

10th Edition

A VIRTUAL CONFERENCE

MINING TECHNOLOGY IN INDIA

Recent Advancements and
Emerging Requirements

November 2, 2020



Co-sponsors:



3rd Edition

A VIRTUAL CONFERENCE

CONVEYING SYSTEMS AND TECHNOLOGIES

Recent Advancements, New Solutions
and Emerging Consumer Requirements

November 3, 2020

Co-sponsors:



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MINING TECHNOLOGY IN INDIA

Mission

- India has a wide variety of mineral deposits across its geographical expanse. However, the mining sector's true potential remains largely untapped, as reflected in the sector's contribution of 2-3 per cent towards the national GDP. There is a huge potential to enhance productivity, achieve sustainable growth, and increase the mining output with the deployment of advanced technology solutions at the planning and operation stages.
- Earlier this year, in a bid to liberalise the coal mining sector, the central government notified the Mineral Laws (Amendment) Ordinance, 2020, which opened up coal mining to non-coal companies, removed restrictions on the end-use of the fuel and introduced flexible criteria for bidders to participate in auctions. The auctions of 38 coal blocks for commercial mining purposes, which would operate on a revenue sharing model and performance-linked incentives, have also been announced. Besides reducing dependency on imported coal, the auctions are likely to bring in competition and attract foreign investment, promote the use of more advanced equipment and technology, and enhance production efficiency.
- Meanwhile, surface mining is prevalent in the country for shallow deposits of metallic ores and minerals. The share of underground mining, which offers opportunities for the exploration of deep-seated high-quality deposits, has been declining. Not only is underground mining costlier, but also requires high-end equipment and technology solutions for successful exploitation.
- The large scale of operations has also resulted in an increase in the size of mining equipment. There is also a significant focus on using more energy efficient equipment and reducing the consumption of diesel.
- The automation of mining operations and use of digital solutions can help increase productivity, promote sustainable resource use, lower fixed costs, and enhance workforce safety. Artificial intelligence (AI), machine learning and industrial internet of things (IIoT) offer a number of use cases for the sector.
- AI-powered robotic devices can perform core mining activities such as drilling, blasting, loading and hauling. Besides, unmanned aerial vehicles/drones and geospatial technologies (such as GPS, GIS and remote sensing) can be used for targeted mineral exploration, preparation of mine plans and obtaining real-time updates on mining operations. Through real-time data collection and analytics, the overall mining operations could be further improved and streamlined.
- Overall, the level of technology deployment in India's mining sector is much lower than that of its global counterparts. Some of the pressing concerns are shortage of skilled manpower, financial constraints, low equipment utilisation, and environmental issues.
- That said, going forward, various factors will continue to drive the demand for mining equipment. These include high stripping ratios, focus on reducing the carbon footprint, adoption of technologies such as drones, IIoT, LIDAR, need for enhancing the output from underground mines, and a large scale of mining operations.
- **The mission of this virtual conference is to:**
 - Showcase new and emerging technologies
 - Discuss the use cases for AI, ML, IIoT and robotics
 - Focus on global practices and lessons for India
 - Highlight the key challenges facing the segment and their solutions

Previous participants

The organisations that have participated in our previous conferences on "Mining Technology in India" include AAC Mining, ABB, ACB, ACC, Adani Mining, Aditya Birla, AECOM, Aggreko, Altair, APMDC, Andritz, Ashok Leyland, Atlas Copco, Australian Trade Commission, Bajaj Reinforcement LLP, Balasore Alloys, BASF, BEML, Bentley Systems, Bharat Forge, Bray Controls India, Brunel India, CAEZEN Technologies, Capstone Geoconsultants, Castro, Caterpillar, Central Institute of Mining & Fuel Research, Central Mine Planning & Design Institute, Central Pollution Control Board, CK Birla Group, CLP Power, Coal India, CMPDI, Cummins India, Deloitte, Dextra, DSP Merrill Lynch, DuPont, Eastern Coalfields, EDF, EDS Technologies, EICL, Eimco Elecon, Elecon EPC, Elliot Geophysics, Engineers India Limited, Epiroc Mining, ERM Consultants, Ernst & Young, Essel Mining, Exxon Mobil Lubricants, FL Smidth, Fugro Geotech, Gates India, GE Transportation, Geo Constech, Gmmco Limited, Geomine Envirotech Consultancy, Government of Western Australia Trade and Investment Office, GSECL, Hazemag, High Commission of Canada, Hindalco Industries, Hindustan Copper, Hitachi, Hyundai Construction Equipment India, ICRA, IIT-ISM Dhanbad, IBI Group, ILF Asia Pacific and Emerging Markets, IMFA, Indian Rare Earths, Indu Projects, Infotech Enterprises, Inspectorate Griffith, Institute of Minerals & Materials Technology, Jaypee Group, JCB India, Jenissi Management Consultants, Jindal Steel & Power, Keltech Energies, Kennametal India, Kirloskar Brothers, Kreate Commodity Trading, KSK Minerals, Lanco Infratech, Larsen & Toubro, Maaden, Maccaferri, Maco Corporation, Magnum Minerals, MAN Trucks, Marsh India, Metso Minerals, Megaplast India Pvt. Ltd., Mineral Exploration Corporation Limited, Ministry of Coal, Ministry of Mines Geological Survey of India, Modular Mining System, Monnet Ispat & Energy, Nalco, National Council for Cement and Building Materials, NCL, NEERI, Neyveli Lignite Corporation, Nina Concrete, NMDC, Normet Underground Solutions, North East Coal Corporation, Northern Coalfields, NTPC, Oriental Rubber, Polycab Wires, PRD Rigs, PricewaterhouseCoopers Pvt. Ltd., PTC, Putzmeister Solid Pumps GmbH, PWC, Queensland, Government Australia, Rashtriya Ispat, Rio Tinto, Ringspann, Roto Pumps, Safire Capital Advisors, Sagta, Sandvik, Sasan Power Limited -Reliance, Shree Cement, Siemens, Singareni Collieries, South Eastern Coalfields, Strategic Decisions Group, TAM Construction Chemicals, Tata Steel, Tata Hitachi Construction Machinery, Technip, Tenova Delkor, THDC, Thiess India, Thriveni Earthmovers, ThyssenKrupp Industries, TIL, TIQ, Trade & Investment, TMEIC, Tractors India, Trafalgar EPC, Utkal Alumina International, VE Commercial Vehicles, Vedanta, Vermeer Equipment, Virginia Mining Resources, Volvo India, Weir Minerals, Western Coalfields, Wipro, Xylem Water Solutions, etc.

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK

- ❖ What is the current state of the mining sector in India? What has been the impact of the Covid-19 pandemic on the sector?
- ❖ What are the recent trends and developments with regard to technology deployment?
- ❖ What are the key issues and challenges? What is the outlook?

FOCUS ON COAL MINING

- ❖ What has been the experience so far? What are the most prevalent technologies in use for coal mining?
- ❖ How has the Covid-19 pandemic impacted the coal mining segment?
- ❖ How is commercial coal mining expected to impact the sector? What is the update on the auction of coal blocks?
- ❖ What are the key issues and challenges? What are the future needs and requirements?

GOVERNMENT PERSPECTIVE

- ❖ What have been the key recent policy developments in the mining industry?
- ❖ How has Covid-19 impacted the mining segment? What steps have been taken to tackle this situation?
- ❖ What initiatives are planned for promoting new technologies going forward?
- ❖ What are the key challenges? How can they be addressed?

SURFACE MINING

- ❖ What are the key technologies and solutions currently being used for surface mining? What has been the experience so far?
- ❖ What are the key issues and challenges? What is the future outlook?
- ❖ What are the key global advancements and upcoming technologies?

DRILLING, BLASTING AND CRUSHING

- ❖ What has been the experience so far in drilling, blasting and crushing operations? What are the key technologies being deployed?
- ❖ What are the key issues and challenges? What are the emerging needs and requirements?
- ❖ What are the global best practices/advancements?

UNDERGROUND MINING

- ❖ What is the current state of underground mining? What are the key technologies and solutions being used?
- ❖ What are the key issues & challenges? How can these be addressed?
- ❖ What are the key global advancements and upcoming technologies?

MINE DESIGN, SURVEY AND EXPLORATION

- ❖ What are the key considerations in mine designing and planning?
- ❖ What are the new and emerging technologies for mine survey and explorations?
- ❖ What are the key issues and challenges? What is the future outlook?
- ❖ What are the global best practices/advancements?

FOCUS ON GREEN/SUSTAINABLE MINING

- ❖ What are the currently deployed green/sustainable mining practices?
- ❖ What are the key issues and challenges? What is the future outlook?
- ❖ What are the global advancements? What are the lessons for India?

AUTOMATION, DIGITALISATION AND DATA ANALYTICS

- ❖ What has been the industry experience in the automation and digitalisation of mining operations and planning?
- ❖ What are key use cases of automation and digitalisation in mining? How can they address Covid-related challenges?
- ❖ What are the applications of real-time monitoring and data analytics?
- ❖ What is the future outlook? What are the key issues and challenges?

AI, ML AND ROBOTICS

- ❖ What has been the industry experience in the implementation of AI, ML and robotics? What are their key applications in the mining industry?
- ❖ What are the issues and concerns?
- ❖ What has been the experience globally? What are the lessons for India?

REMOTE SENSING, GIS AND DRONES

- ❖ What has been the industry experience in the implementation of GIS and remote sensing? What are their key applications in the industry?
- ❖ What are the key applications of drones in the mining sector?
- ❖ What are the issues and concerns?
- ❖ What has been the experience globally? What are the lessons for India?

Target Audience

The conference is targeted at top- and middle-level managers from:

- Coal producing/mining companies
- Producers/Miners of non-metallic minerals
- Power producers
- Crushing and grinding equipment manufacturers
- Equipment leasing and finance companies
- Inspection agencies
- Iron-ore producing/mining companies
- Mineral development corporations
- Steel Manufacturers
- Policymakers and regulators
- Mining engineers and geologists
- Other technology providers
- Other metallic-ore producers
- Drilling and blasting equipment manufacturers
- Excavation and loading equipment manufacturers
- Modelling solution providers
- Safety solution providers
- Pump manufacturers, etc.

CONVEYING SYSTEMS AND TECHNOLOGIES

Mission

- The conveying systems are a popular material handling solution, widely deployed across industries such as power, mining, ports, cement, steel and aluminum. These systems offer quick, efficient and safe movement of heavy material, reduce haulage cost, and minimise the environmental footprint of transportation activity.
- Belt conveyor technology is extensively used at coal handling stations of power plants, bulk cargo handling ports and mine loading stations. It entails a reasonable capex, low land requirement and low operations and maintenance (O&M) costs, and offers high operational reliability. Apart from this, pipe/tube conveyors and integrated conveying and crushing systems are being used in the mining segment for transporting high volumes of ore over longer distances.
- The conveyor system designs have evolved significantly in recent years on the back of technological advancements, automation and digital solutions. The increasing penetration of advanced technologies such as artificial intelligence, radio frequency identification, internet of things, and robotics is expected to power market growth.
- Meanwhile, smart conveyor systems are gaining traction. They are scientifically designed and engineered to cater to the specific needs and requirements of the end-consumer. Although such systems entail a high upfront cost, they offer low lifetime and operational costs, higher productivity and greater energy efficiency. Besides, there is demand for retrofitting the existing systems to meet consumer requirements. The consumers are increasingly adopting energy efficient, flexible and well designed conveyor systems with maximum operational life.
- To enhance the operational efficiency and minimise the O&M cost, the conveyor systems are being incorporated with protection systems such as induction loops and coils, external sensors, transmitters and receivers. Further, materials like polyester polyamide and aramid fibre, which provide the same strength as steel-chord belts at a much lower weight, are being used for conveyor belts. They have a high strength-to-weight ratio, low span requirement and high thermal stability.
- In order to obtain the desired outcome, the selection of the right conveyer system is critical. Layout constraints, route configurations and material characteristics are some of the key factors involved in making a selection. Simulation-based techniques have now been developed to help engineers optimise the design and transfer performance of conveyor systems. Going forward, conveying systems are likely to find newer applications as automated processes become the new normal.
- **The mission of this one-day virtual conference is to showcase new and emerging conveyor system technologies and discuss the changing consumer requirements across industries like power, mining, ports, cement and steel. The conference will also focus on aspects such as automation and digitalisation, system components, safety and O&M of conveyor systems.**

Previous participants

The organisations that have participated in our previous conferences on "Conveying Systems and Technologies" include ABB, ACB, Adani Enterprises, Adani Port, Aezen Technologies, Andritz Technologies, Aryan Clean Coal Technologies, Bengal Tools Limited, Bevcon Wayors, BIS, Caezen Technologies, Central Mine Planning & Design Institute, Competent Engineering Company, COWI India, Dupont, Elecon EPC Projects Limited, Engineering Mining & Environment Consultants, Essar Power, FLSmidth Private Limited, Forech India, Hindustan Zinc, Howe Engineering Projects, Holtec Consulting Private Limited, IMFA, Jindal Power, JK Cement, Joy Global, JKumar Infraprojects, JSPL, JSW Dharmatar Port, Kaveri Ultra Polymers, Krishnapatanam Port, Larsen & Toubro, Martin Engineering, Mecon, Mormugao Port Trust, Mysore Minerals, Nabha Power, NALCO, NLC, NMDC Limited, NRC Industries Limited, NTPC, Olbo & Mehler, Oriental Rubber Industries, Phoenix Conveyor Belts, PMC Projects, Reliance Industries, Ringfeder Power Transmission, Rollcon Technofab, Sandvik Asia, Sempertrans India, Shree Cement, SK Samanta, SRK Consulting, South Eastern Coalfield, Tata Power, Tata Steel, Tega Industries, Teijin Aramid Pune, Thriveni Earthmovers, Thyssenkrupp Industries, TMEIC Industrial System, TRF, Utkal Alumina, Virginia Mining Resources, Voith Turbo and Wirtgen India, etc.

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK

- ❖ What is the current state of the market for conveyor systems? What has been the impact of Covid-19?
- ❖ What are the recent technological innovations?
- ❖ What are the new and emerging customer requirements?
- ❖ What is the future outlook? What are the key challenges?

CONVEYOR SYSTEMS FOR POWER PLANTS

- ❖ What are the key requirements of power plants for conveyor systems?
- ❖ What are the key technological developments in conveyor systems used in the power sector?
- ❖ What is the future outlook? What are the key challenges?

CONVEYOR SYSTEMS FOR PORTS

- ❖ What are the key requirements of the port sector for conveyor systems?
- ❖ What are new and emerging conveyor technologies for bulk cargo transfer?
- ❖ What is the future outlook? What are the key challenges?

CONVEYOR SYSTEMS FOR MINING

- ❖ What are the key requirements of the mining sector for conveyor systems?
- ❖ What are new and emerging conveyor technologies for surface and underground mining?
- ❖ What is the future outlook? What are the key challenges?

CONVEYING SYSTEMS FOR OTHER INDUSTRIES (Steel, Aluminium, Cement, Etc.)

- ❖ What are the new consumer requirements for conveyor systems in the steel, aluminium and cement sectors?
- ❖ What have been the recent technological developments in conveyor systems used in these sectors?
- ❖ What is the future outlook?
- ❖ What are the key challenges?

REGULATIONS AND STANDARDS

- ❖ What are the key regulations and standards pertaining to conveyor systems? What are the issues and concerns?
- ❖ What new or additional standards are (or should be) under consideration?
- ❖ How does the process of setting standards and regulations accommodate or encourage new technologies?

FOCUS ON MATERIAL TECHNOLOGY

- ❖ What are the key considerations for the type and quantity of material required in conveyors?
- ❖ What are the recent advances in material technology? What has been the cost and performance impact?
- ❖ What are the new and emerging customer requirements for conveyor material?

DESIGN AND ENGINEERING

- ❖ What are the key design and engineering considerations for conveyor systems? What are the emerging needs and requirements in light of Covid-19?
- ❖ What are some of the new requirements and trends? What new techniques are being adopted in designing conveyors?
- ❖ What are the key issues and challenges?

ENERGY EFFICIENT CONVEYOR SYSTEMS

- ❖ What has been the industry experience with regard to the adoption of energy efficient conveyor systems?
- ❖ What are the latest energy efficient technology solutions?
- ❖ What is the future outlook? What are the key challenges?

FOCUS ON O&M AND REMOTE MONITORING

- ❖ What are the best practices in the O&M of conveyor systems? What has been implementation experience and learnings?
- ❖ What are the remote monitoring solutions available for conveyor systems?
- ❖ What are the issues and concerns? What is the way forward?

Target Audience

- The conference is targeted at top and middle-level managers from:
 - Coal producing/mining companies
 - Port Operators
 - Iron-ore producing companies
 - Mineral development corporations
 - Inspecting and certifying agencies
 - Consultancy firms
- Conveyor belt manufacturers
 - Automation companies
 - Other metallic-ore producers
 - Research and development organisations
 - Steel manufacturers
 - Other service providers
- Belt material manufacturers
 - Technology providers
 - Producers/Miners of non-metallic minerals
 - Power producers
 - Regulatory and standard authorities
 - Etc.

What differentiates our conferences?

- The **agenda** is developed by our researchers, who track the sector round the year. It is thus **relevant** and **topical**. It is not driven by a particular organisation and does not have a particular slant.
- The **speakers** are **professionals** and **experts** involved in the sector, not a mix of ambassadors, ministers, celebrities and business owners.
- The conferences do not just comprise panels and speeches; they provide a good mix of **expert presentations** and **case histories**, and of course **panel discussions**.
- We have **representation** from **across the country**, as is the case at our physical conferences too.
- Each **stakeholder group** – **policymakers, developers, financiers, consultants** and **relevant NGOs** – is represented at our conferences.
- The moderators merely ask the questions. The **stars** are the **speakers** themselves.
- The **sessions begin and end on time**.
- There is adequate time for a **Q&A session** with **each speaker**. These are not “hit and run” speeches.
- The **delegates** are **professionals** who are vested in the sector, and are not just assembled through social media.
- A **recap** of the conference is also made available to reinforce the key takeaways.

Delegate benefits (Virtual Conference)

- Direct interaction with senior speakers (Q&A facility)
- Easy connectivity to geographically dispersed delegates (click of a mouse)
- Cost effective (lower ticket price as compared to a physical conference)
- Offers flexibility and convenience
- Access to conference recording
- Recap of conference sessions
- Contributes to sustainability and lower carbon footprint

Benefits of sponsorship (Virtual Conference)

- E-Meet influencers and decision-makers/
- Reach out to and engage with new or active prospects
- Generate high quality sales leads
- Increase brand recognition
- Target a captive and engaged audience
- Drive website traffic through social media promotions
- Position your company as the thought-leader in your industry

REGISTRATION FORM

- I would like to register for the “MINING TECHNOLOGY” conference (November 2, 2020)
- I would like to register for the “CONVEYING SYSTEMS AND TECHNOLOGIES” conference (November 3, 2020)
- I would like to register for both the conferences

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Sponsorship opportunities
are available

Registration Fee

Both conferences

	INR	GST@18%	Total INR	Total USD
1 Login	10,000	1,800	11,800	165
2 - 3 Logins	16,000	2,880	18,880	285
4 - 5 Logins	22,000	3,960	25,960	405
6 - 9 Logins	28,000	5,040	33,040	525
10 - 20 Logins	34,000	6,120	40,120	645

Any one conference

	INR	GST@18%	Total INR	Total USD
1 Login	7,000	1,260	8,260	115
2 - 3 Logins	10,000	1,800	11,800	165
4 - 5 Logins	13,000	2,340	15,340	215
6 - 9 Logins	16,000	2,880	18,880	265
10 - 20 Logins	19,000	3,420	22,420	315

- There is a 25 per cent discount before October 14, 2020
- GST @18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.

Payment Policy:

- Full payment must be received prior to the conference.
- Payments for “early bird” registrations should come in before the last date of discount. Discount offers cannot be combined with any other offer.
- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.

Organisers

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company publishes **Indian Infrastructure** and **Power Line** magazines. It also publishes a series of reports on the infrastructure/energy sectors including **Mining in India** and **Mining Equipments Market Projections, Coal in India**, etc.

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