rate capacity of 85.4 million tonnes per annum

The Coal Ministry will launch e-auction of 10 reserves on September 13 for commercial mining, out of which eight blocks would be put up for auction on Tuesday, while two reserves will be put on offer on September 14, official sources said. They also said that technical evaluation of bids has been completed, thus clearing the way for e-auction of 10 coal reserves for commercial mining purposes.

Till now, the Coal Ministry has auctioned 43 coal mines with peak rate capacity of 85.4 million tonnes per annum. Meanwhile, the total peak rate capacity of 10 reserves, which would be put up for auction for commercial mining on September 13, is 39.31 million tonnes per annum, sources said.

Earlier on June 27, the ministry had said that it had received 38 bids during three rounds of commercial coal mines' auctions. In 2020, the Prime Minister had launched auction of 41 coal reserves for commercial mining.

IANS, BS, New Delhi | September 12, 2022

► **Centre working on enhancing mines sector output in GDP to 2.5% by 2030**

Centre has taken various measures with regard to Ease of Doing Business to increase the contribution of mines and minerals sector towards the country's GDP to 2.5% by 2030, said Pralhad Joshi.

The Centre has taken various measures with regard to Ease of Doing Business to increase the contribution of mines and minerals sector towards the country's GDP to 2.5 per cent by 2030, Union Coal, Mines and Parliamentary Affairs Minister Pralhad Joshi said on Friday. He addressed a two-day National Conclave on Mining Ministers here to deliberate on the ambitious target.

"The intention of this conclave is that we should in coming years up to 2030, under the guidance of Prime Minister Narendra Modi ji, other than coal and petroleum, add 2.5 per cent to the GDP of the country. Now, other than these two -- coal and petroleum -- it is 0.9 per cent," he told reporters after the inaugural session.

The Prime Minister has given the target of 2.5 per cent to be achieved by 2030, he said. "...we want to achieve it before 2030. For that, we have taken lot of measures as far as Ease of Doing Business is concerned and ease of investment is concerned," the Union minister said. Observing that the states are the ones that would implement on the ground whatever policies and laws are made at the Centre, he said the conclave has been organised in line with the central government's philosophy of 'Sabka Saath, Sabka Vishwaas'. It is the first such conference where ministers and officials from states are participating and the states would make individual presentations, Joshi said.

The Prime Minister has said the country should become developed by 2047 and Modi's clarion call is that the situation of importing goods despite the availability of raw materials and minerals in the country should go away, he said. After agriculture, mines and minerals sector can provide employment and also generate revenue on a large scale, he said.

"For Atmanirbhar Bharat, Atmanirbhar minerals are needed," Joshi said, adding that this conclave has been organised for that purpose.

Press Trust of India, Hyderabad | September 9, 2022

► **Chhattisgarh govt chalks out strategy for exploring rich minerals**

Till now, more than 100 potential mineral blocks have been identified on the basis of exploration taken up by government agencies in Chhattisgarh.

Endowed with rich minerals, Chhattisgarh is working out an extensive plan to explore high-value minerals with a focus on lithium. Recent surveys have indicated lithium deposits in the central and southern regions of Chhattisgarh. According to officials, work is going on in full swing to complete the formalities and extract lithium, given the demand for the mineral. The state is stressing the need to adopt green technology to explore minerals as well.

"The Geological Survey of India (GSI) has identified a Lithium Block in Katghora-Guchapur area of Korba district, and the reconnaissance survey hints at deposits of lithium with high concentration," said Anurag Diwan, joint director in the Chhattisgarh Directorate of Mines. Lithium blocks have also been traced in and around Tongpal, Govindpal, Chitalnar and Puspall areas of Sukma district in Bastar, Diwan said. The area can be explored for lithium-bearing pegmatite. Surveyors found lepidolite, a lithium-bearing mineral, Diwan added.

In the Korba belt, analytical results indicate significant mineralisation of rare earth elements (REE) and other rare metals. Similarly, a reconnaissance survey for gold and associated sulphide mineralisation in Barjor area of Jashpur district reveals the anomalous gold value in the bedrock sample.

"Our priority is to assess the availability and quantity of high-value minerals like lithium, tin, gold, copper, nickel and diamond using the latest technology," Diwan said. Lithium is used in the process of making glasses, ceramics and pharmaceuticals, besides aluminium and magnesium alloys. But the highest potential for growth is in the battery market, where lithium is used as electrode and electrolyte material in lithium disposable batteries and in lithium-ion rechargeable batteries.

The mining department recently organised a conference to design a strategy regarding the auction of mineral blocks and exploration of high-value minerals available in the state. Detailed deliberation was held with the stakeholders, both from the public as well as the private sector, to make Chhattisgarh a hub of high-value minerals in the country.

Till now, more than 100 potential mineral blocks have been identified on the basis of exploration taken up by government agencies in Chhattisgarh. The state government had issued a tender inviting notices for 40 mineral blocks of minerals like gold, iron Ore, limestone and bauxite. As many as 15 blocks have been successfully auctioned.

R Krishna Das, BS, Raipur | September 8, 2022

► **Rajasthan announces amnesty scheme for mining leases up to Mar 31, 2021**

The mines department's Arrears and Interest Waiver Scheme, 2022, will be applicable to the outstanding dues of those in the business of minor minerals.

The Rajasthan government has announced an amnesty scheme for miners. The mines department's Arrears and Interest Waiver Scheme, 2022, will be applicable to the outstanding dues of those in the business of minor minerals. This scheme is being implemented on mining leases, quarry licences, dead rent on a temporary work permit for river sand, royalties, penalties, etc up to March 31, 2021.

Mines Minister Pramod Jain Bhaya said with this scheme, the state government's outstanding revenue for years would be collected. "This will save time and money, which otherwise would have been spent on collection," the minister said, adding that the manpower

deployed for collection could be utilised in productive work. He said for interest waiver, a maximum relief of 90 per cent and a minimum of 40 per cent on the principal in different slabs would be given in accordance with the outstanding period.

For defaulters who have deposited the principal and only have the outstanding interest to pay, the interest amount can be waived. More than 1,000 cases of this nature are there and the state is expected to get Rs 50-60 crore from them.

Mines and Petroleum Department Additional Chief Secretary Subodh Agarwal said this scheme would be on for six months. "To get the benefit of this scheme, defaulters will have to deposit the prescribed amount. This scheme will not be applicable to the amount to be paid to the District Mineral Foundation Trust (DMFT), or anything coming within the purview of the National Green Tribunal or any other competent court ..."

The scheme takes into account the amounts outstanding for the period from March 31, 1990, to March 31, 2021. The waiver can go up to 90 per cent of the outstanding amount till March 31, 1990. It will be 40 per cent of what was due between March 31, 2010, and March 31, 2021.

Anil Sharma, BS, Jaipur | September 1, 2022

► **Chile launches plan to boost investment to address weakened economy**

Chile's government launched a plan on Monday to promote investment into 2023 that includes an array of tax breaks for the world's largest copper producing nation at a time when its economy is faltering.

In a news conference alongside President Gabriel Boric, Finance Minister Mario Marcel said the package aims to boost investment by at least five percentage points during 2023. "This 'Invest in Chile' plan brings together management efforts, public resources and regulatory changes, all of which can be implemented quickly," Marcel said. "This leads us to believe that we will be able to see most of its effects during 2023."

The plan includes public investment, better access to financing, and promotes private investment through tax benefits. These includes a \$500 million tax credit fund for green businesses that have a "high multiplying effect," an extension of a reduced tax rate for small businesses and instant depreciation mechanisms for all of 2023.

New copper mining projects will also be exempt for five years from an ad-valorem component that was proposed

in a new mining royalty. That would have placed a tax on the value of a mine's production. The government is also planning to reopen foreign investment offices in Europe and North America while setting up public-private working groups in sectors such as construction, energy, transport and mining.

This includes greater public safety coordination, something the mining industry has asked the government to address after reporting a spike in violence that has hurt operations in northern Chile. Last week, the Central Bank said it expects investment to fall by 3.3% this year and 4.7% in 2023.

In its most recent Monetary Policy Report, the bank said the economy will grow this year but will face a more complex scenario in 2023 with a contraction of between 1.5% and 0.5%.

Reuters | September 12, 2022

► **Indonesia accounts for over 50% of deforestation caused by large-scale mining**

More than half of all tropical *deforestation* directly attributable to industrial mining takes place in Indonesia, according to new research conducted at Clark University and Vienna University of Economics and Business.

In a paper published in *Proceedings of the National Academy of Science*, the team behind the study looked at the effects of large-scale mining in the tropical forests of 26 countries and found that Indonesia accounted for 58.2% of the deforestation caused by mineral extraction operation

The researchers overlapped the geographic coordinates of industrial mines in operation from 2000 2019 with forest loss data from the Global Forest Change dataset for the same period. The data covered 26 countries representing 76.7% of the total tropical deforestation observed during the 19 years under review. Coal extraction in the Indonesian province of East Kalimantan drove the mining-related deforestation in the country.

Other areas that stood out were the Brazilian state of Minas Gerais, where deforestation from iron ore and gold mining was clearly visible in the satellite data, as were damages caused by bauxite and gold mining in Ghana and Suriname.

Indirect impacts

According to the scientists behind the study, industrial mining also had widespread indirect impacts on deforestation. More than two-thirds of the countries

studied had, within 50 kilometres of the areas designated for mines, higher rates of deforestation that were not connected to other factors.

“Against the rapidly growing demands for minerals, in particular for metals for renewable energy and e-mobility technologies, government and industry policies must take into account both the direct and indirect impacts of extraction,” Anthony Bebbington, corresponding author for the paper, said in a media statement.

“Addressing these impacts is an important tool for conserving tropical forests and protecting the livelihoods of communities who live in these forests.” For Indonesia, Brazil and Ghana, tropical deforestation from industrial mining peaked from 2010 2014 but continues today.

Coal mining in Indonesia in particular doubled in this time period as output grew to match increased demand from China and India. Specifically, in East Kalimantan, 19% of the tree cover was lost over the past two decades.

The province, the center of coal mining for the country, hosts the construction site of the future national capital Nusantara, a city being built where a timber plantation once stood—and a tropical forest before that.

EIAs should cover larger areas

Given these results, the study points to the need for environmental impact assessments and other permitting requirements for industrial mining to cover a broader geographic scope that includes more territory outside of the project concession area. Applications for new mining projects should also not be examined in isolation; the cumulative impacts of other projects, such as agricultural developments, need to be considered.

“There is a broad range of environmental damage caused by mining operations on top of deforestation, including the destruction of ecosystems, loss of biodiversity, disruption of water sources, the production of hazardous waste and pollution,” Stefan Giljum, lead author of the study, said. “Government permitting should take all of this into account; an industrial mine can easily disrupt both landscapes and ecosystems. Industrial mining remains a hidden weakness in their strategies to minimize environmental impacts.”

Giljum and his colleagues point out that previous research in the Brazilian Amazon has shown that acknowledging and enforcing the collective property rights of Indigenous peoples and local communities are the most effective ways to prevent deforestation,

as deforestation in their territories is significantly lower than in places managed by other government or private entities.

They also note that the study did not include direct deforestation from artisanal and small-scale mining, as standardized global databases with geographic coordinates for such operations do not yet exist in forms that are amenable to statistical analysis.

Yet, the authors recognize that artisanal and small-scale mining, as well as illicit operations, generate significant environmental damage that demands scrutiny, response and remediation.

Staff Writer, Mining.com | September 14, 2022

➡ **Rio Tinto CEO meets top executives at new Chinese ore-buying company**

The chief executive of global mining firm Rio Tinto has met with top executives at the new Chinese state-owned agency created with an aim of centralizing the country's iron ore purchases.

Beijing created the China Mineral Resources Group in August, with registered capital of 20 billion yuan (\$3 billion). The move was seen as Beijing's effort to gain more clout with suppliers like Rio, BHP Group, Fortescue Metals Group, Vale and others over pricing.

Rio's CEO Jakob Stausholm and chief commercial officer Alf Barrios held a video meeting with the senior management of the Group on Sept. 1, the company said in a statement in Mandarin on its Chinese website on Monday. "Rio Tinto Group is very honoured to have the opportunity to become a strategic partner with China Minerals, and work together to deepen comprehensive cooperation in various fields and achieve win-win development," Stausholm said in the statement.

Yao Lin, Chairman of China Minerals said the group was willing to establish a strategic partnership with Rio and to work on win-win and sustainable supply chain system to develop China's steel industry. China is exposed to international prices of iron ore as it must import nearly 80% of its annual consumption of about 1.2 billion tonnes of the steelmaking raw material.

Reuters | September 6, 2022

➡ **Energy crisis an 'existential threat' to EU metal production – Eurometaux**

The European Union needs to reduce power costs in the region to prevent the permanent closure of metal producing plants in the region, which would increase reliance on imports with higher carbon footprints, industry association Eurometaux said.

About 50% of EU aluminum and zinc production capacity "has already been forced offline due to the power crisis", Eurometaux said in a letter to EU Commission President Ursula von der Leyen. EU ministers meet on Sept. 9 to discuss urgent measures to respond to a surge in gas and power prices that is hammering Europe's industry after Russia curbed gas deliveries to the bloc.

Eurometaux wants the EU to raise the 50 million euro threshold for the relief that EU countries can offer to struggling companies, provide support by capping taxes and surcharges on power and gas and create an emergency EU relief fund for energy intensive industries. Eurometaux said the energy crisis is an "existential threat to the future of Europe's metal smelters.

"We call on EU and member state leaders to take emergency action to preserve their strategic electricity-intensive industries and prevent permanent job losses," Eurometaux said, adding that the letter was signed by chief executives of 40 European companies. Eurometaux has 26 company members including Glencore, Aurubis, Boliden and Norsk Hydro.

Zinc, aluminum and silicon production cuts have already left consumers in the Europe's steel, auto and construction industries facing severe shortages, which are being offset by shipments from China and elsewhere. "Chinese production is 2.5 times more carbon intensive than European zinc production; 2.8 more in the case of aluminum and 3.8 more for silicon," Eurometaux said.

"We estimate that Europe's replacement imports of aluminum have already added 6-12 million tonnes of CO2 this year." The industry body also wants the EU to ask member states to provide financial help through the carbon compensation scheme.

The scheme allows national governments to award compensation to energy intensive industries to help them recoup some of the costs relating to high carbon prices that they need to pay due to the Emissions Trading System (ETS). "Base metals, battery metals, and other metals are all needed in higher volumes for Europe's grid infrastructure, electric vehicles, solar panels, wind turbines and hydrogen electrolyzers," the letter said.

Reuters | September 14, 2022

➡ **China Discovers Stunning Crystal on the Moon, Nuclear Fusion Fuel for Limitless Energy**

The find makes China the third country to discover a new mineral on the Moon, and the country says it's analyzed the soil for rare helium-3.

China has discovered a crystal from the Moon made of a previously unknown mineral, while also confirming that the lunar surface contains a key ingredient for nuclear fusion, a potential form of effectively limitless power that harnesses the same forces that fuel the Sun and other stars.

The crystal is part of a batch of lunar samples collected by China's Chang'e-5 mission, which landed on the Moon in 2020, loaded up with about four pounds of rocks, and delivered them to Earth days later. After carefully sifting through the samples—which are the first Moon rocks returned to Earth since 1976—scientists at the Beijing Research Institute of Uranium Geology spotted a single crystal particle, with a diameter smaller than the width of a human hair.

The crystal is made of the novel mineral Changesite (Y), named after the Chinese Moon goddess, Chang e, that also inspired China's series of lunar missions. It was confirmed as a new mineral on Friday by the Commission on New Minerals, Nomenclature and Classification (CNMNC) of the International Mineralogical Association (IMA), according to the Chinese state-run publication *Global Times*.

Changesite—(Y) is the sixth new mineral to be identified in Moon samples, and the first to be discovered by China. Before China, only the U.S. and Russia could claim to have discovered a new Moon mineral. It is a transparent crystal that formed in a region of the northern lunar near-face that was volcanically active about 1.2 billion years ago.

According to state media, the new lunar samples also contain helium-3, a version of the element helium that has long fascinated scientists—and science fiction creators—because of its potential as a nuclear fusion fuel source. This hypothetical form of power aims to harness energy released by atoms that merge under tremendous pressures, such as those in the interiors of stars. Starlight is a ubiquitous product of nuclear fusion, but human-made fusion reactors will still likely take decades to develop, assuming they are feasible at all.

That said, if these reactors do become a reality, helium-3 would be a good fuel candidate because it produces less radioactive byproducts and nuclear waste compared to other atoms. Whereas helium-3 is incredibly scarce on Earth, it is abundant on the Moon, a disparity that has stoked dreams of mining the material on the lunar surface.

Along those lines, China has joined the United States, and other nations, in expressing interest in extracting resources from the Moon in the future.

Becky Ferreira | September 14, 2022

➡ **State govts auctioned 100 mineral blocks from March 2021 to Aug 2022**

The state governments have auctioned 100 mineral blocks between March 2021 and August 2022, the Union Ministry of Mines has said.

Moreover, since 2015, a total of 208 mineral blocks were auctioned in the country, it further informed, adding that commercial mining has been a great success in the country. Last month, Mines Minister Pralhad Joshi had said that the Centre was making efforts to attract more private entrepreneurs into mineral exploration.

“Mineral exploration will be carried out without adverse environmental impact through enhanced use of drones and other latest technologies,” he had said.

IANS, BS, New Delhi | September 19, 2022

➡ **Gas-starved Europe's revival of coal plants spells bad news for India**

Coal consumers in India are taking evasive action to save their balance sheets.

This week, the chief of the Indonesian Coal Mining Association said Indonesian coal miners expect Germany will be their third largest importer by 2023, just behind China and India. The over 150 per cent rise in prices of the fuel across Europe since January this year – a fallout of the gas supply crisis after Russia invaded Ukraine, has made this seemingly absurd ranking possible. More to the point, it has implications for India, which has been an increasing net importer of coal in recent years.

Subhomoy Bhattacharjee, BS, New Delhi | Sep. 16, 2022

➡ **Government working to increase domestic coking coal output: Steel Secretary**

The government is working to increase the domestic production of coking coal as the country aims to have a steel making capacity of 300 million tonne by 2030-31, a senior official said on Thursday. Coking coal is a key input in steel making and the country remains dependent on imports to meet 85 per cent of its coking coal needs. The government has taken an important decision by removing the duty on coking coal to zero, Steel Secretary Sanjay Kumar Singh said. “There have been issues of prices rise in this area (coking coal) but of late, they have come down quite significantly. Of course, ultimately what is going to be the full solution

is that when the production of coking coal to our requirement is done within the country and Ministry of Coal is working for that," he told PTI.

He was speaking on the sidelines of the 'Indian Steel Markets Conference' organised by e-marketplace mjunction. Recently, Union Minister of State for Steel Faggan Singh Kulaste said there was a need for investments in coking coal mining to make the steel industry self-reliant. India imported 57 million tonnes of coking coal in FY22 to produce 120 MT crude steel.

PTI | September 15, 2022

➡ **Russia's largest coal company in talks to set up India office**

Russia's largest coal supplier, Siberian Coal Energy Company (SUEK), is in talks to open an office in India, with the country emerging as a top export destination following sanctions imposed by Europe on Russia, said its CEO Maxim Basov. Basov told ET in an exclusive interview that the company's shipments to India, traditionally a smaller importer of Russian coal, increased to 1.25 million tonnes in the first six months of 2022, twice more than in the entire 2021. SUEK, the world's fourth largest coal supplier, can increase coal supplies to India up to 10 million tonnes a year if all logistical challenges are addressed, said Basov, who recently visited the country for talks to launch the India office.

"SUEK is interested in enhancing links with India. Therefore, it is currently solving pivotal challenges of building up supplies – logistics options, assessing demand, widening the range of partners, determining the cost-effectiveness of supplies, etc.," said Basov. Historically, India was not one of the priority markets for Russian coal suppliers, as costly logistics were an obstacle, said Basov. "With the introduction of anti-Russian sanctions by the EU, interest in this area has picked up and shipments are building up quite rapidly," he said. "In some months, we registered an increase of 50% or more year-on-year. Whereas Russia used to supply 5-7 million tonnes of coal per year, now it supplies about 2 million tonnes per month."

SUEK, which produces ecologically friendly coal, will also explore investments in Indian energy projects in the future, besides inviting Indian foreign direct investment in its projects in Siberia. After the opening of the Indian office, the company will be working with many partners in both the energy and metallurgy sectors, and will look to start investing in Indian coal or energy projects.

The company is eyeing a long-term association with India through the use of the International North South

Transport Corridor (INSTC) and Vladivostok port. Prime Minister Narendra Modi had pitched for optimum use of this port in his recent speech at the Eastern Economic Forum at Vladivostok.

"As for the quality of our coals, it can be regarded as a benchmark. SUEK supplies were traditionally focused on the European and Japanese markets, where the most stringent environmental requirements are in place – both in terms of ash content and sulphur content. Practically all of the coal SUEK exports goes through enrichment plants and has undergone a multistage quality monitoring system," said Basov. "I can say with confidence that our coal is one of the cleanest in the world in terms of its environmental impact... our portfolio includes coal of various grades, which arouses great interest from Indian partners."

Basov is no stranger to India, having studied in an Indian school in Moscow, besides visiting India numerous times in the past, including for the study of Advaita in an Indian monastery. Asked about the payment mechanism for India's coal imports from Russia, he said, "Our company currently operates in US dollars, but payment in other currencies is also a possibility for us, especially since it has already become a common practice for Russian companies. In the Indian coal market, almost half of the transactions with Russian suppliers are made in currencies of third countries – yuan, dirhams, Hong Kong dollars and others."

Basov said the financial systems of the two countries are ready for such transactions since there is an intergovernmental agreement in place. "For this reason, we do not see any particular problem in making payments for coal supplies," he said.

Dipanjan Roy Chaudhury, ET Bureau | Sep 11, 2022

➡ **Coal deal hunters descend on Indonesia as demand peaks**

For more than 1,200 people gathered at a hotel in Indonesia's resort island of Bali this week the message was clear: coal is here to stay.

After two years of pandemic disruptions, Asia's top coal industry event Coaltrans is back in Bali with a turnout that some participants say mirror those seen during the boom years about a decade ago. Buyers all over Asia, and some from Europe, flew in to the conference to hunt for any coal supply they can secure ahead of winter, as global supply shortages and growing energy security concerns drive an unprecedented rebound in coal demand.

(Continued on Page 41)

THE WAYS & MEANS TO INCREASE PRODUCTION OF DEEP-SEATED MINERALS IN THE COUNTRY

Vasudev V.N., Arun Kalra and Rao P.V.

Abstract

The title of this article is based on the topic chosen for a brainstorming session convened by the Ministry of Mines (MoM) on the 25th August 2022 at Shastri Bhavan, New Delhi. The Government's key objectives for reforms in the minerals sector are accelerating the growth of mining industry to support India's goal of achieving a \$5 trillion economy; increasing mine production and pace of exploration, transparency in allocation of mineral concessions, generation of large-scale employment; enhancing private investments in the mineral sector and reducing imports and contain outgo of foreign exchange. However, with the adoption of MMDR (Amendment) Act, 2015 there was a radical shift to an "Auction-only Regime" for grant of Lease for Mining and Licence for exploration. The Auction-only regime has failed to achieve the objectives of NMEP-2016, NMP-2019 and Atmanirbhar Bharat in the minerals sector.

Presently, mining accounts for only 1.7% of India's Gross Domestic Product (GDP) compared to more than 8% each for Australia and South Africa, both of which share geological history similar to India as an integral part of the ancient Gondwana supercontinent. India has not been able to make the kind of discoveries accomplished in these two and many other countries like Canada and Brazil where similar geological conditions exist. The obvious reason is the lack of laws facilitating exploration by private investors. Consequently there has been no reduction in import of minerals and metals which stood at around US\$ 110 billion (including coal) annually. Gold imports alone accounted for US\$ 56 billion in 2021-22.

Further, due to the investor-unfriendly laws, every year, there is a flight of Indian capital of about US\$ 200 million to overseas mineral business-friendly countries! For the same reason, post-2014, there has been no new addition to Resources of Non-Bulk Minerals (NBM) or the so-called Deep-Seated Minerals (DSM) to our National Mineral Inventory and no new mine of NBM granted through auction has come into operation.

*The Auction mode works to some extent for granting Mining Lease (ML) for bulk minerals like iron ore, limestone, manganese, chromite and bauxite, which formed 90% of all the blocks auctioned so far. In fact, out of the **184** blocks auctioned during 2015 to July 2022, **only 13 blocks are for DSM or NBM** like gold, diamond and copper and none for other DSMs like zinc, lead, PGMs, nickel, cobalt etc (Source: MoM). The auction mode is thus an abject failure in the discovery and development of NBM or DSM.*

*National Mineral Exploration Trust (NMET), which was formed after mineral exploration in the country was practically nationalised in 2015, has collected funds of Rs.3707 crores till June 2022, but has been able to spend only Rs.477 crores on mineral exploration projects. Of this, the **expenditure on projects for DSM is a negligible Rs.66 crore since 2015** (Source: NMET's presentation at 6th National Conclave on Mines & Minerals held on 12 July 2022).*

First-Come-First-Served (FCFS) is a transparent and competitive system and an international best practice adopted by most mineral rich countries. FCFS system was in vogue in India until the 2015 amendments to the MMDR Act. FCFS in the pre-2015 MMDR Act led to several significant mineral discoveries, important among them being a major diamond discovery of Bunder in the State of Madhya Pradesh (the block has a high-quality diamond resource of 34 million carats valued at over Rs.60,000 crores) and 12 discoveries of gold deposits in Karnataka and Andhra Pradesh States which have the potential to turn out to be new gold mines.

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The effective tax rate (ETR) for the mining sector in India at 45% (for new mines) to 50% (for the existing pre-2015 mines) is the highest in the world, despite the Government's reduction in corporate tax rate (Source: Federation of Indian Mineral Industries (FIMI)'s Indian Mining – a synopsis, August 2021). Thus, the ETR needs to be brought at par with the global average of around 40%, in order to attract investments in this sector.

The suggested way forward in order to attract the level of private sector investment required to enable discovery of mineral deposits, especially DSM, given the extremely high exploration risk, is through (a) restricting the Auction system only to granting Mining Lease of those blocks with well-defined and estimated Mineral Resources as per the CRIRSCO compliant internationally recognised Exploration Results, Mineral Resources and Reserves reporting standards, (b) adopting FCFS method for granting licenses for CL (Prospecting cum Mining lease), (c) granting ERP (Exclusive Reconnaissance Permit) seamlessly leading to Prospecting and Mining and, (d) Restoring Section 10A(2)(b), which would certainly fast track the intents of Atmanirbhar Bharat.

This article is intended to share comprehensive information with the mining fraternity and draw the attention of the Ministry of Mines to incorporate the authors' recommendations while further reforming the mining sector to achieve the objectives and vision set out in NMEP-2016, NMP-2019 and Atmanirbhar Bharat.

1. Introduction

The Geological Survey of India (GSI) through its regional surveys has recently increased the identified Obvious Geological Potential (OGP) area from 571,000 sq.km to 688,000 sq.km, which is likely to increase with the ongoing surveys by the GSI, NMET and State Mines & Geology Departments. Major areas of the OGP comprise deep-seated minerals like gold, diamond and base-metals such as copper, lead, and zinc, besides the Platinum Group Minerals (PGM), molybdenum, tin, tungsten, cobalt, lithium etc.

The Ministry of Mines announced at the 6th National Conclave on Mines & Minerals (NCMM) held on 12 July 2022 that the “area under exploration has increased to 30% of the OGP”. Thus, India is still largely under-explored to unexplored, especially for deep-seated or non-bulk minerals, despite having favourable geological potential. As a result, India continues to import these minerals as well as coal at a huge annual cost and forex drain of more than US\$ 110 billion to the nation. The value of imports of minerals/mineral products at 25.40% is higher than that of Petroleum products at 21%, of the value of India's total imports. Among the metals, import of gold accounted for US \$56 billion in 2020-21 despite having a Resource Base of 670 tonnes and a highly favourable geological potential for discovering much more. Owing to this dependence on import of metals and minerals, India's Current Account Deficit (CAD) on minerals and metals (excluding oil & gas) has been on the rise not only due to the increasing domestic demand but also due to rise in international market prices.

Besides the metals mentioned above, India has begun importing green-energy technology metals such as the Rare Earth Elements (REEs), lithium, cobalt, neodymium, iridium, gallium, indium, vanadium and other Critical metals such as titanium, tellurium, selenium, rhenium, germanium,

cadmium and scandium and Fertilizer minerals such as phosphorites, potash and sulphur. What is of bigger concern is India's dependence on China for the import of green-energy related critical and strategic minerals. This could have disastrous consequences for national security during emergencies. Despite such alarming trends, the Ministry of Mines is hanging on to Auction-only mode for grant of licences.

Mining accounts for only 1.7% of India's GDP compared to more than 8% each for Australia and South Africa, both of which share geological history similar to India as an integral part of the ancient Gondwana supercontinent. Why then similar mineral discoveries and at comparable pace are not happening in India? Why does the mineral industry's contribution to India's GDP remain so low?

The Ministry of Mines recently held a brainstorming session on increasing production of deep-seated minerals. The session was held on 25 August 2022 with representatives from mineral industry Associations. Two of the authors, Vasudev and Arun Kalra, represented FIMI at the session. The very fact that even after 8 long years of introduction of auction-focussed amended MMDR Act, the MoM is still concerned and grappling with the issue of snail-paced exploration and conversion of known Resources of DSM into new mines, indicates that the auction-system has not worked well so far as exploration for deep-seated minerals is concerned. Why then does the MoM still insist on experimenting with the failed auction-system instead of quickly switching over to the time-tested global model of FCFS? World over FCFS system of granting licences for exploration and prospecting is considered as not only the most transparent method but also a method of promoting mineral exploration as a stand-alone business. Auction-mode does not provide any such scope.

2. Background for adopting the Auction regime

2.1 Though the response of the private sector including FDI to the first National Mineral Policy-1993 and the FCFS-centred MMDR Amendment Act-1994 & 1999 was initially encouraging, the level of investment, especially FDI, was not to the extent expected by the Government of India. Furthermore, the process of granting exclusive Reconnaissance Permit (RP) and Prospecting Licence (PL) was inordinately delayed. Consequently, the Government of India constituted a Committee headed by Mr. Anwarul Hoda, a Member of the then Planning Commission in September 2005. The Hoda Committee was mandated "To review NMP 1993 and MMDR Act, 1957 and suggest policy changes needed to encourage investments by public and private sector in exploration and exploitation of minerals". The second Term of Reference was to review the existing procedures for granting mineral licences and suggest ways for their streamlining and simplification. The Committee concluded that the present procedures are lengthy and cumbersome and recommended setting-up Co-ordination-cum-Empowered Committees at the State and Central Government levels for reducing delays. The Hoda Committee submitted its report in December 2006. It formed the basis for framing the National Mineral Policy (NMP)-2008. Para 3.3 of the NMP-2008 states *"In order to make the regulatory environment conducive to private investment the procedures for grant of mineral concessions of all types, shall be transparent & seamless & security of tenure shall be guaranteed to concessionaires. The first-in-time principle in the case of sole applicants and the selection criteria in the case of multiple applicants will be appropriately elaborated. Prospecting and mining shall be recognized as independent activities with transferability of concessions playing a key role in mineral sector development"*. The Policy was welcomed equally by all the stakeholders including the State Governments.

2.2 The Government of India placed the Draft MMDR Act-2011 before the Parliament for legislation. The draft Act did not follow the letter and spirit of the NMP-2008. Instead it leaned heavily on the auction-mode of granting mineral concessions and replaced the Exclusive Reconnaissance Permit (ERP) by Non-Exclusive Reconnaissance Permit (NERP) for granting large areas for "General Exploration". The Draft MMDR Act-2011 was severely criticised in the Parliament and by a large number of stakeholders outside the Parliament. As a result, the Draft Act-2011 was referred to a 22 Member Parliamentary Standing Committee with Mr. Kalyan Banerjee as its Chairman. The Committee heard the comments and suggestions of the stakeholders on the 25 June 2012. One of the authors of this article, Vasudev, was among those who were invited to present comments and suggestions before the Standing Committee where he spoke against the introduction of the Auction-mode of granting licences.

2.3 The new MMDR Act-2015 did not follow NMP-2008: The Ministry of Mines, while promulgating the MMDR (Amendment)

Act-2015 did not follow any Mineral Policy. The Ministry also did not pick-up investor-friendly recommendations made by the Parliamentary Standing Committee on the Draft MMDR Bill-2011 or consider the judgements of the Supreme Court in '*Centre for Public Interest Litigation and Natural Resources Allocation*', which was stated to be the harbinger of the Amendment Act of 2015. The Apex Court did not mandate that the mineral concessions be allocated only through auction mode but left it to the wisdom of the concerned Ministry. The Supreme Court, in its opinion on the Presidential Reference dated 27.9.2012, had clarified that the auction mode need not be mandatory for 'allocation of all natural resources' but the mode of granting be transparent. However, in 2014 the newly elected Government appears to have picked up the very same draft MMDR Act-2011 that had not been passed by the Parliament and enacted it as the new MMDR (Amendment) Act-2015!

2.4 Two years later, the Supreme Court, vide its judgement dated 2 August 2017, issued a direction '*We direct the Union of India to have a fresh look at the National Mineral Policy-2008, which is almost a decade old, particularly with regard to conservation and mineral development. The exercise should be completed by 31st December 2017*'. However, the Ministry of Mines came up with the new National Mineral Policy in 2019. The NMP-2019 basically followed the auction-centric MMDR (Amendment) Act-2015 that, in turn, had drawn the contents from the auction-centric Draft Act-2011, which had been severely criticized in the Parliament.

3. Reasons for stunted growth of the Deep-seated Minerals Sector

3.1 The Auction-only regime: The Auction-only mode of granting licenses for both the ML & CL is the main cause of the stunted growth of the minerals sector and the current stagnation of commercial mineral exploration in the country. So far, 184 blocks have been auctioned between 2015 and July 2022, of which 98 blocks are for CL. However, only 13 CL blocks have been auctioned for deep-seated minerals viz., 8 for Gold, 2 for Copper, 1 for Copper & Gold and 2 for Diamond (Source: MoM website). Given the high commercial risk involved in mineral exploration for such minerals, it is a moot question, when and how many among those few blocks will reach the mining stage. Only 13 blocks auctioned in 8 years is a clear reflection of the failure of the auction route to trigger large scale private participation and investments in exploration and prospecting for deep-seated minerals.

3.2 Revoking Rights U/s 10A(2)(b): Encouraged by the notional revenue to the States (over the 50 years life of a ML) through the auction route, the MoM amended the Act and took away the rights of pre-2015 applicants vested under Section 10A(2)(b). This was done with the objective of releasing nearly 500 potential mineral blocks (which included blocks with Measured Mineral Resources and Mineral Reserves) through the auction system. Had this not been done, many of these blocks would have progressed to the ML stage and some of them would even have gone into

production and served the intentions of Atmanirbhar Bharat. Such amendments are counterproductive to the purported agenda of the reforms. Cancelling the rights vested under Section 10A(2)(b) has been contested by several Licensees in the Courts of Law. Most recently the Karnataka High Court has ruled against the revocation of Section 10A(2)(b) in its Judgement dated 27 May 2022 in w/pNo.1920 of 2021. Had the Section 10A(2)(b) not been deleted from the Act, a number of deep-seated high-value mineral projects would have come into operation and enlarged the mineral sector's contribution to the GDP by at least 1% and reduced the outflow of forex to some extent.

3.3 Misconception of NERP: Another reason for the stunted growth of the NBM sector was the introduction of Non-Exclusive Reconnaissance Permit in the 2015 Act. RPs are supposed to facilitate large area reconnaissance exploration but because it was made non-exclusive, there were no takers for NERP. Instead of addressing the problem and making it exclusive and seamless to the ML stage, the Ministry of Mines got rid of NERP altogether in 2021! That ended the only option available in the 2015 Act for the private sector to apply for a large area exploration licence of their choice. This was a major setback in achieving the objectives envisaged under NMEP-2016 and NMP-2019.

4. The so-called Reforms in the Mining Sector

On 16 May 2020 the Hon'ble Finance Minister made an announcement under Atma -Nirbhar Bharat scheme for enhancing private investments in the Mineral Sector and for bringing reforms in the mineral sector", as per the MoM's Notice dated 24 August 2020.

Accordingly, the Government of India made some amendments to the Act in 2020 and 2021 and some more are likely to be announced in 2022. Most of these reforms were aimed to broaden and strengthen the auction regime but the main objective of 'enhancing private investments' has not been addressed at all. For instance, all the reforms listed below are for supporting the auction system:

- To facilitate seamless transfer of valid rights/ clearances to new leases
- All future auctions to be without any end-use restrictions
- Transfer of all valid rights and clearances to successful bidders
- Transfer of all ML/ CL without any charges
- Interested people can propose area for auction as CL

Some of the auction-centric reforms are in fact highly detrimental for mineral exploration and mining in the country. For instance:

- a) As pointed out in an earlier paragraph, MoM 'Resolving pending cases U/S 10A(2)(b) by bringing them under the new Auction Regime: 'This would release about 500 blocks for Auctions'.
- b) Lowering Exploration Level from G3 to G4 for Auction of CL blocks: The objective, as stated in MoM's Notice dated 23 April 2021 is 'In order to increase the pace of exploration and bring more blocks in Auction'. It is necessary to make a distinction between Reconnaissance and Prospecting. G4 stage produces only reconnaissance level exploration data, which is highly insufficient for auctioning such areas/blocks for grant of CL (PI cum ML). Even after a year of announcing the amendment there is no sign of 'increase in the pace of exploration'. The brainstorming session held by the MoM on the 25 August 2022 signifies the ineffectiveness of the auction-mode in increasing the domestic production of deep-seated minerals.
- c) Partial Reimbursement of Exploration Expenditure for CL Holders: A MoM / NMET Memorandum dated 23 March 2022 states that in order to encourage exploration by the private sector, in case Composite Licences granted through auction, do not succeed in reaching ML stage, will be Reimbursed 50% of the exploration expenditure up to a limit of Rs. 4 crore, through NMET funds. This is unheard of in any other country. Such a need to compensate for failures would not arise if FCFS system of granting exploration licence is adopted. World over, taxpayers' money is not used to either fund exploration by private companies or compensate for the failures in reaching the mining stage! The MoM should understand that a CL block with G4 stage data is of inherently high risk. The success of a G4 green field is measured in terms of discovering more and more geological, geochemical and geophysical anomalies and exploration drill holes intersecting mineralized zones/ore bodies. Instead of compensating for failure, an incentivised FCFS system would make the deep-seated mineral exploration sector vibrant.
- d) Fixing mineral-wise maximum area limit for mineral concessions: The rationale behind this, as stated in MoM's Notice dated 25 May 2022 is that 'Allowing acquisition of disproportionately large mineral bearing areas would defeat the present system of auctioning of mineral concessions through a fair and transparent mechanism'. Under this premise MoM proposed to limit the PL area for Copper, Lead and Zinc to only 75 sq.km per company per State and ML area to only 25 sq.km. For Gold & associated minerals it is 50 sq.km for PL and only 10 sq.km for ML. While Diamond has the maximum PL area of 400 sq.km, the ML area proposed is only 10 sq.km, which defeats the very purpose of having a larger PL area to begin with. In general, putting limits for PL and ML would discourage exploration for DSM.

5. Auction vs FCFS

5.1. A mineral property/ block can be auctioned only if it has been sufficiently explored to estimate a 'Mineral Resource'. This applies to both bulk and non-bulk minerals.

Bulk mineral deposits, such as iron ore, bauxite, limestone, manganese etc. are simple in their distribution in nature. They commonly occur as continuous beds or tabular bodies at or near the surface. Therefore, they are much easier to discover and with basic exploration inputs their dimensions can be easily defined and resources estimated. Whereas the distribution of deep-seated or NBM's are complex in nature and are often not exposed at the surface. They commonly occur as narrow vein-type or lenticular bodies of dimensions as small as a few centimetres to several tens and hundreds of metres. However, they occur, most often, as discontinuous ore bodies both laterally and vertically. They are called deep-seated because their mineral resources extend to depths of several kilometres. Thus, they are much more difficult to discover and assess. They require more advanced multidisciplinary exploration inputs to discover and estimate Mineral Resources. Therefore, it is only prudent to auction well-defined resource blocks of NBM for ML.

However, by March 2022 GSI has released a total of 202 G4 blocks across various States for auction to grant CL. Of these, 77 blocks or 38% of 202 are for NBM: Gold-32, Diamond-5, Copper, Lead, Zinc, Nickel, and PGEs – 43. Most of these blocks are very small (10-20 sq.km) and with no resources identified. If the Ministry of Mines really wants all these blocks to be picked up by the Indian investors as well as MNCs /JECs, the only way forward is through FCFS. The private investors obviously pick up a larger areas than intended under 202 G4 blocks.

5.2. Merits of First- Come – First -Served (FCFS) mode:

All those countries that have become mineral rich, through discoveries, have chosen the FCFS mode for granting licenses for exploration and/or prospecting, seamlessly leading to mining. FCFS protects the 'Intellectual Property Rights' of an explorer in the selection of targets and facilitates exploration to be carried as an independent stand-alone business. Another international best practice is the 'Right to Retain the discovered and Resource-defined areas for a certain number of years mandated by country-specific laws' and 'Right to Transfer' the licensed blocks in part or in full. For these reasons, globally large area licences are issued over long tenures and periodic reduction of area, with a committed minimum work programme and exploration expenditure.

6. Exploration Success Under the pre-2015 FCFS Reconnaissance Permit Regime

With the announcement of the first-ever National Mineral Policy in 1993, mineral exploration and mining were opened-

up to domestic mining and exploration companies and FDI. What attracted some MNCs like BHP, Rio Tinto, Phelps Dodge, De Beers and a few 'Juniors' like Pebble Creek and Meera Exploration (Canada), Australian-Indian Resources, Geomysore Services, Deccan Gold Mines Ltd., and also Indian companies like ACC and MSPL, was the favourable geological potential for deep-seated minerals that India was known for internationally and the GoI's resolve to open-up all data and maps generated by the GSI on a public platform such as MoM & GSI's portal. However, the main trigger for the private companies to invest was the FCFS mode of granting licences, with security of tenure while migrating from RP to PL to ML.

Of the 341 RPs granted up to 2014, most of them were between 2000 and 2010. They covered an area of 518,000 sq.km (Source: Base Paper for Discussion–NMEP 2016). Thrust for exploration was mainly for Diamonds (231,551 sq.km in 156 RPs), Gold (95,295 sq.km in 83 RPs) and Base Metals (80,380 sq.km in 76 RPs), accounting for almost 80% of the RP area granted.

6.1 Exploration Success: Considering the short duration and the limited number of companies exploring under the RP regime in India, the RP stage exploration was a big success. Commensurate with the thrust for exploration and exploration expenditure, most of the successes were for gold and diamond.

The most significant discovery has been that of the Bunder Diamond Deposit in Madhya Pradesh by Rio Tinto, with estimated diamond Resources of 34.20 million carats, valued at around Rs. 60,000 crore. Rio Tinto discovered the deposit in 2004 and eventually withdrew their licence in 2017 due to inordinate delays in granting clearances. Later, Essel Mining won it in auction held in 2019.

De Beers India (56) and Rio Tinto (~ 40) discovered around 100 kimberlites in 12 years, which is almost equivalent to what GSI has discovered in all these years. Although De Beers' kimberlites did not prove to be diamondiferous (as on an average only 15% kimberlites are diamondiferous), De Beers still considers India highly prospective for diamonds as India has a large cratonic area of almost 700,000 sq.km that can host kimberlites/ lamproites.

Deccan Exploration Services India Pvt. Ltd and Geomysore Services India Pvt.Ltd discovered several virgin area gold deposits besides discovering the extensions of the known ones. Noteworthy discoveries are at Ganajur, Mangalgatti, Bhavihal and Hirenagnur in Karnataka with JORC compliant Resources of **2 Mil.OZs or about 60 tonnes of gold**. Besides, Jonnagiri (West Block) in Andhra Pradesh State was a new discovery by Geomysore Services.

MSPL discovered the extensions of the Sangli gold deposit and other gold-bearing zones in Gadag Gold Field, besides the discovery of a Rare Earths resource in Rajasthan. Premier Nickel Mines Ltd. discovered a significant nickel prospect in Mahakoshal belt, MP State. Another notable achievement was the tripling of the Reserves of Zn-Pb at Rampura-Agucha in Rajasthan by Vedanta Group.

It is to be noted that the majority of the Junior Exploration Companies, who have been the mainstay for the exploration successes in countries like Canada, Australia and the USA, did not invest in India. The main deterrent was the inordinate delay in grant of RPs and for PL & ML to RP holders, besides other related clearances.

6.2. Exploration Expenditure: Globally > 85% of the expenditure is on the exploration of deep-seated minerals. Mineral-rich countries like Canada and Australia are spending more than US\$ 1 billion (> Rs.7000 Cr) (Source: S & P Analysis 2012-19). The total of all Exploration Expenditure in India is very low at around Rs. 1000 Crore /Year or 0.8% of Global Expenditure. India should be spending ~Rs.7000 Crore/ annum (including Rs. 2000 Crore on gold alone) for drilling a minimum of ONE million metres a year from discovery stage to Resource drilling to Scoping Study.

7. The Serious ill effects of Auctioning

The Auction mode is detrimental to the development of a country's mineral resources for the following reasons:

1. Revenue sharing alongside high taxation of ~50% results in an increase in the cost of mineral production and burdens the consumers. The high cost of mineral production makes importing cheaper and domestic merchant mining unsustainable;
2. Blocks granted under the Auction system would be forced to go for mining the cream and ignore marginal grades due to the pressure of sharing high (+100%) committed revenue.

3. Revenue sharing and high taxation goes against Indian Bureau of Mines (IBM) objective of Mineral Conservation and promoting Zero-Waste mining. The so-called marginal grade ores can never be mined because of revenue sharing. Low-grade metalliferous mineral resources will remain untouched in the ground as non-performing mineral assets even when market prices pick up.
4. High cost of mineral production results in the inflated market price of minerals and metals eventually burdening the Consumers.
5. Auctioning does not provide a level playing field. It does not encourage the participation of a wide spectrum of private investors. It is highly partisan, hence, has the potential to vest the country's proven natural resources in the hands of a few wealthy industrialists.
6. No Law is legislated to mandate NMET-empowered exploration companies to explore and prospect a given block satisfying the internationally recognised CRIRSCO-compliant QA/QC Standards, such as the Indian Mineral Industry Code (IMIC) or Joint Ore Reserves Committee (JORC) code or National Instrument NI 43-101 of Canada.
7. The auction centric laws have made a mockery of the assessment of the value of the CL blocks, which are often poorly defined and in the case of auctioning of G3/G4 (Greenfield) CL blocks, valuation is impossible or controversial, and hence likely to be questionable by CAG or other Government Auditors at a later stage.
8. CL Blocks put for auction ignore the dip (inclination from horizontal) of mineable ore bodies whereas the boundaries of ML blocks go vertically down. This one factor alone should be taken note of by the MoM and shun the auction mode.
9. Tax payers' money is squandered by permitting NMET empowered agencies to carry out inherently risky mineral exploration and prospecting activities.
10. The country's OGP area is as large as 700,000 sq km. It would take several decades to package such a large area and put them on auction. FCFS mode is much faster and would also attract the desired level of investments, expertise and technology.
11. There always remains some new mineral resources to be discovered beyond the areas scanned by Government agencies and NMET funded private companies.
12. Auction does not attract FDI or technically competent JECs as the same being not in tune with international Laws governing the grant of mineral concessions. The Auction system does not encourage JECs because it does not support exploration to be carried out like a commercial business.

Revenue to State Governments

Auction overview (105 blocks): Revenue to State Government		
Particulars	Total (in crores)	% of resource value
(A) Estimated value of the resources	80631.36	100%
(B) Additional Contribution through Auction	693614.77	85.99%
(C) Royalty	119970.85	14.87%
(D) DMP	11997.28	1.49%
(E) NMET	2299.42	0.30%
(F) = (C) + (D) + (E) Statutory payments	134367.35	16.66%
(G) = (B) + (F) Total Revenue to Government	827982.12	102.65%
(H) (A) - (G) Remaining with mining companies	-21357.76	-2.65%

Source: FIMI analysis based on Ministry of Mines data for 105 mineral blocks. Note: NMET goes to Central Government

Source: FIMI Analysis by FIMI, New Delhi, based on the Ministry of Mines' for 105 mineral blocks; **Note:** (a) Ministry of Mines has not updated this table on their website; (b) Revenue collected under NMET goes to the Central Government.

13. Auctioning destroys merchant mining.
14. Auctioning has taken away the fundamental rights of people to research and select areas and file applications seeking grant of licences.

All of the above will only serve to discourage investments in exploration. The Nation's economy and rural employment generation will be badly hit. The Nation would continue to depend on imports of deep-seated minerals or NBM.

7. Conclusions and Recommendations

7.1 Conclusions

1. Since the promulgation of the MMDR Amendment Act-2015, the main priority of the Ministry of Mines, Government of India, has been 'to increase the pace of Auction' instead of addressing the objective of 'increasing the pace of mineral discoveries and production of minerals' for which India has been dependent on imports. All the amendments carried out in the name of reforms by the Ministry of Mines are 'to increase the pace of auctions'. MoM has even resorted to 'Incentivising Auctions' by way of granting Rs. 20 lakh for each successful auction to States and having so far released Rs. 8.80 crore to 14 States. While on one hand, peoples' right to select and apply for large area licences for reconnaissance exploration has been taken away, on the other hand, the Auction system has failed to promote the development of deep-seated minerals or NBM. Despite making innumerable amendments, the Ministry is still engaged in public consultation which is a pointer to the failure of the auction mode to promote fast-paced exploration and development of the Nation's mineral potential.
2. Despite the availability of a large OGP area of 700,000 sq. km and the availability of supporting basic geoscientific data that are freely available on the GSI Portal, the annual expenditure on detailed exploration is dismally low. While India needs to invest around Rs.7000 crores annually on exploration for NBM, it has spent less than Rs.70 crores on this account through NMET in the last eight years and hardly any private investment flowing in! What is lacking are the enabling laws for attracting, facilitating and fast-pacing investments from the private sector.
3. Emphasis on Resource maximization and conversion of Resources into mines will automatically maximise the revenue flow to the States as well to the Central Exchequer.

7.2. Recommendations

1. MoM should relax the auction only policy and mandate it only for blocks of land that comprise adequately explored and well-defined Mineral Resources and Reserves as per the CRIRSCO compliant public reporting standards.

2. Restore the rights of citizens/companies to identify exploration worthy areas and seek large area (500 sq.km to 5000 sq.km) exclusive Exploration Licence on FCFS mode with seamless transition to Mining Lease or transfer of licence at any stage. Globally FCFS is considered to be the most transparent and efficient mechanism for allocation of exploration licences and for attracting private investment.
3. Restore the rights u/s 10A(2)(b) of the MMDR Amendment Act-2015 in the interest of fast pacing the intentions of Atmanirbhar Bharat in deep-seated minerals. Restoration of the already vested rights would serve restoring investor confidence.
4. Stipulate 7-8 years long tenure to Exploration Licences with inbuilt stipulations for gradual reduction in area, committed work programme and minimum exploration expenditure
5. Licences and associated clearances be granted in a time-bound manner. Introduce 'deemed approval' if an application is not acted upon within the stipulated timeline.

The above suggestions for amendment of the MMDR Act-2015 would definitely serve to attract a large number of Indian and overseas companies or individuals to invest in mineral exploration, prospecting, mining and mineral processing of deep-seated non-bulk minerals and metals in the country. The suggested amendments would also serve to fast pace the intentions of Atmanirbhar Bharat in the minerals sector and, at the same time, facilitate the creation of millions of jobs and trigger rural economic development.

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OBITUARY



Shri R. K. Shrivastava
15.7.1940 - 9.9.2022

Shri Raj Kumar Shrivastava (LM/3420) was amongst the members of Rajasthan Chapter- Jaipur. He did his diploma in mining engineering in the year 1963 and AMIE (Mining) in 1986. He was a holder of FCC (Metal).

He worked at Bailadila Iron Ore project of NMDC, MP State Mining Corporation and Rajasthan State Mineral Development Corporation Ltd. Shri Shrivastava superannuated from RSMDC in the year 1998 as Senior Manager (Mining).

Shri R. K. Shrivastava is survived by his wife, a daughter and two sons. The Members of MEAI extend their heartfelt condolences to his bereaved family and friends.

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OBITUARY



Prof. R. C. Hanumanthu
(Lm. No – 3164 /
Rayalaseema Chapter)
(01.07.1952 to 28.08.2022)

Prof. R. C. Hanumanthu was Professor of Geology (Rtd.), former Head of the Department and Chairman, Board of Studies & Director, Community Development of Sri Venkateswara University, Tirupati, Andhra Pradesh. He was Ex-Member, A.P. Pollution Control Appellate Authority, Govt. of A.P.

Dr. R. C. Hanumanthu was born in a small remote village in an agricultural family in Anantapur district. He belongs to a backward class Community. After his schooling from his native place, he completed his Pre-university and Bachelor Degree courses at Government Arts College Anantapur and then joined for Post-Graduation in the Department of Geology, S.V. University, Tirupati in the year 1973. He obtained M.Sc. Degree with high first class in the year 1975 under the eminent faculty of the department led by Prof. M. G. Chakrapani Naidu.

After completion of his M.Sc., his zeal towards research made him to register for Ph.D under the able guidance of Prof. M. S. Murthy, who was the founder member of the Department of Geology. He got UGC-JRF by virtue of his merit in the post-graduation. While he was doing his Ph.D he was selected as a Lecturer in the same Department in the year 1979. He was later elevated to the rank of Professor in the year 1998 after serving as a Lecturer and Reader for a period of two decades.

The members of MEAI pray for the departed soul to rest in peace and express their profound condolences to the bereaved family members.



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MEJ RIDDLES

Dear Readers of MEJ,

In order to increase the readership of MEJ, which has been felt essential in the interest of our ardent members, the mineral industry professionals as well as the mining sector, the Editorial Board of MEJ has decided to hold a monthly QUIZ. The monthly QUIZ will be designed and printed in MEJ based on the content published in the previous month's MEJ. The MEJ readers will be given five objective questions with multiple choices to choose; and expect them to respond with their correct answer by email to the Editor at editormejmeai@gmail.com by 20th of the current month. If more than three members responded with the correct answers, then the three winners will be decided by draw. Each winner will be issued a certificate of merit and a nominal cash prize of Rs 500.

Encourage the EMJ readers to participate in the QUIZ in large numbers and benefit from the enhanced knowledge by reading the Journal from the first to last page.

Questions based on MEJ September 2022 issue

- 1. How many Chapters are there in MEAI?**
(a) 21 (b) 22
(c) 23 (d) 26
- 2. Who is the Chairman of the Training, Development & Program Committee of MEAI?**
(a) Mr Deepak Vidyarthi (b) Prof. BB Dhar
(c) Dr Abani Ranjan Samal (d) Dr K Ram Chandar
- 3. Which organisation issues NACRI Competent Person (CP) Certificates?**
(a) NACRI (b) MEAI
(c) CRIRSCO (d) FIMI
- 4. Which country is not one of the top 4 Copper Capex countries?**
(a) Indonesia (b) Russia
(c) Mongolia (d) Chile
- 5. Who is the CEO of GMDC Gramya Vikas Trust?**
(a) Mr HK Joshi (b) Ms Gunjan Pande
(c) Mr YC Gupta (d) Mr Swagat Ray

WINNERS OF RIDDLES PUBLISHED IN THE MEJ AUGUST 2022 ISSUE

Congratulations to proud winners

Mr Bharath Kumar AY

National Institute of Rock Mechanics, Bengaluru
E-mail: ay.bharath@gov.in

Mr Prabhash Gokarn

Head Metallurgical, Scientific Services
Tata Steel Limited
E-mail: prabhash@tatasteel.com

Prof. D.P. Tripathy

National Institute of Technology, Rourkela
E-mail: debi_tripathy@yahoo.co.in

To receive the cash prize of Rs 500, the winners may please contact the Secretary General, MEAI on email at meai1957@gmail.com or Mob. 9177045204.

MEAI NEWS

MEAI HEADQUARTERS

5th Council meeting held at Udaipur on 26th August 2022



Shri. K. Madhusudhana, President, addressing the Council



Shri. K. Madhusudhana, Shri. D.B. Sundara Ramam (Left), Shri. M. Narsaiah, Shri. B.S.P. Raju (Right) in the Council Meeting



Shri. D.B. Sundara Ramam addressing at the Council meeting



Members attending the 5th National Council Meeting

BELLARY – HOSPET CHAPTER

Nature Walk on 4.9.2022

Nature Walk was organized at Jwaladarashi Gudda, Hosapete by the Chapter to maintain the overall health among the Members of the Chapter and the other professionals of the Association, mining students & few family members. Nearly 40 Life Members, including others have participated in the event at 6.00 am on 04.09.2022. Shri. K. Madhusudhana, President, MEAI, Shri. Prabhakara Reddy, Chairman of the Chapter, other Office bearers along with the Executive Body and Development body members took part in the walk.

Shri. Madhusudhana, President has appreciated the gathering and conveyed his gratitude to PBS & Son for sponsoring the event and making arrangements for Breakfast and Tea to all the participants.

Shri K. Prabhakara Reddy has appreciated all the participants, organizer and the sponsors for coming forward in making the event successful. He also extended thanks to the team involved in organizing the event. All the participants enjoyed the Nature Walk and appreciated the Organizers and Sponsor of the event for making wonderful arrangements.



Some Glimpse of Photographs

PLANTATION & NATURE WALK ON 11.09.2022

Plantation & Nature Walk was organised at Jambunatha Temple, Jambunatha Halli, Hosapete by the Chapter to improve green cover in the area and maintain the overall health among the Life Members of the Chapter and other members of the Association, TMAE Society Polytechnic students and a few family members.

Around 30 Members have participated in the event at 6.00 am on 11.09.2022. Plantation programme was carried out with around 50 saplings in the compound of Adarsha School, Jambunatha Halli area. After the plantation, all the Participants started the walk from Foot hill to hill top of the Jambunatha Temple.

Sri. K Prabhakara Reddy, Chairman and Sri S H M Mallikarjuna, Secretary of the Chapter appreciated the gathering and conveyed his gratitude to R.B.S.S.N. Pvt. Ltd., Kariganur, Hosapete for sponsoring and making arrangements for Breakfast and Tea for all the participants.

All the participants enjoyed the Nature walk and appreciated the Organizers and Sponsor of the event for making wonderful arrangements.



Members at the Hill top of Jambunath Temple



Plantation in progress

BHUBANESWAR CHAPTER

Knowledge Sharing Session held on 10th Aug'22 Theme: Best Practices of Mechanical Maintenance

The Bhubaneswar Chapter had organized a "Knowledge Sharing Session" on 10th August 2022 at Chrome Valley Club, Sukinda Chromite Mine of Tata Steel Mining Limited in physical mode. Office bearer of the chapter, Shri. Shambhu Nath Jha (Secretary) and other senior members of the Chapter graced the occasion. The session was attended physically by Shri. Suresh Kumar Pedada (Director of Mines Safety, Mechanical, SEZ Ranchi) and various other members of mining fraternity of Sukinda Valley.

The session started with auspicious lighting of lamp by the dignitaries followed by welcome address of Shri. Shambhu Nath Jha in which he welcomed all the participants. He also thanked various speakers for bringing their technical expertise to the event.

Five technical presentations on the following topics were presented by officials from M/s OMC Ltd, M/s Vedanta Ltd, M/s IMFA Ltd, M/s TSML & M/s MN Dastur.



Lighting of Lamp



A section of participants



Welcome Address by Shri. Shambhu Nath Jha

Presenter 1: M/S OMC Ltd.

Mr. Bablin Samantray, Sr. Mgr. Mech (OMC) & Mr. Kirti Ranjan Sahoo, Sr. Mgr. Mech (KCCL). They shared their views on some of the right track approach adopted at their location to amplify safety in Mechanical Maintenance. They emphasized on one of the best practices of Air Filter cleaning method fabricated in-house and its effectiveness.



Presentation by Mr. Bablin Samantray, M/S OMC Ltd.

Presenter 2: M/S Vedanta Ltd.

Mr. Bishu Soren, Head Engineering & Mr. Paresh Rathour, Mining Engineer. He had enlightened on some of the benchmark practices adopted at their location to enhance safety in Mechanical maintenance. He had stressed upon use of technologies opted for upkeep of Mechanical maintenance system.



Presenter 3: M/S Imfa Ltd.

Mr. P. Dillip Patro, GM Mechanical & Mr. Saumya Kanta Nag, Manager Mechanical. He had presented on some of the standard approach adopted at their location to magnify safety in Mechanical maintenance. He had assured on not tolerating or compromising safety in any situation while doing Mechanical maintenance.



Presenter 4: M/S TSML

Mr. Ashutosh Parida, Mgr. Mech (DECO) & Mr. Tushar Rahangdale, Dy. Mgr. Mech (DECO). They briefed about some of the base line criterion used for upgrading safety standards while carrying out any Mechanical maintenance activities. They stressed upon use of Oil filter press & dedicated Brake test yard as defined in DGMS circulars.



Presenter 5: M/S MN Dastur

Mr. Joy Krishna Samal, Project In charge & Mr. Iqbal Akhtar, Safety Supervisor. He had shared some difficult yardstick for emphasizing safety in dismantling job at their respective location. He also talked about implementing Cold work permit & hot work permit as desired.



Speaking on the occasion, Shri. Sushanta Kumar Mishra, Sr. GM. TSML had stressed up on the importance of this type of knowledge sharing sessions for the benefit at individual and industry level by learning and sharing new things. He shared his views on some of the best practices indirectly

influencing Mechanical Maintenance such as Work at Height facilities, IME & training for workmen. He had shared some upcoming best practices through digitalisation & automation in Mechanical maintenance for TSML such as Real time monitoring of Operator Fatigue, Governor based speed control, etc. He had also indicated some of the challenges faced in changing the mind set of workmen while introducing changes.



Speaking on the occasion, Shri Suresh Kumar Pedada (Director of Mines Safety, Mechanical) emphasized on the importance of welcoming people with new ideas for adopting Best practices in Mechanical Maintenance. He also talked about new practices of Non-Destructive testing & Structural Stability. He briefed about some of the technologies used in Operator Fatigue, Tyre repairing & Welding jobs. He also explained about the importance of focusing on skill development as we can't tolerate or compromise performance in any situation. He also appreciated MEAI for its approach in providing opportunities to professionals in their career growth through frequent technical sessions and seminars to remain updated on current issues and concerns of the industry and different approaches to manage them.



The event ended with the vote of thanks proposed by Shri Naveen Shrivastava, AGM-Mining, Tata Steel Mining Limited.



HYDERABAD CHAPTER



General Meeting of Hyderabad Chapter. Shri. Sumit Deb, Chairman addressing the members



General Meeting of Hyderabad Chapter at NMDC Conference Hall. Shri. V.S. Rao, Shri. Md. Fasihuddin, Shri. Susheel Kumar attended.



Shri. Sumit Deb, Chairman Hyderabad Chapter felicitating Shri. Venkat Ramayya, Vice Chairman on getting Active Chapter Award



Group Photo of Hyderabad Chapter members

JAIPUR CHAPTER

Training cum Workshop

Two-Day Training Cum Workshop on Remote Sensing, GIS & Drone Survey” was conducted successfully on 9 -10 September by the Chapter at Mining Welfare Centre for Mining Engineers, Geologists and Survey professionals as well as students of Mining Engineering and Geology. Altogether 46 participants from Rajasthan, Hayana and Gujarat attended the training course. The course module comprised of:

1. Basics of Remote Sensing, Satellite Imagery and its interpretation – Recent Developments by Shri P. C. Bakliwal
2. Basics of GIS – MapInfo Discover Software & QGIS By Dr. Vivek Laul & Dr Manoj Gaur
3. Basics of ArcGIS By Shri Bhupesh Gupta
4. Basics of Drone Survey and its application By Shri Vishal Modi

The Course Module also included practical training exercises in the classroom itself. Participants also expressed admiration and higher degree of satisfaction on the program through Feedback forms received during valedictory session. They also showed interest in attending other training programs required to nurture professional skill.



Lecture on QGIS by Dr. Majoj Gaur.



Welcome address by Shri. K.S. Yadav Chapter Secretary



Opening Address by Shri. Anil Mathur Chapter Chairman



Felicitation of Faculty members

RAJASTHAN CHAPTER-UDAIPUR

National Seminar at a Glance

Three-day National Seminar & Exhibition on "Role of Innovation and Technology in Turnaround of Mining Industry" was organized by the Chapter and Hindustan Zinc Ltd., Udaipur during 26-28 August, 2022 at Orbit Resort, Udaipur.

The mining industry is a major economic activity in India which currently contributes to around 2.5% of country's GDP. Mining is often perceived as traditional and conservative industry with respect to innovations and advancement in technological changes. Over the past decades, it is facing serious challenges such as decreasing ore grades, over exploitation of shallow mineral deposits, delay in newer discoveries, specific technological needs of mining deeper deposits, management of multiple issues from mine to mill, ore from pit to port, ensuring minor metal and byproduct recoveries, value addition and utilization of waste, geo-technical issues, environmental concerns, shortages of skilled professionals, interruptions in material supply and alike. These challenges have created a turning point and imperative to innovations and technological advancement in mining industry, which play a critical role in improving operations feasibility, efficiency and cost optimization.

In order to cater to the needs of above, the Rajasthan Chapter-Udaipur during its executive meeting brainstorming session it was decided to organize a National Seminar on the "Role of Innovation and Technology in Turnaround of Mining Industry" jointly with Hindustan Zinc Ltd, Udaipur from 26-28 August, 2022.

Prior to inaugural function on 26th August afternoon, 5th Council Meeting of MEAI and Extra Ordinary General Meeting (EGM) was organized under the chairmanship of Shri K Madhusudhana, President, and Shri M Narasaiah, Secretary General, MEAI. The Chapter welcomed Shri K Madhusudhana, President, Shri DB Sundraraman, Vice-President III, Shri M Narasaiah, Secretary General and Shri BSP Raju, Joint Secretary-cum-Treasurer along with all the Council members came from all over India by providing uparna and traditional pagdi.



On this occasion an exhibition covering various innovations and advanced technologies in mining sector was inaugurated by Chief Guest Dr KB Pandya, IAS, Director, Dept. of Mines & Geology, GoR, Shri Pradeep Gawande, IAS, MD, RSMML and Shri Arun Misra, CEO, HZL with all dignitaries. The exhibitors were HZL, Normet India Pvt. Ltd., Sandvik, Geotek, Aska Equipments, Maco Corporation, Deptt. of Mines & Geology, Tyre Technocrats, HK & Associates, Garuda UAV Soft Solution, Volvo, LSC Infratech, K White Granite, Safe Mintech Solution, MECL, Naghpur, RSMML Pvt Ltd. Udaipur and Rajsmand DMFT.



After the inauguration of exhibition, inaugural function was held at 5:00 PM. Shri K Madhusudhana, National President MEAI presided over the function and Chief Guest was Dr KB Pandya, IAS, Director, Deptt. of Mines & Geology, Govt. Of Rajasthan; Shri Pradeep Gawande, IAS, MD, RSMML and Shri Arun Misra, CEO, HZL were the Guests of Honour. Key-note Speaker was Shri DB Sundraraman, Vice-President (Raw Material), Tata Steel Ltd and Chairperson, Tata Steel Mining Ltd. Shri Praveen Sharma, COO-HZL & Organizing Secretary, Seminar was on the dais. After floral welcome of the guests and lighting of lamp in front of Lord Ganesha by the dignitaries, the welcome speech by Shri Praveen Sharma was delivered. He told that this seminar will definitely bring the revaluation in mining industry for adoption of latest technology and innovation in mining industry which will ultimately increase the growth of country. He further, told that above 40 Technical Papers on various subjects will be presented in the technical sessions. He also thanked to all exhibitors for excellent exhibition on innovation and technology in mining industry.



(L to R) Shri DB Sundraraman, Shri KB Pandya, IAS, Shri K Madhusudhana, Shri Pradeep Gawande, IAS, Shri Arun Misra, CEO, HZL and Shri Praveen Sharma, COO-HZL

Keynote Speaker Shri DB Sundraraman, told that adoption of latest mining technology, digitalization, innovation are the only tools for sustainable mining. He further told that how production optimization, value chain optimization, work force transformation, asset performance management, DGPS, drone, exploration and resource modeling, maintenance technology, high technology in blasting, reduction of carbon foot print, gasification can improve the growth.

On this occasion following persons were recognized for their excellent contribution to the mining industry.

1. Shri Prof. Sushil Bhandari was presented with Lifetime achievement award by Mining Engineers Association of India.
2. Dr KB Pandya, IAS, Director, DMG for best department of mining reorganization from Govt. of India.

3. Shri Priyansh Telreja, HZL Best Student Award of Rs 21000 (Cash Prize) and Certificate by MEAI.
4. Shri Asutosh Keer, was given MEAI, Tata Bhupendra Singh Bhati Scholarship 2022, Certificate and Cash prize of Rs. 15000.
5. Shri Praveen Sharma, COO-HZL was recognized by providing shawl on behalf of Hindustan Zinc Ltd for world class mining of Lead and Zinc, Silver and Association Minerals.
6. Shri MK Bokadia, RK Marble was recognized by providing shawl on behalf of RK Marble for world class mining of marble.



Felicitations of Prof. Sushil Bhandari, Shri Priyansh Telreja and Shri Asutosh Keer

While addressing, Shri Rajendra Harlalka, Owner of Khetan Business Corporation told that continuous efforts for achieving perfection in mining are to be made by the mining engineers and emphasized to increase the resources.

While addressing, Guest of Honour Shri Arun Misra told that by adopting innovation and high technology in agriculture and mining can improve the economic growth of the country. He also emphasized on skill development and robotic technology simultaneously.

While addressing, Dr KB Pandya, IAS, Director, DMG, Govt. of Rajasthan told that mining is a challenging job. Rajasthan is rich in minerals and this industry can grow with foreign investment. Masonry stone is giving highest revenue to the govt.



On this occasion a souvenir and a pen drive was released by the all dignitaries.

While addressing, Shri K Madhusudhana, President, MEAI thanked the Chapter & Hindustan Zinc Ltd, Udaipur for the success of the seminar. He emphasized on resource development, Skill Development in mining Industry and also join DMFT and CSR activity with MEAI.

While addressing, Shri Pradeep Gawande, MD, RSMML told that for increasing the production of minerals, latest technology viz. drone survey etc.



Vote of thanks was proposed by Shri Asif Mohammad Ansari, Secretary of the Chapter.

Technical Session I, II & III on 27.08.2022

There were three Technical Sessions on the 2nd day of the seminar. For technical session I, Prof. Sushil Bhandari and Shri AK Garg, General Manager, GMDC were the chairpersons. In this session Keynote address was presented by Dr Pradeep Kumar Jain, Chief Mineral Economist (Retd.) and

Consultant Indian Bureau of Mines on the subject of structural reforms in the Indian mining sector for ease of doing business and sustainable development. Shri Harish Gehlot and team presented a paper on mining method for geotechnically challenging ore body at Rampura Agucha underground mines. Shri Kuldeep Singh Solanki presented a paper on explosive act 1984 made simple. Shri KS Choudhary presented a paper on Pb-Zn Resource identification and assessment through interpretation of ancient mining in south of Agucha Mine. Dr Ranjit Choudhuri presented a paper on Potash exploration - understanding of its Loaded implication in the National and Global Context. Shri Narendra Kumar Kavdia presented a paper on Six Essentials to Make Tier-1 Mineral Discoveries in India.



There were four technical papers presented in Technical session-II. Dr G.K. Pradhan, Dean AKS University, Satna (M.P.) & Dr. S.K. Parihar, Council Member & Ex HOD & Professor, Min. Dept., MBM Engg. College, Jodhpur were the Chairpersons. In this session Keynote address was presented by Anthony de Veth on The Journey to Modernize Hindustan Zinc Limited's Underground Mining Operations. Shri Gunshekhhar Kunwar presented on the Role of Digitlisation, Automation, Electrification in Mining 4.0. Shri Anshul K Khandelwal presented on Digital Innovation at Sindesar Khurd Mine, Hindustan Zinc. Shei Ravi Babel presented on Virtual Reality Based Training for Shaft Winder Application at Rampura Agucha Underground Mine, HZL.

In the technical session-III four papers were presented. Dr Ranjit Choudhary, Ex GGM, RSMML; Hon'ble Member FIMI; Ex President Geoscientist Society of Rajasthan and Shri Deepak Gupta, Chairman, MEAI Delhi Chapter were the Chairpersons. Shri Srinivas Kammala presented on

Maximization of Ore Recovery from Crown Pillar by Use of Technology In Underground Metal Mine. Shri Somdeb Dutta Mal presented on Structural Geology Control on Ore Mineralization And Implication On Mine Design at Baroi Lead & Zinc Mine, Zawar, Shri PK Bhatt presented on Sustainable and Eco-Friendly Tailing Storage at Zawar Mines Through Dry Tailing Plant Operations. Shri Sanjit Adhya presented on Deployment of Female Workforce in Three Shifts at Noamundi Iron Mine of M/S Tata Steel Limited.

On this occasion a cultural program was organized based on Rajasthan culture, folk dance and songs. All the participants from various parts of India appreciated and enjoyed the programme.

Technical Session IV & V on 28.08.2022

There were two Technical Sessions on 3rd day of the seminar. During the 4th technical session, five technical papers were presented. Er. L.S. Shekhawat, Head- Mining, Adani Enterprises and Dr SC Jain, Prof. Mining Engineering, CTAE were Chairpersons. Shri Lalit Mohan Soni presented on Role of Innovations and Technology in Turnaround of Mining Industry Strategic. Shri P. Ravindran presented on Adaptation of Advanced Technology in the Field of Exploration and Its Boon to Mining Industry. Shri Ayan Giri presented on Quantifying the Performance of Resin Bolts and Comparison of Its Efficiencies Vis-a-Vis Mines Safety. Shri Sakshi Gupta presented on Use of Automation for Improvement in Production Drilling at Sindesar Khurd Mine. Shri Vinayak Poddar presented on Unlocking value in mining through centre of excellence.

During 5th technical session, four technical papers were presented. Er. Anil Mathur, Chairman, Rajasthan Chapter Jaipur and Dr. Anupam Bhatnagar, Professor & Head, Dept. of Mining Engg., CTAE Udaipur were Chairpersons. Dr. Pramod Rajmeny presented on Innovative Practices Catalyze Ramp-Up of Mine Production Amid Enhanced Safety. Shri S.C. Joshi presented on A View on Occupational Safety Health and Working Conditions Code2022. Shri R. P. Gupta presented on Production of Green Energy from Natural Resources Like Hydrozen and Solar Power in Mining and Allied Industry. Shri Sabyasachi Nayak presented on A Roadmap for Developing the Environment, Health, and Safety [EHS] Framework in the Mining Industry.

Valedictory Function

Valedictory function of three day seminar was held on 28.08.2022. Shri K Madhusudhana National President of MEAI presided over the function. Chief Guest of the function was Shri Ram Lal Jat, Hon'ble Revenue Minister, Govt. of Rajasthan and Guests of Honour were Shri Akhilesh Joshi, Ex CEO HZL & Director of RSMML, Shri Mahesh Mathur, Addl Director of Mines & Geology, Rajasthan, Shri SC Joshi, Retd. Chief Labour Commissioner, Govt. of India and Shri Praveen Kumar Singh, Ex MLA.



A warm welcome of all the guest was done by presenting Bouquet, Uparna & Traditional Pagdi.

Welcome speech was delivered by Shri Praveen Sharma. He told that about 400 participants from different parts of the country have participated and 40 papers were presented by the experts from India, Australia, Jambia and China on Mineral Exploration, Exploitation, Beneficiation, Atomization, Digitization and Skill Development which will definitely benefit the stakeholders, policy makers, managers, entrepreneurs and students.



Sh Arun Kumar Kothari, Past President MEAI appreciated the papers presented during the seminar and briefed about the recommendations of the Seminar like mining of deep seated deposits, exploration, potash mining, change of explosive rules, simplification of mines and mineral development rules, new classification of minerals, mineral bearing land etc. which shall be sent to Govt. He told that entry of females in mining is a good sign and thanked to those female authors presented papers on this occasion. He requested

the Hon'ble Minister to recommend the outcome of seminar to the Govt.

MEAI specially felicitated the following for their excellent contribution for the success of this seminar.

- Dr SS Rathore, Ex Dean CTAE & Ex-Chairman, MEAI-Udaipur felicitated by Shri Ram Lal Jat, Hon'ble Revenue Minister, Govt. of Rajasthan.
- Smt Laxmi Meena and Smt Geeta Meena brand ambassador HZL felicitated by Shri Ram Lal Jat, Hon'ble Revenue Minister, Govt. of Rajasthan.
- Shri Alpesh Lodha & Shri Deepak Lodha of Orbit Resort were felicitated by providing shawl.

In his address, Shri SC Joshi, Retd. Chief Labour Commissioner, Govt. of India said that mining is backbone of prosperity of the country. Productivity, Safety and Environment balance are the challenges in mining, which can only be achieved by adoption of latest technology. He further emphasized on skill development, health and social security of workers. He told that soon new unified labour code shall be published. He congratulated organizers for grand success of the seminar.

In his address, Shri Pradeep Kumar Singh, Ex MLA told that mineral bearing land should be given preference over the forest and charagah as this land cannot be transferred to elsewhere. Development of mining industry is possible only by adopting latest technology in mining.



While addressing Sh Mahesh Mathur, Addl. Director, DMG congratulated organizers for grand success of the seminar. He told that we should improve the adverse image of mining in the society by eco-friendly mining. He further told that mining with protection of environment is big challenge for small mines. Govt. has changed the rules in mining in which lease renewals has been changed from 2025 to 2040 and lease agreement can be done prior to EC but mining is permissible only after environment clearance.

While addressing Shri Akhilesh Joshi, Ex CEO HZL & Director of RSMML congratulated organizers for grand success of the seminar. He told that mining is art in which upgradation

of mineral and mining should be done in such a manner that the low grade mineral may become viable.



While Addressing Shri K Madhusudhana, National President MEAI, told that if a small amount of DMFT is used for skill development, it can provide employment in mining industry. He requested the Govt. for providing land for office purpose of Udaipur Chapter. He congratulated HZL & RSMML for supporting the Rajasthan Chapter-Udaipur.



While addressing Shri Ram Lal Jat, Hon'ble Revenue Minister, Govt. of Rajasthan told that Rajasthan mining revenue is above Rs 7000 crores and providing employment to about 7 Lakh persons. Minerals play a significant role for revenue generation and employment in Rajasthan. Rajasthan Govt. is simplifying the mines rules like allotment of land in khatedari, renewal of lease up to 2040, minimum area of mining lease, lease agreement prior to environment clearance etc. He assured that he will send recommendations of the seminar to Chief Minister of Rajasthan. He further told that this type of seminars will help the Govt. in framing rules. He congratulated Rajasthan Chapter-Udaipur for grand success of the seminar.



On this occasion first prize of exhibition was awarded to Normet India Pvt. Ltd. and the second prize was given to DMFT of Rajsamand (DMG).

Vote of thanks was delivered by Dr SK Vashisth, Council Member & GM HZL and Program Anchoring was done by Anshuka Chattopadhyay, Geologist of HZL.

Recommendations of the National Seminar

1. Advanced technology and deep drilling rigs need to be applied to explore deep seated mineral deposits.
2. In case of potash in Rajasthan, invite investors to explore the deposit to a mineable viability. Once deposit is established, thereafter suitable mining could be evolved.
3. The explosive magazines are to be established in cluster of mining areas with a provisions to Store, Sale and use of explosives to help the small mine lease holders.
4. Implementation of advance technology in small scale mines and low grade minerals to make mining profitable and to increase the mineable reserves.
5. To promote zero waste based mining through use of advance machinery and monitoring with digital tools.
6. Beneficiation of low grade minerals is essential to make the use of the mineral and also to extract low grade minerals.
7. Auction System has many complexities, so auction system has resulted in downfall of mining activities. Indian companies are going abroad since the system is actually more easy for grant of mining leases. Therefore, auction Procedures may be made easier to promote mining activities.
8. Govt. of India has brought several modifications in MMDR Act and Mineral Concession Rules. But in the country things are not happening at the ground level. There is a need for co-ordination of various departments at the State level to reduce delay in clearance of mineral concessions.
9. There is a need of new classification of Mineral Bearing Lands that should be added in the Land Record system. Sanctioned Leases should be termed as Specific Mineral Bearing Zones. Lands where Mineral deposit has been established then it may termed Prospective

Mineral Bearing Zones. No Non-Mining Activity may be Permitted In Mineral Bearing Zone.

10. Presently at most of the mines improper and incomplete record keeping is there. Therefore, appropriate digitized records at every stage of mining operations be recorded and available to top management and decision makers. It should also be available to regulatory authorities as and when required.
11. Blast Result Software be used regularly so that accidents are reduced and data analysis can be carried out. A blast may fail in computer but it should not in field.
12. MEAI has a Think Tank of experts for Skill Development in Mining Sector. It would be appreciated if the Ministry of Mines could include the MEAI also in its fold for Skill Development. MEAI has 26 branches and more than 6000 mining experts all over the country and they could be of a great help in such a national project.

RAYALASEEMA CHAPTER

Workshop on 10th September 2022

A One-day Workshop was organized on 10th September 2022 at "Tarangini", UltraTech cement Limited, APCW, Tadipatri in association with Datamine International Limited, Smartchem Technologies Limited and Garware Technical fibres.

Technical presentations were made by eminent speakers on the following:

- Use of mining software in Mine Planning and Designing – Datamine International Limited, New Delhi
- Latest case studies on usage of ANFO in deep hole blasting – Smartchem Technologies Limited, Pune



Interaction with vendors at product display stalls



Inauguration of workshop by lighting of lamp



Presentation by Eminent speakers



A section of audience

In all 70 members participated the workshop. Shri K Madhusudhana, President – MEAI, Shri B Rama Rao, FH-Tech, UltraTech Cement, Shri PV Krishnaiah Yadav, National Council Member, Shri K Karunakara Rao, Chairman, RS Chapter, and Around 35 Life Members and 30 Senior level members from Rayalaseema cluster of mines and representatives of sponsors participated in the workshop.

Annual General Body Meeting

Annual General Meeting was held on 10th Sep 2022 at 04:30 PM after the Workshop. Shri K Sudhakar, Secretary, RS Chapter welcomed the dignitaries Shri K Madhusudhana, President - MEAI, Shri PV Krishnaiah Yadav, National Council Member, Shri K Karunakara Rao, Chairman, Rayalaseema Chapter and other Members of MEAI.

The Secretary has informed the house that Prof. R C Hanumanthu [LM – 3164] has passed away on 28th August 2022. The members paid tribute to him. The meeting continued with the agenda points.

Presently the chapter has 107 members, based on the geographical area of our chapter 9 members have moved out to other chapters and 9 members have moved in from other chapters. 3 new members have enrolled in the last couple of days.

Presentation of Accounts: The balance sheet was presented and member approved the same.

New Office Bearers:

As the term of present office bearers was completed and as the Chapter Chairman is moving out of our geographical area, he has requested to elect an alternate person in his place.

Shri K Madhusudhana, President, MEAI has conducted the selection process of the new office bearers and Executive committee members for the period 2022-24.

Shri P V Krishnaiah Yadav, NCM - MEAI has proposed Shri K Nagasidda Reddy as the New member for the position of the Chairman and the house has approved the proposal. The house has also approved the other office bearers for the term 2022 – 2024.

Chairman:

SHRI K NAGASIDDA REDDY LM - 2216

Vice Chairman:

SHRI AJMAL AHMAD N LM - 1848

Secretary:

SHRI KALIDINDI SUDHAKAR LM - 2541

Jt Secretary:

SHRI E VASUDEVAN LM - 3065

Treasurer:

SHRI K RAMANJANEYA REDDY LM - 2488

Executive Committee Members:

SHRI D VENKATA RAMANA LM - 3099

SHRI K V S SARMA LM - 1950

SHRI MADDELA VENKATESU LM - 4476

SHRI K NAGA THULASI REDDY LM - 1755

SHRI O KESAVA REDDY LM - 2785

SHRI O VASUDEVA REDDY LM - 5643

In addition to above Executive Committee, in view of having better operational parameters, the secretary has proposed to form two independent committees, which will operate on their own and function in co-ordination with the office bearers for the period 2022-2024 to help in having better funding and enrollment of new members.

RESOURCE MOBILISATION COMMITTEE

Chairman:

SHRI MUKESH KUMAR SINHA LM - 4291

Members:

SHRI ANIL D KAWALE LM - 2322

SHRI J NAVEEN KUMAR REDDY LM - 2532

SHRI L SOMASEKHAR REDDY LM - 3129

MINES HOD LIM – 63.

NEW MEMBERS ENROLLMENT COMMITTEE

Chairman:

SHRI KAMMIT RAMA SUBBAIAH LM - 4431

Members:

SHRI K V SURESH REDDY APPLIED

SHRI S VIJAY KUMAR REDDY LM - 3595

SHRI C VENKATA RAMANAIAH LM - 2699

SHRI GONA MANOHAR REDDY LM - 2490

Newly Elected Chairman, Shri K Nagasidda Reddy thanked all members for electing him as the Chairman for Rayalaseema Chapter. He has expressed that it is a proud moment for him to hold the position and will strive to keep the standards of the Association. He also conveyed to intensify efforts for the enrollment of the new memberships. The new Office Bearers thanked the house for electing them as the office bearers.

The meeting ended with Vote of Thanks proposed by the Secretary of the Chapter



Proceedings of AGM and Installation of New Executive Committ

VERAVAL PORBANDAR CHAPTER

Chapter Executive Committee made necessary arrangements to make the “Azadi Ka Amrit Mahotsav” and “Har Ghar Tirnaga” campaign aimed at boosting national pride during 13-15 August 2022 in Saurashtra Region. Chapter provided national flags and displayed banners. The programme started from Mines Office, Ambujanagar on 13th August 2022 in the presence of Chief Guest Mr MK Jain, Mines Head of Ambuja Cement, Chapter Chairman Mr AK Jain, Executive Committee member Mr Jitendra Kumavat. Mr MK Jain and AK Jain delivered a speech with their own hindi poem on Azadi Ka Amrit Mahotsav among 20 members and mines workers. One and half hour programme ended with refreshments.

After this programme, Chapter Chairman AK Jain and few members visited Jeevandeep Trust Centre (centre for Care to Handicapped Children), Kodinar and joined prabhat pheri with handicapped children. MEAI Members devoted time with handicapped children and distributed national flags and sweets to them.

The Chapter members celebrated successfully Har Ghar Trinaga programme in other parts of Saurashtra Region also. The Chapter's Whatsapp group shared among all its members about above in detail.



MEAI TECH SERIES – SEPTEMBER 2022

Innovation for better Productivity in GOLD Exploration in Mining Sector in India

As a continual improvement on Training, Development & Programs, the Third disquisition in the Tech Series for the mining professionals was held virtually on 17th September 2022 at 06:30 pm on WebEx platform.

After a warm welcome by Mr Deepak Vidyarthi, Chairman-TDPC, the President- MEAI Mr K. Madhusudhana highlighted on the origin of MEAI TECH SERIES and extended a hearty welcome to the speaker Dr. P. Sangurmath on a very important topic on “Gold Exploration in India” and wished the presentation would be very fruitful and beneficial to the participants.

Dr. Sangurmath made a presentation on Innovation for better Productivity in Gold Exploration in Mining Sector in India.

He touched upon the history of Gold mining in India and gave a detailed account of the Gold occurrences in various geological settings. He explained in detail about the gold exploration and mining activities at Wayanad-Nilambur Gold Fields, Gadag Gold Fields, Kempankote Gold Fields, Ramgiri Gold Fields, Hutti Gold Fields, Kolar Gold Fields etc and laid emphasis on the risk and success involved in Gold exploration.

The gold ore reserves and grade of all the states of India were highlighted with due emphasis on the utilization of the Gold Ore Tailings. He further presented on the opportunities and challenges in Gold Exploration and mining in India.

With a very interactive session the Presentation concluded with thanks to the speaker for the wonderful disquisition and for having taken pains it's for preparation.



LIFE MEMBERSHIP APPROVED BY THE COUNCIL

1st Council Meeting

LM Number - Name (Mr / Ms) - Chapter

- 5753 - Shivakumar L - Bellary Hospet
5754 - Basavarajappa H J - Bellary Hospet
5755 - Naresh Kakumanu - Bellary Hospet
5756 - J V Gireesha - Bellary Hospet
5757 - Pradeep D J - Bellary Hospet
5758 - Pramod S Ritti - Bellary Hospet
5759 - Shailendra Kumar - Hyderabad
5760 - Tathagata Mukherjee - Kolkata
5761 - Chandan Pramanik - Kolkata
5762 - Rameshappa - Bangalore
5763 - Perumandla Shashikanth - Hyderabad
5764 - Velmareddy Prasanna Kumar Reddy - Hyderabad
5765 - Vinay Kumar - Bailadila
5766 - Bunga Krishna Kishore - Visakhapatnam
5767 - Lakkarsu Krishna - Hyderabad
5768 - Sivanbharathi Ramachandran - Tamilnadu
5769 - S Chandrasekhar - Hyderabad
5770 - Syed Irfan Basha - Bellary Hospet
5771 - Amaresh Y - Bellary Hospet
5772 - Naresh Kumar B - Bellary Hospet
5773 - Shashidhara L - Bellary Hospet
5774 - Harish Deshpande - Bellary Hospet
5775 - Khader Basha - Bellary Hospet
5776 - Ananda H - Bellary Hospet
5777 - T Jitender Reddy - Bellary Hospet
5778 - Sandeep R Manakeshwar - Bellary Hospet
5779 - Dhruvakumara B Y - Bellary Hospet
5780 - Venkatachary R - Bellary Hospet
5781 - G Madhusudana Reddy - Bellary Hospet
5782 - Bharath Kumar Reddy G - Bellary Hospet
5783 - Pandanaboyina Nagaraju Yadav - Bellary Hospet
5784 - Vijayakumar G - Bellary Hospet
5785 - Nagaraja G - Bellary Hospet
5786 - Ashwek Amrut Desai - Bellary Hospet
5787 - Raguri Harish - Bellary Hospet
5788 - Sarvesh Sitaram Gaonkar - Bellary Hospet
5789 - Tejeswaran K M - Bellary Hospet
5790 - Prasad Teli - Bellary Hospet
5791 - Tofiq Ahmed - Bellary Hospet
5792 - Rajani Kumar V - Bellary Hospet
5793 - Ganesh Naik - Bellary Hospet
5794 - Doreraj S M - Bellary Hospet
5795 - Visawanatha A - Bellary Hospet
5796 - Vinayaka Hiremathada - Bellary Hospet
5797 - Gajjala Partha Saradhi Reddy - Bellary Hospet
5798 - Sunil G - Bellary Hospet
5799 - Dillep Kumar Suthar - Udaipur
5800 - S Ravichandran - Tamilnadu
5801 - Vivekanand Acharya - Jaipur
5802 - Dr. Karuppanan S - Tamilnadu
5803 - Rajesh S Chaubey - Jabalpur
5804 - Ravikumar - Bellary Hospet
5805 - Mahammadrafik Bagwan - Bellary Hospet
5806 - Vijaya Narasimhulu Jenka - Bellary Hospet
5807 - Rajashekhara D - Bellary Hospet
5808 - M. Sreenivasulu - Bellary Hospet
5809 - Ashish Varma Mandapti - Bellary Hospet
5810 - Sudhir Y Wakhale - Bellary Hospet
5811 - K.Venkatasreedhar - Bellary Hospet
5812 - Meerakori Veera Mahesh - Bellary Hospet
5813 - Theliki Sivasankaraiah - Bellary Hospet
5814 - Komma Santhosh Reddy - Bellary Hospet
5815 - Nakka Siva Prasad - Bellary Hospet
5816 - Vikram Singh - Hutti Kalaburagi
5817 - Arvind Mathur - Bellary Hospet
5818 - B. Vikram Pyus - Tamilnadu
5819 - Madhabananda Acharya - Bellary Hospet
5820 - Kommana Mallikarjuna Rao - Hyderabad
5821 - Srikanth Sriramulu - Hyderabad
5822 - R. Govindarajan - Bailadila
5823 - Santhosh Malatesh Dundannanavar - Bellary Hospet
5824 - Ganesh Kumar Reddy Pallo - Bellary Hospet
5825 - C Suresh Babu - Bellary Hospet
5826 - Kotresh M - Bellary Hospet
5827 - M Eswara Reddy - Bellary Hospet
5828 - Praveen Kumar J S - Bellary Hospet
5829 - Durgaprasad Kuppili - Bellary Hospet
5830 - Goppumukkala Suryanarayana Raju - Bellary Hospet
5831 - Sreedhara N B - Bellary Hospet
5832 - Krishna B - Bellary Hospet
5833 - Azar Mohammad M - Bellary Hospet
5834 - K Chandrashekar - Jabalpur
5835 - S R Dehariya - Jabalpur
5836 - Phool Singh Dhruw - Jabalpur
5837 - Veerendra Kumar Jain - Jabalpur
5838 - Sanjay Kumar - Jabalpur
5839 - Sujit Kumar - Jabalpur
5840 - Anurag Kumar Sahu - Jabalpur
5841 - Ankush Yadav - Jabalpur
5842 - Sunil Goyal - Jabalpur
5843 - Vishal Bhardwaj - Jabalpur
5844 - Jitendra Kumar Medhankar - Jabalpur
5845 - Aqeel Ahmed Khan - Jaipur
5846 - Damodara Reddy Chinnasane - Bellary Hospet
5847 - Mahaveera K A - Bellary Hospet
5848 - Mallesha S - Bellary Hospet
5849 - Sivakumar K - Bellary Hospet
5850 - K Yallappa - Bellary Hospet
5851 - Chilukuri Narasimha Rao - Singareni

5852 - Divakar Hegde - Bellary Hospet
5853 - Umesh Sawarkar - Bellary Hospet
5854 - Kondabattini Gyaneswar - Bellary Hospet

2nd Council Meeting

5855 - Vennapusa Umesh Vamsidhar Reddy - Verval Porbandar
5856 - Indraneel Dawande - Jabalpur
5857 - Ankan Mitra - New Delhi
5858 - Rakesh Kumar Jaiswal - Jabalpur
5859 - Rajesh Kumar Das - Raipur
5860 - Rajesh Kumar Gautam - Jabalpur
5861 - Varun Kumar Mishra - Jabalpur
5862 - Pravin Yeshwant Manchalwar - Bellary Hospet
5863 - Hatim Hussain Faizee - Udaipur
5864 - Thriyambaka Shastry Y M - Bellary Hospet
5865 - Piyush Srivastava - Barajamda
5866 - Prasanta Kumar Sinha - Raipur
5867 - Mediseti Sasi Kiran - Visakhapatnam
5868 - Shivakumar Lakhara - Udaipur
5869 - Mayank Bhavsar - Udaipur
5870 - Manoj Behari - Jaipur
5871 - Mallikarjuna Kambalyal - Bellary Hospet
5872 - Krishna Reddy - Bangalore
5873 - Raghavendra S Kulkarni - Bangalore
5874 - Naik Kartik Rama - Bangalore
5875 - Bartholomew D' Souza - Bangalore
5876 - Shrinivas L Pattar - Bangalore
5877 - Saurbh Rajesh Mishra - Bangalore
5878 - Sajjad Ahamed Jelani G - Bangalore
5879 - Akshu Dilip Taksande - Bangalore
5880 - Mahesh Dutt Purohit - Jaipur
5881 - Keshavan Kasturi - Bangalore

3rd Council Meeting

5882 - Rajeev Ranjan Verma - Bailadila
5883 - Sumant Vasant Dhanodkar - Mumbai
5884 - Souradeep Mukherjee - Kolkata
5885 - Satya Prakash Sahu - Bhubaneswar
5886 - Joseph John - Bangalore
5887 - M Shankar Maraiiah - Bangalore
5888 - Niladri Bhattacharjee - Bhubaneswar
5889 - Thangella Sivnageswara Rao - Hyderabad
5890 - A. Balamurugan - Tamilnadu
5891 - Sharath Kumar P - Bellary Hospet
5892 - Indrani Basak - Kolkata
5893 - Vir Bhadra Baj - Jaipur

4th Council Meeting

5894 - Shri Prasannakumar C P - Bangalore
5895 - Shri K C Manoj - Bangalore
5896 - Shri Vijay R - Bangalore

5897 - Shri Venkatesh Patil - Bangalore
5898 - Shri Sudheer K V - Bangalore
5899 - Shri Vignesh Kumar M - Bangalore
5900 - Shri Praveen F - Bangalore
5901 - Shri Manoj Seeman S - Bangalore
5902 - Shri Soosai Adaikala Raj A - Bangalore
5903 - Shri Ranjith M - Bangalore
5904 - Shri Amaresh - Bangalore
5905 - Shri Darshan B U - Bangalore
5906 - Shri Shivakumar I C - Bangalore
5907 - Shri Manohar A - Bangalore
5908 - Shri K Lakshmappa - Bangalore
5909 - Kamal Kumar Baswal - Himalayan
5910 - Neeraj Kant - Himalayan
5911 - Sujit Roy - Kolkata
5912 - Somnath Gain - Kolkata
5913 - Yogesh Gehlot - Rajasthan Jaipur
5914 - Ashima Jain - Raj-Udaipur
5915 - Subhasis Das - Tamilnadu
5916 - Ajay Kumar Goyal - Barajamda
5917 - Shri Manoj Kumar Tripathi - Jabalpur
5918 - Shri Pankaj Kumar - Udaipur
5919 - Ibrahim Sharief - Jabalpur
5920 - Kumar Shyamal Kishore - Jabalpur
5921 - Maneti Thirupathi - Jabalpur
5922 - Laxmikant Kaushik - Jabalpur
5923 - Kamlesh Kumar - Jabalpur
5924 - Arvind Tukaram Shende - Jabalpur
5925 - Amit Biswas - Jabalpur
5926 - Modi Yakin Rajeshkumar - Jabalpur
5927 - Sunil Kumar Upadhyay - Jabalpur
5928 - Bharat Singh Rao - Jabalpur
5929 - Vishal Raj - Jabalpur
5930 - Abhishek Mitra - Jabalpur
5931 - Harish H P - Bangalore
5932 - Lakshamma - Bangalore
5933 - Sanjay M Girhe - Jabalpur
5934 - Naresh Kumar Katariya - Jabalpur
5935 - Vijaya Vikram R.G - Bangalore
5936 - Lokesh Kumar G.N. - Bangalore
5937 - Monisha G.Y - Bangalore
5938 - Vishwanath Uppugunduri - Bangalore
5939 - D. Ramanjaneya Reddy - Bellary - Hospet

5th Council Meeting

5940 - Amal Roy - Hutti – Kalaburagi
5941 - Dean Derrick D - Hutti – Kalaburagi
5942 - Abhijith M Suryavanshi - Hutti – Kalaburagi
5943 - Rajmohammed - Hutti – Kalaburagi
5944 - Sachin Kathare - Hutti – Kalaburagi
5945 - ManJunatha T S - Hutti – Kalaburagi
5946 - Kailasam T - Hutti – Kalaburagi
5947 - Prashanth - Hutti – Kalaburagi

- 5948 - Venkatesh - Hutti – Kalaburagi
5949 - Mohammed Irfan Hulageri - Hutti – Kalaburagi
5950 - Vikram L R - Hutti – Kalaburagi
5951 - Dyamappa Huchappa Adnur - Hutti – Kalaburagi
5952 - M Manjunath Pm Yallappa - Hutti – Kalaburagi
5953 - Ramesh - Hutti – Kalaburagi
5954 - Prashant Poal - Hutti – Kalaburagi
5955 - Anilkumar B V - Hutti – Kalaburagi
5956 - Jakeer Husain - Hutti – Kalaburagi
5957 - Ganesha R B - Hutti – Kalaburagi
5958 - Mahmadsusen - Hutti – Kalaburagi
5959 - Gunti Shivakrishna - Hutti – Kalaburagi
5960 - Bharat Dave - Udaipur
5961 - Gulshan Jawa - Jodhpur
5962 - Prakash Bandenor - Hutti – Kalaburagi
5963 - Sadanand - Hutti – Kalaburagi
5964 - Megharaj - Hutti – Kalaburagi
5965 - Budi Basava - Hutti – Kalaburagi
5966 - Manjunath Kotrappa Kadler - Hutti – Kalaburagi
5967 - Lokesh - Hutti – Kalaburagi
5968 - Shastry M G M - Hutti – Kalaburagi
5969 - Aravinda J - Hutti – Kalaburagi
5970 - Balaji M Suryavanshi - Hutti – Kalaburagi
5971 - Sri Raghava Tj - Hutti – Kalaburagi
5972 - Ramesha G - Hutti – Kalaburagi
5973 - T Ravi Kumar - Bangalore
5974 - M S Venkateswara Rao - Bangalore
5975 - Hareram Singh - Dhanbad
5976 - Pronota Mitra - New Delhi
5977 - Sabyasachee Pradhan - Bangalore
5978 - Pranab Kumar - New Delhi
5979 - Rajneesh Purohit - Udaipur
5980 - Siva Prasad B N V - Bangalore
5981 - Sujit Kumar Sinha - Jodhpur
5982 - Jasraj Gehlot - Jodhpur
5983 - Dheeraj Kumar - Jodhpur
5984 - ChAndra Shekhar Singh - Jodhpur
5985 - Sunil Sanadhya - Udaipur
5986 - Om Prakash Agal - Udaipur
5987 - Mahendra Kumar Bokadia - Udaipur
5988 - Rijumon Dasgupta - Kolkata
5989 - Cheruku Sai Chand - Hyderabad
5990 - Thayaraja M P - Bellary – Hospet
5991 - Imran S M - Bellary-Hospet
5992 - Hemanth Kumar N M - Bellary-Hospet
5993 - O P Somani - Bellary-Hospet
5994 - Siddappa Kalagudi - Bellary-Hospet
5995 - Mahesh Kumar Thautam - Hyderabad
5996 - Himanshu Praveen Sharma - Ahmedabad
5997 - Patel Dipakkumar KanaiYalal - Ahmedabad
5998 - Kevinkumar Amrutlal Vara - Ahmedabad
5999 - Bhatt Bhavik Rameshchandra - Ahmedabad
6000 - Bhatt Dhuval Harshadbhai - Ahmedabad
6001 - Suchika Gupta - Ahmedabad
6002 - Chirag Shah - Ahmedabad
6003 - Devesh Srivastava - Ahmedabad
6004 - Janardan N Dave - Ahmedabad
6005 - Ishank K Bhavsar - Ahmedabad
6006 - Matariya Sureshbhai J - Ahmedabad
6007 - Chandu Pratapbhai Mulubhai - Ahmedabad
6008 - Gajjar Ketankumar Ranavlal - Ahmedabad
6009 - Niravkumar Kantilal Viramagama - Ahmedabad
6010 - Dinesh Samatbhai Makwana - Ahmedabad
6011 - Alla Subba Rao - Ahmedabad
6012 - Pitroda Jaydip Ghanshyambhai - Ahmedabad
6013 - Thakor Shaileshji Harchandji - Ahmedabad
6014 - Patel Ganeshbhai Udabhai - Ahmedabad
6015 - Jadav Kishanbhai Devrajbhai - Ahmedabad
6016 - Pindariya Hebha Mandanbhai - Ahmedabad
6017 - Nakum Anilbhai Devrajbhai - Ahmedabad
6018 - Damor Shantilal Navjibhai - Ahmedabad
6019 - Pragadesh Harshadbhai Patel - Ahmedabad
6020 - Rajnikant Vasantbhai Patel - Ahmedabad
6021 - Yunus Khan Rustamkhan Baloch - Ahmedabad
6022 - Joshiyara Pradipbhai Navinbhai - Ahmedabad
6023 - Akhilesh Singh - Ahmedabad
6024 - Prakash Amrutlal Aboti - Ahmedabad
6025 - Patel Nilesh Kanubhai - Ahmedabad
6026 - Kankad Bhagvan Vallabhbhai - Ahmedabad
6027 - Shiyal Rajesh Bharatbhai - Ahmedabad
6028 - Baraiya Pragjibhai Raghavbhai - Ahmedabad
6029 - Rajubhai Manojbhai Kantariya - Ahmedabad
6030 - Kantevala Hitendrakumar Haribhai - Ahmedabad
6031 - Neeraj Pratap - Ahmedabad
6032 - Rathva Vipulkumar Chhatrasinh - Ahmedabad
6033 - Maheshkumar Karashanbhai Parmar - Ahmedabad
6034 - Ashok Hiralal Gupta - Ahmedabad
6035 - Dangar Sanjay Devayatbhai - Ahmedabad
6036 - Mohitkumar Harajbhai Barad - Ahmedabad
6037 - Prajapati Jaykumar Jitubhai - Ahmedabad
6038 - Khaped Karansinh Babubhai - Ahmedabad
6039 - Lalchandra Shekhar Singh - Ahmedabad
6040 - Riteshkumar Govindbhai Damor - Ahmedabad
6041 - Patel Tarunkumar Nareshbhai - Ahmedabad
6042 - Abhilash Dixit - Ahmedabad
6043 - Ram Hiteshkumar Naranbhai - Ahmedabad
6044 - Patel Karnav Mukeshkumar - Ahmedabad
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6048 - Kotana Appala Naidu - Ongole - Vijayawada
6049 - Bhima Tirumalaiah - Ongole - Vijayawada
6050 - Siriveru Nargarjuna - Ongole - Vijayawada
6051 - Ekkurthi Siva Prasad - Ongole - Vijayawada

6052 - Mallela Mallikarjuna - Ongole - Vijayawada
 6053 - Kondapu Reddy Nagarjuna Reddy - Ongole - Vijayawada
 6054 - Gunji Aruna Sai - Ongole - Vijayawada
 6055 - Midasala Gopi - Ongole - Vijayawada
 6056 - Konda Poulu - Ongole - Vijayawada
 6057 - Bottala Hema Kiran - Ongole - Vijayawada
 6058 - Sammangi Vvi Sai Kumar - Ongole - Vijayawada
 6059 - Annam Munaiah - Ongole - Vijayawada
 6060 - Bolledu Ganesh Kumar - Ongole - Vijayawada
 6061 - Ealaprolu Ravi Teja - Ongole - Vijayawada
 6062 - Jalakam Abhilash - Ongole - Vijayawada
 6063 - Jalakam Abhiram - Ongole - Vijayawada
 6064 - Pabbathi Venkatakrishna - Ongole - Vijayawada
 6065 - Gujja Venugopal Rao - Ongole - Vijayawada
 6066 - Nonabothula Sreekanth - Ongole - Vijayawada
 6067 - Kondapaka Ramanarendra Chary - Ongole - Vijayawada
 6068 - Kethi Reddy Kiran Kumar - Ongole - Vijayawada
 6069 - Arepaka Sivanagaraju - Ongole - Vijayawada
 6070 - Kanchunatham Lakshmi Prasad - Ongole - Vijayawada
 6071 - G Venkateswara Reddy - Ongole - Vijayawada
 6072 - T Chandra Rao - Ongole - Vijayawada
 6073 - P Sunil Teja - Ongole - Vijayawada
 6074 - Murthy Sekhar Babu - Ongole - Vijayawada
 6075 - Chaluvadi Suresh - Ongole - Vijayawada
 6076 - Allampati Aneel Kumar - Ongole - Vijayawada
 6077 - Poru Thulasi - Ongole - Vijayawada
 6078 - B.Simhachalam - Ongole - Vijayawada
 6079 - P.Lakshmi Reddy - Ongole - Vijayawada
 6080 - D.Nasaraiah - Ongole - Vijayawada

(Continued from Page 14)

“Coal never went anywhere. We got another 20 years with coal, like it or not,” Ben Lawson, an executive with Sanaman Coal, said on the sideline of Coaltrans when asked if coal is back. These participants gathered as benchmark Newcastle coal surged to over \$440 per tonne while Indonesia’s coal benchmark price for September was set at \$319.22 per tonne after hitting a record \$321.59 in August.

Western countries have sought to move away from the polluting fossil fuel in recent years to slash carbon emissions but demand for coal has surged this year as governments try to wean themselves off Russian energy while keeping a lid on power prices. Energy prices have jumped to record levels since Russia invaded the Ukraine earlier this year, as many European countries lost access to vital supplies of natural gas and coal from their top provider Russia.

While high coal prices have helped miners like BHP Group, Glencore PLC and Adaro Energy Indonesia

record bumper profits, environmentalists worry that this has stalled decarbonization efforts across Europe, and risks disrupting global climate commitments. A supply gap in sea-borne coal is expected to persist throughout the year and Europe’s 2022 imports of thermal coal could be the highest in at least four years, an analyst told the conference on Monday.

S&P Global Ratings estimated Europe’s energy bill will exceed its pre-pandemic levels by well over 1 trillion euros (\$1.00 trillion) with countries such as Germany restarting some coal power plants to meet winter heating demand. “Walking away from coal hasn’t solved the problem, arguably it has just made things more expensive, at a time when it can’t easily be replaced,” Scott Dendy, executive director of research firm McCloskey by OPIS said at the forum. “Working with coal is the only way to truly implement a workable energy transition.”

Boom years back?

Coaltrans organizers said there was a 30% increase in participants this year from 2019, the last in-person conference before the pandemic.

Some regular participants of the conference said the crowd was reminiscent of past Coaltrans, although it lacked the bling from the years when companies competed with one another to throw the best beach parties and buyers flew in belly dancers to entertain Indonesian miners. Since those boom years, there has been a backlash against coal, culminating in a bleak outlook for the fossil fuel at the last in-person Coaltrans event in 2019.

While the West was increasingly rejecting the dirty fuel back then, China was buying less as it sought to produce its own supply and as renewables gained market share. Miners in Indonesia, the world’s biggest exporters of thermal coal, said at the time they would have to rely on countries such as India, Vietnam and the Philippines for export demand.

In recent months, however, Indonesia has seen buyers from Germany, Italy and Poland coming to Jakarta, looking for bargains. “For the short term, everybody seems to agree that based on recent developments, there is a lot of optimism that coal will remain a mainstay in power source. Not only in Asia, but even Europeans are buying,” said Hendra Sinadia, executive director, Indonesia Coal Miners Association on the sidelines of the conference. (\$1 = 0.9972 euros)

Reuters | September 20, 2022

CONFERENCES, SEMINARS, WORKSHOPS ETC.

ABROAD

10-12 Oct 2022: Australian Mine Ventilation Conference 2022. Gold Coast, Australia and online. Contact AusIMM. T: 1800 657 985 or +61 3 9658 6100 (if overseas)

17-19 Oct 2022: International Mining and Resources Conference. IMARC 2022. Melbourne, Victoria, Australia and online. Contact: connect@imarcglobal.com; Australia: +61 (0) 3 9008 5946

21-22 Oct 2022: International Conference on Mineral Processing and Mining ICMPM. London, United Kingdom. Website URL: <https://waset.org/mineral-processing-and-mining-conference-in-october-2022-in-london>; Contact URL: <https://waset.org>

08-09 Nov 2022: International Conference on Underground Mining Methods and Technologies ICUMMT. Istanbul, Turkey. Website URL: <https://waset.org/underground-mining-methods-and-technologies-conference-in-november-2022-in-istanbul>

18-19 Nov 2022: International Conference on Underground Mining Methods and Applications (ICUMMA). Singapore. Website URL: <https://waset.org/underground-mining-methods-and-applications-conference-in-november-2022-in-singapore>. Program URL: <https://waset.org/conferences-in-november-2022-in-singapore/program>.

29 Nov - 1 Dec 2022: AusRock Conference 2022. Melbourne, Australia and Online. Contact AusIMM. T: 1800 657 985 or +61 3 9658 6100 (if overseas)

20-21 Dec 2022: International Conference on Design Methods in Underground Mining (ICDMUM 2022). Istanbul, Turkey. Website URL: <https://waset.org/design-methods-in-underground-mining-conference-in-december-2022-in-istanbul>; Contact URL: <https://waset.org>

27-28 Dec 2022: International Conference on Coal Resources and Coal Mining ICCRCM. Vienna, Austria. Website URL: <https://waset.org/coal-resources-and-coal-mining-conference-in-december-2022-in-vienna>

11-12 Jan 2023: International Conference on Land Reclamation in Mining Areas ICLRMA. Singapore. Website URL: <https://waset.org/land-reclamation-in-mining-areas-conference-in-january-2023-in-singapore>

21-22 Jan 2023: International Conference on Mineral Deposits and Mining Methods (ICMDMM 2023). Amsterdam, Netherlands. Website URL: <https://waset.org/mineral-deposits-and-mining-methods-conference-in-january-2023-in-amsterdam>; Contact URL: <https://waset.org>

18-19 Feb 2023: International Conference on Bauxite Mining and Alumina Refining ICBMAR. Jeddah, Saudi Arabia. Website URL: <https://waset.org/bauxite-mining-and-alumina-refining-conference-in-february-2023-in-jeddah>

4-5 Mar 2023: International Conference on Mining and Refining of Metals ICMRM. Rome, Italy. Website URL: <https://waset.org/mining-and-refining-of-metals-conference-in-march-2023-in-rome>

4-5 Mar 2023: International Conference on Mining Intelligence (ICMI 2023). Rio de Janeiro, Brazil. Website URL: <https://waset.org/mining-intelligence-conference-in-march-2023-in-rio-de-janeiro>; Contact URL: <https://waset.org>

22-23 Apr 2023: International Conference on Recent Developments in Mining Technologies ICRDMT. London, United Kingdom. Website URL: <https://waset.org/recent-developments-in-mining-technologies-conference-in-april-2023-in-london>

22-23 Apr 2023: International Conference on Mining and Mineral Technologies (ICMMT 2023), Tokyo, Japan. Website URL: <https://waset.org/mining-and-mineral-technologies-conference-in-april-2023-in-tokyo>; Contact URL: <https://waset.org>

3-4 May 2023: International Conference on Mining Technologies and Sustainable Systems ICMTSS. Rome, Italy. Website URL: <https://waset.org/mining-technologies-and-sustainable-systems-conference-in-may-2023-in-rome>

29-31 May 2023: MetPlant Conference 2023. Perth, Australia and online. Contact AusIMM. T: 1800 657 985 or +61 3 9658 6100 (if overseas)

15-16 Jun 2023: International Conference on Mining and Metallurgical Technologies (ICMMT 2023). Toronto, Canada. Website URL: <https://waset.org/mining-and-metallurgical-technologies-conference-in-june-2023-in-toronto>; Contact URL: <https://waset.org>

26-29 Jun 2023: 26th World Mining Congress. Resourcing Tomorrow-Creating Value for Society. Brisbane, Queensland, Australia. Contact: Kristina Liska, Event and Registration Coordinator at registration@wmc2023.org

16-17 Aug 2023: International Conference on Mine Mechanization and Mining Policies (ICMMMP 2023). Tokyo, Japan. Website URL: <https://waset.org/mine-mechanization-and-mining-policies-conference-in-august-2023-in-tokyo>; Contact URL: <https://waset.org>

8-9 Feb 2024: International Conference on Web Mining, Information and Knowledge Extraction (ICWMIKE 2024). Lisbon, Portugal. Website URL: <https://waset.org/web-mining-information-and-knowledge-extraction-conference-in-february-2024-in-lisbon>; Contact URL: <https://waset.org>

17-19 Jun 2024: Molten 2024. Brisbane, Australia and Online. Contact AusIMM. T: 1800 657 985 or +61 3 9658 6100 (if overseas)

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 We Also Make Tomorrow



#SteelFact

Globally, extensive

afforestation

programmes are converting mines
into habitats for local wildlife

Source: World Steel Association

*Currently, an area of 563 hectares
is covered via afforestation in
our mining locations.

*Data as on October 2021



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