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HINDI-CHINI JIVE

Chinese President Xi Jinping and Prime Minister Narendra Modi reached a deal to resolve a four-year military stand-off on the Himalayan frontier last month. India had increased the scrutiny of investments coming from China, blocked direct flights between the two countries and had practically barred issuing any visas to Chinese nationals since the clashes.



At the BRICS summit in Kazan, President Xi Jinping and PM

Narendra Modi agreed to boost communication and cooperation and resolve conflicts. Earlier this year in July, the Chief Economic Adviser V Anantha Nageswaran, highlighted in his Economic Survey recommendations that India was faced with two strategic choices: integrating into China's supply chain or promoting FDI from China. The report argued that focusing on FDI from China was more promising for boosting India's exports to markets like the US, following the successful model of East Asian economies. The thaw in the relations could benefit India both in terms of boosting manufacturing output, as a result of Chinese FDI and boosting exports to the US and European markets.

But during the short term, the Indian CE sector stands at a crossroads. facing significant challenges posed by the increasing influx of lowcost Chinese imports. With reports indicating that the share of Chinese equipment has surged to 22 per cent, Indian manufacturers are sounding the alarm over what they describe as "unfair practices" that jeopardise local production and innovation. The growth in the CE market in India is largely fuelled by government initiatives aimed at bolstering infrastructure and mining sectors. Given that the price disparity between Indian and Chinese construction equipment is vast, the cost-effectiveness often outweighs the benefits of supporting domestic manufacturing.

Chinese companies have reportedly intensified their dumping practices in India to mitigate excess inventory due to an economic slowdown at home. This situation is worsened by the lack of differential import duties; both Chinese and Indian manufacturers with high levels of localisation face a uniform import duty of 7.5 per cent.

In the face of these challenges, Indian manufacturers are advocating for protective measures that would create a more level playing field. The need for government intervention is urgent, especially as the sector is critical for infrastructure development, a key driver of economic growth.

Looking ahead, the future of India's CE industry is promising, with potential for innovation and sustainability. Companies like Volvo are leading the charge in electric machinery, anticipating regulatory changes and rising demand for eco-friendly solutions. Dimitrov Krishnan, MD, Volvo CE India, noted that upcoming emission norms would significantly alter the landscape, necessitating investments in cleaner technology. The expected shift towards electric machines presents a unique opportunity for Indian manufacturers to diversify and enhance their product offerings.

The 10th Edition of the India Construction Festival garnered enthusiastic support from leaders in the construction and infrastructure sectors. Mark your calendars for the next edition, returning on September 3-4, 2025!

The call to action is clear: protect and promote Indian manufacturing in the construction equipment sector to ensure its growth is not stifled by aggressive foreign competition in the short term and move to draw FDI from the now 'friendly' neighbourhood.

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INSIDE

Cover Story: 12th Equipment India Awards **Crowning Achievement**

LARSEN & TOUBRE

The titans of the construction equipment industry were honoured at the 12th Equipment India Awards.

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Construction World Global Awards



At the 22nd CONSTRUCTION WORLD Global Awards, over 50 awards in 21 categories were handed out.

RAHSTA 2024

Honouring Excellence in Road Construction 50 Held during the 14th RAHSTA Expo, the RAHSTA Awards 2024 recognised excellence in road and highway innovation, construction, and technology.

RAHSTA Expo: A Visual Journey

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The RAHSTA (road) ahead for the CE industry is bright with full of possibilities and opportunities.

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India has doubled its road network in the past decade, boosting connectivity and attracting significant interest from InvITs.

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Innovations are driving sustainable road development across India.



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GROWING TOGETHER



INSIDE

Feature: Mining Equipment

Unearthing Potential



Today, mining is a \$1 trillion industry, providing materials for everything from the energy sector to the commercial goods market.



"Sany leads in sustainable practices for mining industry." 74 - Sanjay Saxena, Chief Operating Officer, Sany India and South Asia



"Mining industry prioritises stability, performance, and after-sales service." 76 - Prasanta Ganguly, Head - OTR Marketing (Domestic Sales), BKT Tires

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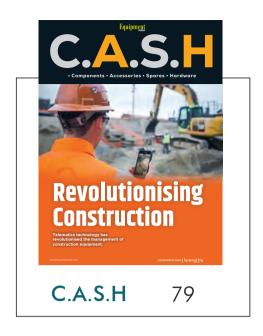
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Special Focus: Monitoring and Control



Revolutionising Construction
Telematics technology has revolutionised the management of construction equipment.

Interaction



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Efficiency and Innovation 84
- Vasanth Thangavelu, General
Manager – Brand Marketing
South AP, ExxonMobil Lubricants

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"We are committed to achieving carbon neutrality target by 2040."

- Seshan Iyer, President -Industrial Business, Schaeffler India

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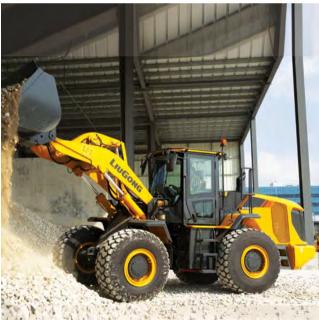














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INDIA

Propel electric tipper truck 470HEV achieves Homologation certification!

Propel Industries, India's fastest growing crushing equipment manufacturer, has reached a key milestone. The electric heavy-duty Tipper, the 470 HEV, from the house of Propel has received Homologation certification which is a document which certifies that a vehicle is roadworthy and complies with the government's safety standards.

Commenting on the significant landmark, V Senthil Kumar, Managing Director, Propel Industries Private Limited said, "The electric heavy-duty Tipper, the 470 HEV was initially manufactured for off-road applications. Receiving the Homologation certification is a groundbreaking achievement as it reaffirms our commitment to pushing boundaries and delivering innovative solutions that meet the evolving needs of the industry.

Propel continues to lead the way in eco-friendly transport, offering a sustainable solution for both off-road and on-road applications. This certification comes as a significant milestone in Electric Mobility for India's mining and construction sector."

The 470 HEV Tipper, India's first smart electric heavy-duty Tipper, is available in two battery variants—385 kWh and 256 kWh. Equipped with advanced battery options, it delivers fast charging, regenerating braking and optimises energy efficiency for demanding tasks.

The truck's compact turning radius and wheelbase allow for superior manoeuvrability, making it ideal for both on-road and off-road conditions. This high-performance truck has been engineered to handle even the toughest mining and



construction challenges while reducing environmental impact. Designed with a liquid-cooled motor, clutch-less AMT transmission, ABS, and a noise-free cabin, it ensures enhanced operator comfort and durability. The 470 HEV embodies environmental responsibility with zero emissions, reduced noise levels, and asbestos-free brake liners.

This latest milestone highlights Propel Industries' dedication to revolutionising electric mobility, providing sustainable, highperformance equipment for mining and construction sectors.

JCB India launches its most fuel-efficient tracked excavator

India's leading manufacturer of earthmoving and construction equipment, JCB India, launched its JCB NXT 215 LC Fuel Master tracked excavator at its state-of-the-art factory in Pune. In addition to its introduction to the domestic market, the machine will also be exported to countries around the world.

The JCBNXT 215 LC Fuel Master has been extensively engineered to reduce fuel consumption by 14 per cent compared to the previous model. It has been tested for demanding working cycles for Indian operations and significantly benefits customers through reduced operating costs.

This has been possible through optimised Hydraulics using JCB's Intelliflow Hydraulics technology. The machine now gives real-time fuel



consumption data through the onboard interface screen as well as over LiveLink which is JCB's innovative remote monitoring solution.
Improvement in fuel efficiency can lead to an estimated savings of Rs. 2.90 Lacs per year, a direct saving for JCB's customers. In addition to this, new feature of auto engine long idle stop avoids wastage of fuel wastage in case engine is idling for long.

Speaking at the event, JCB India CEO and Managing Director, Deepak

Shetty said, "Innovation has been the cornerstone of our operations in India for over four decades. This new machine has been engineered to enhance the profitability of our customers through a significant reduction in fuel consumption of 14 per cent. It will lead to a better return on their investments in today's competitive working environment"

This new machine is also 5 per cent more productive and comes with a Power Boost function to perform in tough applications. It has a quieter engine compartment which makes operations comfortable and fatigue-free. The machine is also designed to give strong performance in rock breaker applications. LED lights have been introduced for brighter work area illumination and durable performance.

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Tata Hitachi showcases ZAXIS 38U and SHINRAI Prime at RAHSTA Expo

Tata Hitachi is making a notable presence at the 14th RAHSTA Expo, taking place at Jio World Convention Centre, Mumbai. The company has showcased its latest advancement, the newly launched ZAXIS 38U (3.5 tonne mini excavator) and the SHINRAI Prime (backhoe loader). The ZAXIS 38U is a compact and versatile mini excavator, designed specifically to meet the evolving needs of the Indian construction sector.

This machine, featuring a short tail swing radius, is engineered to deliver exceptional performance in confined spaces, making it an ideal



solution for a variety of applications such as urban construction, landscaping, and utility work.

The ZAXIS 38U's powerful Japanese engine, combined with an advanced hydraulic system, ensures

unmatched productivity, operational ease, and fuel efficiency. In addition to the ZAXIS 38U, Tata Hitachi is proud to showcase the SHINRAI Prime, a ground breaking backhoe loader that embodies the core values of trustworthiness, capability, and reliability that Tata Hitachi is renowned for.

The SHINRAI Prime is a symbol of unwavering trust and performance excellence. One of its standout features is the enlarged backhoe bucket, allowing operators to excavate larger quantities of material with each scoop.

Sany India inaugurates 22nd 3S branch

SANY India inaugurated its latest 3S (Sales, Service, Spares) branch in Vedayapalem, Nellore, marking a significant milestone in the company's robust expansion across the country. This branch will be the sixth 3S branch in the Rayalaseema region and the 14th 3S branch for Madhura across Telangana and Andhra Pradesh. The branch is strategically located to serve the old

Nellore district, providing easy access to high-potential markets such as Nellore, Sullurpeta, Kavali, Atmakur, Krishnapatnam, Gudur, and Naidupeta.

The inauguration event was attended by over 35 potential customers and representatives from leading financial institutions in the district, highlighting strong local business support.

Govt receives 44 bids in 10th round of commercial coal mine auction

The government announced that it has received 44 bids for 67 coal blocks offered for sale in the 10th round of commercial mine auctions. All bids were submitted in physical form. In June, the coal ministry put these 67 coal mines up for auction, reflecting a strong interest from stakeholders in India's evolving coal sector. The coal ministry noted that the significant number of bids highlights continued engagement from various participants, particularly small and medium-sized players,



demonstrating the inclusivity of the auction process. The online and offline bids will be opened soon.

Centre unveils 17 Bihar projects



The Central government has launched 17 key infrastructure projects for Bihar, aiming to boost the State's overall development and connectivity. These projects encompass a wide range of sectors including transportation, urban development, healthcare, and education. Major focus areas include road and bridge construction, railway upgrades, and enhancements to water supply and electricity infrastructure. The initiative is part of the government's broader strategy to address the infrastructural needs of Bihar, one of India's rapidly developing states. Significant projects involve improving regional connectivity by upgrading major roads and bridges, which will streamline transport within Bihar and enhance access to neighbouring regions.

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PNC Infratech wins ₹6,670 crore road contracts

PNC Infratech has announced the successful acquisition of contracts worth ₹6,670 crore for essential road infrastructure projects in Maharashtra. This significant contract win marks a key milestone for the company, emphasising its role in enhancing the state's transportation network. The projects aim to upgrade and expand vital roadways, ensuring improved connectivity and efficiency for both commuters and freight movement.

As part of its commitment to driving infrastructure development, PNC Infratech will implement advanced engineering practices and innovative construction techniques to ensure timely completion and durability of the roads. This initiative aligns with the Indian government's broader objective to bolster infrastructure and support regional growth, ultimately fostering economic development in Maharashtra.

The road projects are expected to facilitate better access to urban centres, enhance trade routes, and contribute to job creation in the region. Moreover, they will likely improve safety standards and reduce travel time, benefiting local residents and businesses alike.



By securing these contracts, PNC Infratech continues to solidify its position as a leading player in the Indian infrastructure sector. The company is poised to leverage its expertise and experience to deliver high-quality road infrastructure, contributing significantly to the nation's economic growth and development goals.

MoRTH approves ₹1,255 cr Patiala Bypass project

The Ministry of Road Transport and Highways (MoRTH) has approved the construction of a new bypass around Patiala, Punjab, with an investment of ₹1,255.59 crore. This project aims to enhance regional connectivity and ease traffic congestion in the area.

The Northern Patiala Bypass will provide an efficient alternative route for vehicles traveling to and from the city, significantly reducing transit times and improving road safety. By diverting traffic away from the urban centre, the bypass will alleviate congestion on existing roads, benefiting both local residents and commuters.

This infrastructure initiative aligns with the government's vision of improving national highways and facilitating smoother transportation across states. The project is expected to support local economic development by providing better access to markets and services, ultimately contributing to the



region's growth.

In addition to improving connectivity, the Patiala Bypass is designed to include modern features that promote road safety and sustainability. Environmental considerations will be integrated into the project, ensuring that the construction and operation of the bypass minimise ecological impacts.

As the project progresses, stakeholders will closely monitor its implementation to ensure timely completion and adherence to quality standards. This upgrade is anticipated to provide significant long-term benefits, transforming Patiala's transportation landscape and enhancing the overall quality of life for its residents.

G R Infraprojects secures Pune Ring Road and Nagpur metro projects

G R Infraprojects has received a Letter of Acceptance (LOA) from the Maharashtra State Road Development Corporation (MSRDC) to construct a 9.341-km segment of the Pune Ring Road.

The Pune Ring Road project is valued at ₹1,885.63 crore and will be executed using the Engineering, Procurement, and Construction (EPC) model. The segment will connect Kalyan/Rathwade village to Shivare/ Kusgaon village in Pune district, with a completion timeline of 36 months from the start date.

Additionally, G R Infraprojects has secured a ₹903.5 crore contract from Maharashtra Metro Rail Corporation for the design and construction of an elevated metro viaduct in Nagpur. This component of the Nagpur Metro Rail Project spans 17.6 km and includes two special railway spans measuring 79 and 100 m each.

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Indian warehousing demand set to reach 1.2 billion sq ft by 2027

India's logistics sector is undergoing a major transformation, with evolving supply chains projected to generate demand for 1.2 billion sq ft of warehousing space by 2027, according to a joint study by ILL India and Miebach Consulting. This demand will encompass Grade A, B, and C facilities across the country.

A notable shift towards highquality infrastructure is driving the growth, with Grade A warehousing stock expected to increase from 290 million sq ft in 2023 to 400 million sq ft by 2027. E-commerce, third-party logistics (3PL), and omni-channel retail are emerging as primary drivers of this surge, especially in tier I and increasingly in tier II and III cities.

Warehouse absorption in Tier II and III markets saw a 41 per cent rise



from 11.6 million sq ft in 2022 to 16.4 million sq ft in 2023. This shift signals a growing emphasis on expanding logistics infrastructure beyond metro cities to meet rising regional demand.

"Urban fulfillment centres are playing a pivotal role, with an estimated additional 35 million sq ft required across India by 2027 to

meet last-mile delivery needs," said Sanjay Bajaj, Senior Managing Director, Logistics & Industrial, India, ILL. He highlighted the sector's growing focus on Environmental, Social, and Governance (ESG) compliance and the National Logistics Policy, which aims to reduce logistics costs to 10 per cent of GDP.

Centre approves ₹1,014 cr for road projects in Telangana and AP

The Centre has sanctioned ₹1,014 crore for various road and highway projects in Telangana and Andhra Pradesh. In Telangana, ₹516 crore has been allocated for a 14 km, 4-lane bypass around Nalgonda Town, linking the Nakrekal to Nagarjuna Sagar section of NH 565. This initiative aims to alleviate congestion, improve road safety, and enhance connectivity between Nakrekal and Nagarjuna Sagar.

Union Minister for Roads, Transport and Highways, Nitin Gadkari, also announced ₹400 crore for the development of 13 state roads covering 200.06 km in Andhra Pradesh under the Centre for Research in International Finance (CRIF) scheme.

Additionally, ₹98 crore has been designated for constructing a 4-lane Sankar Vilas Road over Bridge (ROB) on the Guntur-Nallapadu railway section in Guntur district, under the CRIF Setu Bandhan scheme for 2024-25. In Goa, the department has approved Rs 557 crore for the four-laning of a 9.6 km stretch from Ponda to Bhoma on NH-748. This project aims to complete the missing four-lane link between existing segments from Khandepar to Ponda.

Modi inaugurates 23 projects, including 7 airport expansions

Prime Minister Narendra Modi inaugurated 23 significant projects worth ₹6,611.18 crore, including seven airport expansions, during his



visit to his parliamentary constituency on October 20. The inauguration featured completed projects at Rewa (Madhya Pradesh), Ambikapur (Chhattisgarh), and Sarsawa (Saharanpur, UP) airports, along with the foundation laying for expansions at Lal Bahadur Shastri International Airport (Varanasi) and new terminals at Bagdogra (West Bengal), Darbhanga (Bihar), and Agra airports. Divisional Commissioner Kaushal Raj Sharma confirmed that the cost for the LBSI Airport expansion and new terminal building is ₹2,870 crore. Other airport projects include the New Civil Enclave at Bagdogra (₹1,550 crore), Darbhanga (₹912 crore), and Agra (₹579 crore). Additionally, the PM will lay the foundation for a new academic block and girls' hostel at Kasturba Gandhi Balika Vidyalaya in Arajiline, Varanasi, costing ₹4.17 crore.





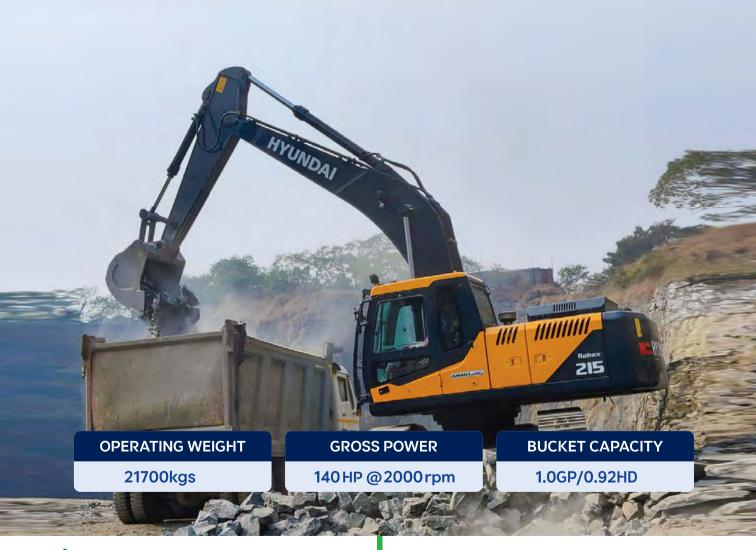
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Hoist & Winch is pillar of support in crane project

The design and installation by Hoist & Winch of replacement end carriages for two overhead cranes reached its conclusion recently with the end user expressing complete satisfaction in the outcome. Previously, the 2-tonne swl (safe working load) manual overhead cranes were suffering from potentially dangerous crabbing problems due to the original design of the end carriages. Hoist & Winch thus had a responsibility to work expediently and professionally, with the aim of bringing this concerning issue to a safe resolution.

Alongside the supply, installation,



hire and load testing of hoist units/ cranes for all types of industries, Hoist & Winch also offers lifting equipment refurbishment and rectification services. With each project of this type presenting its own set of challenges, the company comes to the fore in tackling work that competitors often prefer to avoid.

John Deere adds SmartDetect to loaders

John Deere has added its SmartDetect, an object detection system that enhances overall situational awareness for operators, to select utility-class and production-class wheel loaders. This summer, John Deere introduced the SmartDetect Field Kits for 444-904 P-Tier and X-Tier models. With safety being a constant concern in the construction industry, the technology aims to provide operators with greater visibility.

"SmartDetect is a crucial addition

to our portfolio of precision construction technology solutions, designed to help operators confidently navigate and maximise productivity on busy construction sites," says Katie Voelliger, product marketing manager. "Safety is a shared responsibility, and we're excited to continue developing solutions that empower operators to work more safely and effectively."

John Deere designed SmartDetect to function as an additional set of eyes for loaders.

Liebherr's mobile construction crane range is expanding

With a jib measuring in at 52 m and a maximum lifting capacity of 2,100 kg at its jib head, the new MK 120-5.1 delivers impressive performance. The crane marks an expansion of Liebherr's existing MK portfolio and bridges the gap between the MK 88-4.1 and the MK 140-5.1. One of the mobile construction crane's key advantages is its agility; its small turning circle facilitates site access via narrow streets and intersections.



The new crane is based on the established MK 140-5.1. Crane operators who know how to operate this model can work with the new one without extensive additional training. The MK 120-5.1 is equipped with the new Liebherr TC-OS display. The TC-OS (Tower Crane Operating System) user interface focuses on ease of use and flexible customisation by the crane operator. Its 12-inch touch display can be used in split and full screen mode.

Doosan Bobcat integrates with Doosan Mottrol

Doosan Bobcat has announced that its vertically integrated subsidiary, 'Mottrol', which specialises in hydraulic components, is expected to relaunch as 'Doosan Mottrol'. Mottrol produces travel and swing motors, pumps, main control valves and other hydraulic components for construction equipment. In response to equipment electrification, Mottrol has also been developing 'E-Drive', a technology for inverters, and swing and travel devices.

Kubota unveils two new RTV-X models

Kubota has unveiled two more models for increased versatility – one with a climate-controlled, sealed cab and another that quickly converts from two seats to four. Both the RTV-X Cab and Crew models get 24.8HP Kubota diesel engines. The crew model allows the owner to choose between hauling and passengers with a tool-less "K-Vertible" bed system that converts from one-row seating with a long cargo bed to two rows of seats with a smaller cargo bed.











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Tadano electric crane is coming to America with Doosan Mottrol

Developed by Japanese material handling giant Tadano, the 100-ton GR-1000XLL EVOLT is a wheeled electric crane built to handle rough terrain and unfinished job site surfaces. And now, Tadano's electric crane coming to America.

First revealed last summer, the new electric rough terrain crane offers all-wheel drive, four-wheel steering, and can reach a maximum lifting height of more than 224 feet (nearly 70 m) and a maximum arc radius of over 190 ft (58 m).

"We are very confident in the investment we've made in this crane," said Dean Barley, president and CEO at Tadano America of the 100-ton-capacity machine. "This crane has been tested and retested. We wanted to make sure that the first fully electric rough terrain (RT) crane in North America meets all the requirements of the market."

The GR-1000XLL EVOLT ships with six lithium ion batteries packing 226 kWh of power. That's good enough for five hours of continuous



operation and up to 12.5 miles of driving range. If it doesn't need to move that day, operators can get as many as seven hours of continuous operation before it needs charging. Once there, the big mobile crane can be connected to a standard CCS1 DCFC port at up to 150 kW – enough to fully charge its batteries in under two hours.

JCB unveils new machine and technology

At a press event at its UK headquarters JCB announced the launch of a new reduced tail swing excavator, the 145XR, as well as a new Al-based technology safety solution. The new excavator model is the latest in the OEMs X Series range of excavators and is said to have a 27 per cent shorter tail swing than a conventional model but retains a full-sized cab.

Brooks also highlighted that the new model would be ideal for working in congested and urban environments and the sides of roads and highways, where space is limited.

The cab is said to be further improved with a new ten inch



touchscreen monitor, with the JCB UX interface. The switch panel incorporates customisable hot keys, allowing personalisation for the operator. Climate control, keyless start, and twin cameras for added visibility are all standard.

Liebherr USA holds sales, training seminar

Liebherr USA earthmoving and material handling technology team held the 2024 sales and training seminar for both internal and external distribution network participants. Liebherr employees from the US, Canada and Europe participated. The two-day event allowed more than 100 participants to receive extensive hands-on training of multiple products like crawler excavators, wheel loaders, dozers, material handlers and the TA 230 articulated dump truck.

AEM's Manufacturing Express returns home to Wisconsin

The AEM
Manufacturing Express
concluded its crosscountry tour when it
returned home to
Wisconsin for its
final stops.

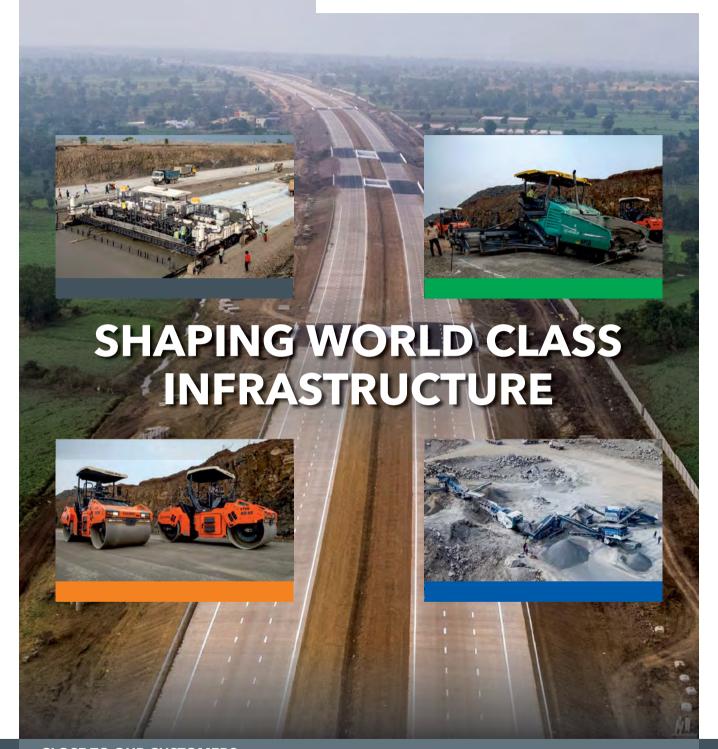
The tour, which launched on July 1 in Knoxville, lowa, has travelled across 22 states, celebrating the 2.3 million men and women of the U.S. equipment manufacturing industry and highlighting their role in building, powering, and feeding the world.

Yamaha unveils 2025 UTV lineup

Yamaha has rolled out its 2025 lineup of utility vehicles, unveiling the all-new RMAX4 1000, tech enhancements, improved ride quality and control, and more. The 2025 Wolverine models, available in two- and four-seat configurations, come equipped with Yamaha's Ultramatic transmission, On-Command 4WD, EPS, a 2,000-pound towing capacity and 600-pound bed capacity, and integration with a wide range of Yamaha Genuine Accessories.







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Crowning Achievement





COVER STORY 12th Equipment India Awards 2024

n October 10, 2024, the bustling city of Mumbai played host to the much-anticipated 12th BKT Equipment India Awards 2024, an event that recognised and celebrated the outstanding achievements within the construction equipment sector. The grand ceremony took place at Jio Convention • Centre and was a highlight of the India Construction Festival, which gathered industry leaders, manufacturers, and financiers from across the nation to honour innovation and

excellence in this

vital sector.

The inaugural addresses set a reflective tone for the evening, emphasising the importance of collaboration and information sharing within the industry. In his opening speech, Pratap Padode, Founder and President, First Construction Council, remarked, "At Equipment India, we have always tried to enhance the standard of the industry. During this 17th year of our existence, we still find that companies are trying to hide behind a veil as far as the disclosure of factual data is concerned." His emphasis on transparency resonated with the audience, highlighting the critical need for the construction equipment sector to adopt best practices for data sharing, akin to those seen in the automobile industry.

Vipin Sondhi, Chairman, RAHST Committee, and former MD and CEO, JCB India and Ashok Leyland, also shared optimistic insights, stating, "Today, we celebrate not just the figures but the remarkable individuals behind them—the innovators, manufacturers, and teams that push the boundaries of what's possible." He highlighted the impressive growth of equipment sales, which saw a 26 per cent increase during FY 2023-24, reflecting strong market recovery and renewed confidence.



Pratap Padode, Founder and President, **First Construction Council**

The 12th BKT Equipment India Awards not only celebrated the achievements of key players in the construction equipment sector but also served as a reminder of the collective effort required to drive the industry forward.

The awards event reaffirmed its commitment to supporting the industry's ongoing evolution, ensuring that India remains a significant player in

> the global construction equipment market. With the industry poised to grow at a CAGR of 12 per cent, reaching \$25 billion by the end of the decade, the evening left attendees inspired and motivated to continue pushing boundaries in their respective fields.

A significant highlight of the evening was the presentation of the Equipment India Person of the Year 2024 award to Jaideep Shekhar, Managing Director, Terex India.

WINNERS OF 12TH BKT EQUIPMENT INDIA AWARDS

Equipment India Person of the Year 2024

Green Factory of the Year Best After-Sales Service Provider

> **Concrete Pumps Truck Cranes**

> **Asphalt Plants** Asphalt Finishers

Batching Plants

Crawler Cranes

Piling Rigs

Rigid Dump Trucks

Motor Graders

Mini Excavators

Crawler Excavators

Mobile Cranes

Crawler Dozers

Skid-Steer Loaders

Wheel Loaders

Self-Loading Concrete Mixers

Tower Cranes

Compaction Equipment

Mobile Cranes

Jaideep Shekhar,

Managing Director, Terex India

Tata Hitachi Construction Machinery Tata Hitachi Construction Machinery

Schwing Stetter India

Sany Heavy Industry India

Ammann India

Amnann India

Schwing Stetter India

Sany Heavy Industry India

Sany Heavy Industry India

Caterpillar India

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COVER STORY 12th Equipment India Awards 2024



JURY TEAM: From L-R: SP Rajan, Sr Vice President and Head - Plant and Machinery, L&T Construction; Ashok Chhajer, Senior General Manager – OE Sales, Balkrishna Industries; Pratap Padode; Sudhir Hoshing, CEO, IRB Infrastructure Developers; Vipin Sondhi; and Ratan Lal Kashyap, President – SCM, Dineshchandra Agrawal Infracon.



Under Shekhar's astute leadership, Terex India has achieved remarkable growth, marked by innovation and a commitment to excellence. The jury praised his strategic vision, which has not only propelled the company's success but also contributed positively to the broader industry landscape.

Receiving the award, Shekhar expressed heartfelt gratitude, stating, "I'm deeply grateful to the jury and

Equipment India for this remarkable honour.
This award reflects not only my contributions

but also the dedication and hard work of my team. I have been associated with the industry for more than 25 years, and this award motivates me to keep pushing boundaries and to lead the growth with integrity."

The award presentation was made all the more special

JURY MEMBERS

- Ashok Chhajer, Sr. General Manager - OE Sales, Balkrishna Industries
- Atasi Das, Assistant Vice President, GR Infra
- HS Mohan, ex-CEO, Infrastructure Equipment Skill Council
- Ratan Lal Kashyap,
 President SCM, Dineshchandra
 Agrawal Infracon
- Sameer Malhotra, Director and CEO, Shriram Automall India
- Seshnath B, MD and CEO, Walvoil Fluid Power India
- Shyam Gyanani, Director, Trident International
- SP Rajan, Head Plant and Machinery, L&T Construction
- Sudhir Hoshing, CEO, IRB Infrastructure

PAHSTA -AWARDS 2024-

Vipin Sondhi, Chairman, RAMSTA Committee, and former MD and CEO, JCB India and Ashok Leyland



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COVER STORY 12th Equipment India Awards 2024



"ICF 2024 has once again proven to be an invaluable platform for the construction and CE industry. The convergence of innovative ideas and collaborative efforts showcased here reflects our collective commitment to growth and excellence. Congratulations to ASAPP Info Global for orchestrating such a successful event and to all the award winnersyour achievements are a testament to the bright future of our industry."

- Rajiv Poddar, Managing Director, BKT Tires

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achievements but also reinforced the collective vision of a thriving construction equipment industry.

by the presence of previous winners of the Equipment India Persons of the Year, including Vipin Sondhi, former MD and CEO, JCB India (Equipment India Person of the Year 2013), Sandeep Singh, Managing Director, Tata Hitachi Construction Machinery (Equipment India Person of the Year 2017), and Dimitrov Krishnan, Managing Director, Volvo Construction Equipment India (Equipment India Person of the Year 2023).

The night also witnessed the recognition of numerous companies across various categories, showcasing the best of the best in the construction equipment sector.

As the evening drew to a close, the excitement and camaraderie in the room were palpable. The 12th BKT Equipment India Awards 2024 not only celebrated individual



Jaideep Shekhar (2nd from right), MD, Terex India, winning the Equipment India Person of the Year 2024 from L-R: Vipin Sondhi, Equipment India Person of the Year 2013; Sandeep Singh, Equipment India Person of the Year 2017; and Dimitrov Krishnan, Equipment India Person of the Year 2023.



"I congratulate ASAPP Info on the outstanding success of the conference and award shows! It was a privilege to be part of such an insightful session with industry leaders. My heartfelt congratulations to the award winners; your exceptional achievements truly highlight your remarkable contributions to the construction equipment market."

- Sanjay Koul, President- India and South East Asia and Managing Director- India, Timken India With key players committed to transparency, innovation, and sustainable practices, the stage is set for a transformative decade ahead. As attendees departed, they carried with them renewed energy and determination, eager to contribute to the industry's growth story. The echoes of this inspiring night will undoubtedly resonate throughout the sector, propelling it toward new heights and greater accomplishments.





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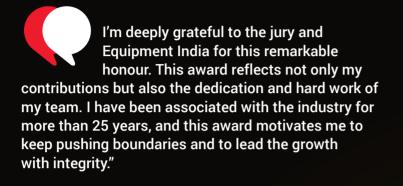
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Equipment India Person of the Year 2024

Jaideep Shekhar, Managing Director, Terex India





Jaideep Shekhar, Managing Director, Terex India, receiving the Equipment India Person of the Year 2024 award from (L-R) Pratap Padode, Founder and President, First Construction Council; Sandeep Singh, Managing Director, Tata Hitachi Construction Machinery; Ashok Chhajer, Senior General Manager – OE Sales, Balkrishna Industries; Vipin Sondhi, Chairman, RAHSTA Committee and former MD and CEO, JCB India and Ashok Leyland; and Dimitrov Krishnan, Managing Director, Volvo Construction Equipment India.

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Bestseller – Tower Cranes and Mobile Cranes

Manish Mathur, CEO – Cranes, Action Construction Equipment, receiving the Bestseller

Awards in the Tower Cranes and Mobile Cranes categories.



Bestseller –
Self-Loading
Concrete Mixers
Gautam Eunny, Chief
Marketing Officer,
AJAX Engineering,
receiving the Bestseller
Award in the Self-Loading
Concrete Mixers category.

12th Equipment India Awards 2024 COVER STORY





Bestseller — Asphalt Plants and Asphalt Finishers
(2nd from left) Dheeraj Panda, Managing Director, and Manish Kulkarni, Director — Sales
and Marketing, Ammann India, receiving the Bestseller Awards in the Asphalt Plants and
Asphalt Finishers categories.



Bestseller – Crawler Dozers

Chandra Shekhar Singh, Zonal Head – North-West Zone, BEML, receiving the Bestseller Award in the Crawler Dozers category.

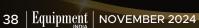
COVER STORY 12th Equipment India Awards 2024



Bestseller - Compaction Equipment
Shalabh Chaturvedi, Managing Director, Case Construction, receiving the
Bestseller Award in the Compaction Equipment category.



Bestseller – Wheeled Loaders (2nd from left) Wu Song, Managing Director, and Nischal Mehrotra, Senior Vice President – Sales and Marketing, LiuGong India, receiving the Bestseller Award in the Wheeled Loaders category.









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Bestseller – Rigid Dump Trucks and Motor Graders
Mukul Dixit, Director – Sales & Marketing, Global Construction Infrastructure,
Caterpillar India, receiving the Bestseller Award in the Rigid Dump Trucks and
Motor Graders categories.



Bestseller - Skid-Steer Loaders
Suk (Ted) Namkoong, MD & CEO, Doosan Bobcat India, receiving the Bestseller
Award in the Skid-Steer Loaders category.

12th Equipment India Awards 2024 COVER STORY





Bestseller – Piling Rigs

(2nd from left) Sanjay Saxena, COO, Sany India and South Asia, and Rajeev Kumar Singh,
Business Head, Deep Foundation Business, receiving the
Bestseller Award in the Piling Rigs category.

COVER STORY 12th Equipment India Awards 2024

Bestseller —
Crawler Excavators
(middle) KG Justin,
Head - Sales and Dealer
Development, and
(2nd from right) Ashish Kumar,
Zonal Head Sales West,
Tata Hitachi Construction
Machinery, receiving the
Bestseller Award in the
Crawler Excavators category.





12th Equipment India Awards 2024 COVER STORY



Bestseller – Mini Excavators

(2nd from left) Srinivas Kakita, Head Compact Equipment and Siddharth Chaturvedi, Head Marketing, Tata Hitachi Construction Machinery, receiving the Bestseller Award in the Mini Excavators category.

Sandeep Singh, MD, Tata Hitachi Construction Machinery.



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Best After-Sales Service Provider (middle) Santosh Kumar, Zonal Head Service West, (extreme left) Srinivas Kakita, Head - Compact Equipment, and (extreme right) KG Justin, Head of Sales and Dealer Development, Tata Hitachi Construction Machinery, receiving the Best After-Sales Service Provider award.

















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A World of Excellence

At the 22nd CONSTRUCTION WORLD Global Awards, over 50 awards in 21 categories were handed out.



he 22nd CONSTRUCTION WORLD Global Awards was held on October 9 and 10, 2024 at the Jio World Convention Centre, Mumbai.

Benchmarked to global standards

At the inaugural session, Sanjay Bhatia, Upa-Lokayukta, Government of Maharashtra, along with Vipin Sondhi, Chairman, RAHSTA Expo Committee, and Pratap Padode, Founder, FIRST Construction Council, inaugurated the RAHSTA Expo. Expressing delight at the huge display of construction technology, Bhatia said, "The expo has put the construc-

tion industry on an international standard. India is experiencing nation-building at a robust pace and I am truly impressed with the work now being done by our youth with their startups, many of whom are showcasing their innovation here."

Special bytes

At the 22nd CONSTRUCTION WORLD Global Awards, over 50 awards in 21 categories were presented to over 50 companies.

"I am thrilled to accept this award on behalf of Century Ply," said Anup Mangaserri, Chief Executive Officer -Laminates, Century Plyboards India. "It's an honour to be recognised and I extend my heartfelt thanks."

"Tata Consulting Engineers has made significant strides in nation-building projects in India and high-impact engineering efforts abroad," said BR Parthasarathy, Senior Vice President and Head - Infrastructure Cluster, Tata Consulting Engineers (TCE), sharing his pride in receiving the ENR Award. "This recognition underscores our global capabilities and we are honoured to be part of this journey."

For his part, **Sarat Chandak**, **CEO**, **H&R Johnson**, said, "We are truly delighted to receive this award as the most admired brand in the construction world. This recognition reflects

the dedication and hard work of the brand over its six-year journey in India. Thank you for acknowledging our efforts."

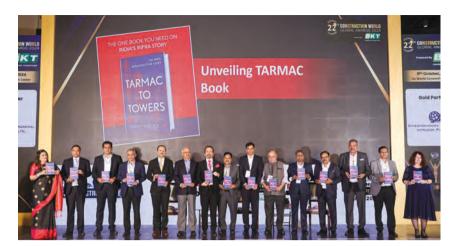
And Sandeep Desai, Executive Director, and Ananta Rayaprolu, "Director, Afcons Infrastructure, noted, "This is a proud moment for the entire Afcons team to have this particular trophy and prestigious award. Afcons has always been at the forefront of extreme engineering, and we are really happy for this acknowledgment, which motivates us to continue pushing the boundaries of innovation."

Joining the chorus of gratitude, Manish Kumar, Executive Vice President, ITD Cementation, stated, "It is an incredible honour to receive this award and to be here for this event, which is very well organised. Being recognised among the best of our peers in the industry is truly a privilege. I accept this on behalf of my team and company and we are deeply grateful for this recognition."

Many winners addressed the efforts that led to their recognition. "We are extremely proud and thankful to receive the CW Person of the Year (Private Sector) award," said Hardik Agrawal, Director, Dineshchandra Agrawal (DRAIPL). "This recognition



AM Naik, Chairman Emeritus of Larsen & Toubro (L&T) Award: CW Lifetime Achievement Award.



Unveiling of Tarmac to Towers book.

reflects the relentless efforts of the entire Dinesh Chandra Group. We are deeply motivated by this honour and we thank the CONSTRUCTION WORLD Global Awards for this acknowledgment." And Lalit Chhabra, Managing Director, PINI India, added, "It is a tremendous honour to receive this award. We are delighted that our global efforts have been recognised. This is a testament to what we have done in the past and our hard work. We look forward to improving our ranking in the years to come."

Sharing his excitement, Ryoya Watanabe, Senior Manager - BD & Marketing Division, Nippon Koei India, said, "We are headquartered in Tokyo and I am excited and honoured to accept this prestigious award. Thank you very much for this recognition."

Meanwhile, Saji Samuel, Executive Vice President (Long Products), JSW Steel, brought the conversation around to India's bright future. "I feel elated with this award because this is going to propel India into a five trillion-dollar economy as quickly as possible," he remarked. "I wish CONSTRUCTION WORLD all the very best and hope many new companies will participate in this event going forward. I feel very proud to hold this trophy in my hand on behalf of my company."

This collection of leaders from

different sectors was a showcase of the diversity and excellence celebrated by these prestigious awards, marking significant milestones in their respective industries.

An event to remember

Another highlight of the event was the launch of Pratap Padode's book, *Tarmac to Towers – India's Infrastructure Story*.

Indeed, in keeping with tradition, the annual CWGA Awards ceremony was a memorable celebration of architectural achievements and a platform for dialogue on critical issues affecting the construction industry.



Mofatraj Munot, Group Founder, Promoter and Chairman, Kalpataru Group: CW Lifetime Achievement Award.

22nd CONSTRUCTION WORLD GLOBAL AWARDS 2024

LIFETIME ACHIEVEMENT AWARD

- AM Naik, Chairman Emeritus, Larsen & Toubro
- Mofatraj Munot, Group Founder, Promoter and Chairman, Kalpataru Group

PERSON OF THE YEAR - PRIVATE SECTOR

Dineshchandra Agrawal, Chairman and Managing Director, DRAIPL

MOST ADMIRED BRAND 2024

- » Asahi India Glass
- » Berger Paints
- » Century Plyboards India
- » DLF
- » GMMCO
- » Godrej Properties
- » H&R Johnson
- » Hindware
- » JCB
- » Jindal Steel & Power
- » JSW Paints
- » ISW Steel
- » Komatsu India
- Larsen & Toubro
- » Tata Projects

PAST CWGA WINNER

- » Afcons Infrastructure
- » APCO Infratech
- » Ashoka Buildcon
- » Dilip Buildcon
- » DRAIPL
- » GR Infraprojects
- » H G Infra Engineering
- » HCC
- IRB infrastructure Developers
- » ITD Cementation India
- » J Kumar Infraprojects
- » KNR Constructions
- » NCC
- » Patel Engineering
- » PNC Infratech
- » PSP Project

- » Ramky infrastructure
- » Tata Projects
- » Welspun Enterprises

ENR AWARDS: RECOGNISING TOP INTERNATIONAL DESIGN FIRMS AND TOP

INTERNATIONAL CONTRACTORS

- » Surbana Jurong Private Ltd.
- » Urbacon Trading and Contracting W.L.L
- » Pini India
- » Larsen and Toubro
- » Larsen and Toubro
- » Tata projects
- » Tata projects
- » Shapoorji and Pallonji
- Ircon International Ltd
- Tata Consulting Engineers
- » Afcons Infrastructure
- » Nippon Koei India
- » Rina Consulting SPA

PROJECT OF THE YEAR AWARD

- METRO RAIL:

KEC International

PROJECT OF THE YEAR AWARD

- REAL ESTATE:

L&T Realty

PROJECT OF THE YEAR AWARD - ROADS:

Bharat Vanijya Eastern

INTEGRATED SOLUTION PROVIDER: Gmmco

PROJECT INNOVATION OF THE YEAR: Spar Geo Infra

FASTEST GROWING COMPANIES

Largest & Most profitable: L&T

FASTEST GROWING COMPANIES

- ULTRA CATEGORY
- 1. Kalpataru Projects
- International
- 2. Afcons Infrastructure
- 3. NCC

FASTEST GROWING COMPANIES

- LARGE CATEGORY
- 1. ITD Cementation India
- 2. DRAIPL
- 3. Ashoka Buildcon

FASTEST GROWING COMPANIES

- MEDIUM CATEGORY
- 1. Ceigall
- 2. H G Infra Engineering
- 3. Ramky Infrastructure

FASTEST GROWING COMPANIES

- SMALL CATEGORY
- 1. Varindera Constructions
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Held during the 14th RAHSTA Expo on October 10, 2024 at Jio Convention Centre, Mumbai, the RAHSTA Awards 2024 recognised excellence in road and highway innovation, construction, and technology.



Innovation Award in **Project Execution**

Dr. Ameen Syed, Managing Director, CC Precast Solutions, receiving the award for **Prestressed Precast Concrete Pavement** (PPCP) method in which concrete panels are prestressed, cast and cured at a casting yard and then transported and placed at the construction site.

Best Digital Technology Award in Road Building

Dr Mukul Shastry (2nd from left), General Counsel, and Bovin Kumar, CEO, Cube Highways and Transport Assets Advisors, receiving the award for harnessing cutting-edge technological solutions to drive operational efficiency and enhance infrastructure management across its portfolio with in-house developed applications



Award for Excellence in **Project Management**

(2nd from left) Yogesh Mohan Mehra, Chief Engineer, and Varun Gupta, Executive Engineer, Haryana Public Works - B&R Department, receiving the award for managing rural road construction projects.



Best Road Financier Award

(2nd from left) Manish Mohan, Executive Vice President and Head, and Amit Mahesh Mehta, Product Head -Infrastructure Finance, HDFC Bank, receiving the award for supporting approximately 20,440 km of roads in the last financial year.

Awards for Excellence in **Bridge Engineering**

(2nd from left) KV Praveen, Executive Vice President and Head DIAL Phase 3A Project, and Avinash Yellappa Mahendrakar, Head - Design, L&T TI IC, receiving the award for Eastern Cross Taxiway Bridge.



RAHSTA AWARDS

Award for Highest Standards of **Excellence in Road Engineering &** Construction

Pankaj Sachan, Vice President (Corporate Affairs), Patel Infrastructure, receiving the award for the Vadodara Mumbai Expressway corridor.





Award for Best Use of Waste Material Recycling in Road Construction

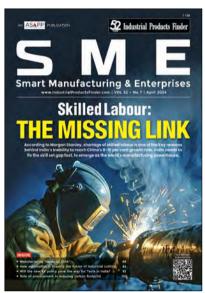
(2nd from left) Amit Kumar Mahato, Head Marketing & Business Development, Industrial By-Products Management Division, and Pratik Kumar, Manager - New Business Development, Tata Steel, receiving the award for using steel slag - Tata Aggreto and Tata Nirman.







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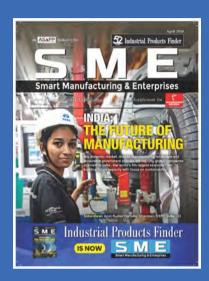
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Road ahead for CE Industry

Driven by increased government spending, rapid urbanisation, technological advancements, and the 'Make in India' initiative, the RAHSTA (road) ahead for the CE industry is bright with full of possibilities and opportunities.



India's road network has grown 59 per cent to become the second largest in the world in the last ten years. National highway construction in India increased at 9.3 per cent CAGR between FY16-FY24. With the government's continued focus on infra-led growth, construction equipment (CE) industry is also witnessing robust demand. In fact, in FY24, the industry witnessed about 26 per cent growth compared to previous year.

Ranjan Sharma, Senior Director – Large Corporate Ratings, CareEdge Ratings, states, "There has been a significant focus of the Union government on infrastructure development in the country, as a result almost all segments like roads, ports, bridges, etc. are doing well. If one looks at performance of the top 18–20 listed EPC companies, their order books have been consistently growing YoY basis. Road construction pace in India in FY24 was one of the highest (i.e. 34 km per day compared to 28 km per day in the previous year), as large number of projects were awarded in the preceding two years.

In FY24, the CE industry, which plays pivotal in infrastructure development, grew by 25 per cent (in terms of unit sold) led by earthmoving, material handling, as well as road CE."

But, in the current fiscal year (in the first five months), there has been some slowdown in project awards. As a result, experts expect the road construction pace to moderate in FY25 to about 31 km per day from 34 km per day. Even this speed is one of world's fastest in the road construction segment.

Growth multiplier

Explaining the driving force behind CE industry, Sandeep Singh, Managing Director, Tata Hitachi Construction Machinery Company, says, "Road construction, mining, housing, and the Har Ghar Jal Yojana are the main growth drivers. However, this year, heavy rains and elections led to stagnation in growth. Mining is growing as it has been privatised. Overall, we are looking at an average growth rate of 10–15 per cent over the next five years."

Today, everybody across the world is eagerly watching India's unfolding growth story. Driven by solid automotive sales, Indian auto component industry is eyeing to grow from the current \$20 billion to \$100 billion in the next six years. Similarly, Indian Construction Equipment Manufacturers' Association (ICEMA) has set an ambitious target of \$25 billion by 2030 (from the current \$9.5 billion) for the Indian construction equipment industry.

According to Vipin Sondhi, Chairman, RAHSTA Expo Committee, CE manufacturers in India should work on seven-point agenda for building a strong industry. "The industry should raise the ambition bar higher (think global and build big brands), be obsessed with total quality, build scale, focus on R&D and innovations, strengthen the domestic supply chain, adopt Industry 4.0 and digitalisation, and invest in people to propel the industry's growth forward," he says.

India spends 0.5 per cent of GDP on R&D, while developed countries on an average spend 2.5 per cent of the GDP. Hence, to maintain market dominance and strengthen exports, CE makers will have to focus on innovation. Attracting young talent will also be crucial for CE manufacturing to propel growth. "If younger generation understands that technology is the driving force in



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"The industry should raise the ambition bar higher, be obsessed with total quality, build scale, focus on R&D, strengthen the domestic supply chain, adopt Industry 4.0, and invest in people to propel the industry's growth forward."

- Vipin Sondhi, Chairman, RAHSTA Expo Committee



"In FY24, the CE industry, which plays pivotal in infrastructure development, grew by 25 per cent (in terms of unit sold) led by earthmoving, material handling, as well as road construction equipment."

- Ranjan Sharma, Senior Director - Large Corporate Ratings, CareEdge Ratings



"Exports have doubled in the last two years. This growth is happening both in construction equipment as well as components market. The global CE market is about 1.2 million machines across all product types, so the export opportunity is high."

- Dimitrov Krishnan, Managing Director, Volvo CE India

manufacturing, and then they will be attracted to the sector," says Sondhi.

Global CE makers are using domestic arm to not just serve India but also the global market. ICEMA has set the target of \$ 3 billion CE exports by 2030, which can be easily achieved considering the fact that India exported CE worth \$ 0.5 billion in FY24. Dimitrov Krishnan, MD, Volvo CE India, adds, "Exports have doubled in the last two years. This growth is happening both in CE as well as components market, particularly in the fabrication industry. I think it's only positive. The fact that we are the third-largest market in the world, and poised to become the second-largest, will definitely attract the scale required for construction equipment. Globally, the CE market is about 1.2 million machines across all product types, so the export opportunity is high. Every brand is looking forward to investing in India, and more than 30 countries are receiving machines from India today."

With environmental concerns growing, CE are also gearing up to help construction companies (or project developers) minimise their carbon footprint. Sustainability will get further push with the implementation of stage 5 emission standards for CE vehicles (CEVs) in India, which will take effect on January 1, 2025. Shalabh Chaturvedi, MD for India and SAARC region, CASE Construction Equipment, says, "The Indian CE industry is moving towards the one of the most stringent emission norms (Stage 5) in the world. To enable adherence to upcoming emission standards, supply chain also needs to be geared up. Many CE OEMs are extending sustainability targets to their suppliers as well."

Aiding sustainability

As emission standards become stringent, the construction equipment



"The shift from fossil to alternate fuels is bound to happen requiring changes in CE design, components and their materials. For example, the bearing industry is already working on alternate materials to meeting the emerging needs of CE makers."

- Sanjay Koul, President - India and SE Asia and Managing Director - India, The Timken Company



"We can become the second-largest construction equipment manufacturer in the world. We are also excelling in the components manufacturing industry, with 60 per cent of our business coming from outside India."

- Sitaram Ganeshan, President, Wipro Hydraulics



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- Shalabh Chaturvedi, Managing Director, India & SAARC region, CASE Construction Equipment

would require high quality components to fulfil the requirements of this emission norm. "If you want to manufacture CE that will lead to savings and sustainability, then component players have to play a major role," opines Sanjay Koul, President - India and SE Asia and Managing Director - India, The Timken Company.

Talking about the trends, Koul says, "The shift from conventional (fossil) to alternate fuels is bound to happen requiring changes in CE design, components and their materials. For example, the bearing

industry is already working on alternate materials to meeting the emerging needs of CE makers. Smart batteries, smart hydraulic systems—all this will come. We need to keep an eye on developed countries to track technological shifts and catch up later."

Rising income levels is propelling the need for better infrastructure, which is expected to keep up the pace of demand for CE. As the CE makers increase their manufacturing footprint in India, they are also aiming to increase sourcing of components and machinery (required



for CE production) from domestic producers. Expressing optimism for the CE manufacturing industry, Sitaram Ganeshan, President, Wipro Hydraulics, states, "We can become the second-largest CE manufacturer in the world. We are also excelling in the components manufacturing industry, with 60 per cent of our business coming from outside India."

The emphasis on higher quality standards is leading to greater mechanisation, especially in larger projects; thus, aiding the industry's growth. Giving the user industry's perspective on the CE, SP Rajan, Vice President and Head – Plant & Machinery, L&T Construction, says, "CE manufacturers should be fully geared up to fulfil the future requirements. I would like to see more use of biofuels in the near



"CE manufacturers should be fully geared up to fulfil the future requirements. They should focus on improving the ease of operation for operators. I would like to see more use of biofuels in the near future."

- S P Rajan, Senior Vice President and Head – Plant & Machinery, L&T Construction

future. When it comes to electric equipment, we should develop systems that don't require charging at all. Companies should create self-charging technologies, like solar batteries, where heat is converted into energy. We should also focus on improving the ease of operation for operators."

The construction equipment

industry is expected to experience substantial growth in the coming years, driven by increased government spending, rapid urbanisation, technological advancements, and the 'Make in India' initiative. Thus, RAHSTA (road) ahead for the CE industry is full of bright prospect laying a foundation for a strong, better India.



India's Road Network Boom

India has doubled its road network in the past decade, boosting connectivity and attracting significant interest from infrastructure investment trusts (InvITs).



n a remarkable achievement, the country has doubled its road network over the past decade, which has not only enhanced connectivity but also attracted substantial investments from infrastructure investment trusts (InvITs). "From the investor's perspective," said Vijay Agarwal, Managing Director, Equirus Capital, "around 13 infrastructure investment trusts have been invested in road assets and nearly Rs 2 trillion is under investment." Expressing optimism, Vijay highlighted that a majority of road assets are now housed under these InvITs, which have proven to be an efficient ownership structure that appeals to the market and



"Around 13 infra investment trusts have been invested in road assets and nearly ₹2 trillion is under investment."

- Vijay Agrawal, Managing Director, Equirus Capital

investors alike.

Muraleemohan, Chief Operating Officer, Maple Infra, highlighted the growing international interest in Indian road assets emphasised, "the time to be in India is now," especially in the roads sector. He noted that the government's policies have created an unprecedented coexistence of multiple investor, developer and contractor classes within the highway

industry, noting that the ecosystem offers equal opportunities to all players. "This is what excites international investors," Muraleemohan added.

Road assets as an investment class?

Highlighting the robust infrastructure ecosystem in India, Muraleemohan called for greater recognition of different investor classes and their specific needs, noting that policy stability is critical for institutional investors looking to commit to Indian infrastructure projects.

"Highways provide tolling assets that give investors exposure to toll



"The government's policies have created an coexistence of multiple investor, developer and contractor classes."

- Muraleemohan M, Chief Operating Officer, Maple Infra



Highways provide tolling assets that give investors exposure to toll revenues, which are directly linked to the nominal GDP."

- Vineet Sarawagi, Head - Business Development, Interise

revenues, which are directly linked to the country's nominal GDP. Toll rates are inflation-indexed, allowing access to traffic volumes that correlate with the GDP, making it a great way to tap into the fastest-growing large economy in the world," said Vineet Sarawagi, Head – Business Development, Interise, praising India's highway sector as an attractive investment destination, noting that it offers a diverse range of products for investors. Going further, Sarawagi suggested that to enhance the sector's appeal, toll rates should be indexed not only to the Wholesale Price Index (WPI), but also to the Consumer Price Index (CPI). He argued that blending both indices could provide a more accurate reflection of inflation and boost investor confidence in upcoming build-operate-transfer (BOT) and TOT projects.

"Investors were hesitant to take on construction risk, which led to mixed experiences," Gaurav Chaturvedi, CFO, Nxtinfra, said, emphasising that Infrastructure Investment Trusts (InvITs) have created a framework where different stakeholders could coexist more effectively. Breaking down the sector's evolution, he described three distinct phases. "In the first phase, contractors took on the role of

developers, primarily to feed their contracting arms and hold assets until maturity," he said. The second phase saw investors entering the market, but many were cautious about the construction risk involved. Now, in the third phase, all stakeholders have a clearer understanding of their roles,

significant portion of the risk in road projects lies in the construction phase, which many international investors are hesitant to take on. "For these investors, TOT has been the ideal solution, allowing them to focus on operational assets without construction risk."

"Risk assessment is critical and relying solely on external consultants is not enough. In-house capabilities are essential for accurate risk analysis, he said emphasising the importance of having a strong in-house technical team to analyse



"Investors were hesitant to take on construction risk, which led to mixed experiences."

- Gaurav Chaturvedi, Chief Financial Officer, Nxtinfra

making this an ideal time for collaboration and growth. Chaturvedi concluded that this maturity in the sector presents a unique opportunity for stakeholders to engage in India's infrastructure growth story with a balanced approach to risk and reward.

HAM and TOT: Easing investor risk

Pointing out how the hybrid annuity model (HAM) and toll-operate-transfer (TOT) frameworks have been instrumental in easing risk for international investors in India's infrastructure sector, Deepak Chaudhary, Associate Director of Project Finance and Treasury, Sekura India Management noted that a

and mitigate risks before entering any transaction.

Potential of GNSS for toll collection

"Over the last 30 years, electronic toll collection (ETC) has been a major positive disruptor, addressing issues like revenue leakage and skirmishes at toll plazas. With 99 percent of toll revenue now assured through technology, investors are only taking growth risks, not revenue collection risks," said Muraleemohan about the transformative impact of ETC systems. He noted that Global Navigation Satellite System (GNSS) and satellite-based tolling allows for precise tolling based on actual highway use, emphasising upon the confidence it brings to investors. He pointed out that GNSS requires significant infrastructure to detect vehicle entry and exit points on highways and suggested gantry-based tolling, which could eliminate the need for toll plazas entirely.



"TOT has been the ideal solution, allowing them to focus on operational assets without construction risk."

- Deepak Chaudhary, Associate Director - Project Finance and Treasury, Sekura India.



Mapping the Future

The PM Gati Shakti programme reduces logistical costs that currently account for 13–14 percent of India's GDP.



The core of Gati Shakti

"The core objective of Gati Shakti is to address the significant planning gaps in infrastructure projects across the country," said Vinod Yadav, Director (Transport) NCC, emphasising upon its focus on driving economic growth. In conclusion, Yadav summarised the vision of PM Gati Shakti as a transformative approach aimed at driving economic growth and

aunched to transform the nation's infrastructure development, PM Gati Shakti is a groundbreaking initiative which emphasises the importance of collaboration among different ministries and stakeholders to create a cohesive infrastructure framework. By mapping over 900 layers of data related to existing and upcoming projects, it enhances project transparency and efficiency, significantly reducing logistical costs that currently account for 13–14 percent of India's GDP.

Shining amid crisis

"India embarked on the \$1.4 trillion of national infrastructure pipeline at a time when the world was a troubled place," said Bharat Parekh, Executive Director, CLSA, adding, "As



"India embarked on the \$1.4 trillion of national infrastructure pipeline at a time when the world was a troubled place."

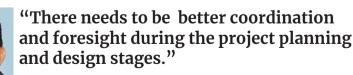
- Bharat Parekh, Executive Director, CLSA

far as execution is concerned, like almost at the peak of Covid, clearly we changed the track of the last 30 to 40 years of subsidies and freebiedriven budgets to capex-driven economic recovery and that's what has set India as a shining star on the global map and with doubling of the capex in the budget, very clearly now the fruits are here for us to see where our growth is clearly different from the world. So what we are going to do today is to dig deeper into challenges to infrastructure assets from here on."

sustainable development by creating a seamless synergy between infrastructure sectors, fostering innovation and reducing costs.

Unified data

"The private sector should benefit from the vast database and information available on the Gati Shakti portal," said Abhishek Chaudhary, President of Business Development and Strategy, Welspun Enterprises, stressing the need for better DPRs and accountability and highlighting the significant progress made under PM Gati Shakti with over 900 layers of data already integrated into the portal. He called for the portal to be made accessible to consultants, financiers, developers and contractors which would further enhance project execution, enabling smoother operations and better-informed



- Ashish Kataria, Director, Ashoka Buildcon



"The objective of Gati Shakti is to address the planning gaps in infrastructure projects across the country."

- Vinod Yadav, Director, Transport, NCC

decision-making across India's infrastructure landscape. "The top-down approach has been well-executed but the bottom-up implementation, where the real work happens, still needs to catch up for the true potential of PM Gati Shakti to be achieved," he concluded.

World class infrastructure

"It's a fantastic concept at the macro level," said Ashish Kataria, Director, Ashoka Buildcon, acknowledging the PM Gati Shakti initiative's ability to streamline national infrastructure development and praising it for laying a strong structural foundation aimed at aligning efforts towards building world-class infrastructure while avoiding duplication of work. Kataria's comments highlighted the need for better coordination and foresight during the project planning and design stages to ensure the successful implementation of ambitious goals.

DPR challenges

Kataria emphasised that detailed project reports (DPRs), often prepared by consultants, are critical to a project's success but are frequently marred by oversight. "The problem is that consultants who draft these DPRs often miss key design elements or fail

to engage essential stakeholders early on," he noted, adding that this leads to demands for modifications like flyovers or Vehicle Overpasses (VOPs) once the project is already underway. He suggested that greater accountability from DPR consultants is necessary, proposing a system where consultants remain financially engaged until at least 25 percent of the project is completed. Concluding his remarks, Kataria commented on the Public-Private Partnership (PPP)

significant hurdle in project completion, drawing on his past experience. He recounted how he witnessed delays in the National Highways Development Programme (NHDP) due to insufficient land acquisition. "Designs were based on outdated data from 40 to 50 years ago, leading to severe complications during construction," highlighting the need for more accurate and up-to-date data, he explained. On a more optimistic note, Singh praised the initiative as a substantial step forward in addressing these challenges. He said, "The nation is being masterplanned in terms of industrial zones and multimodal transport, which is incredibly exciting."



"The private sector should benefit from the vast database and information available on the Gati Shakti portal."

Abhishek Chaudhary, President of Business Development and Strategy, Welspun Enterprises

model, stating that while it is often touted, "the first 'P'-public-tends to disappear after the award of the concession," underscoring the need for genuine collaboration between the public and private sectors.

Land acquisition delays

"Projects were awarded, but land acquisition did not happen," said Shatrughan Singh, Chief Commercial Officer, Birla Pivot, emphasising that land acquisition continues to be a

Leveraging technology

Singh highlighted the potential of technological advancements to improve project execution, noting that many issues faced on the ground can be mitigated through better technology adoption. He concluded by reiterating the importance of embracing technological advancements in project management to minimise delays, which he believes are linked to over 90 percent of projects not finishing on time. He summarised saying, "It's all about working together to adopt technology for better management and controls."

The PM Gati Shakti programme, with its focus on transparency, efficiency and cost reduction, is poised to not only modernise infrastructure but also enhance India's global competitiveness.



"Designs were based on outdated data from 40 to 50 years ago, leading to severe complications during construction."

Shatrughan Singh, Chief Commercial Officer, Birla Pivot



Green Roads Ahead

The road construction industry, is adopting methods to reduce embodied carbon in materials.



he road construction industry, as the demand for eco-friendly infrastructure grows, is adopting innovative methods to reduce emissions and embodied carbon in materials. These advancements not only address the global push towards sustainable development, but also set a path for a more resource-efficient future in infrastructure.

Embodied and operational carbon in cement sector

"While operational carbon -



"Using GGBS as an eco-friendly alternative to OPC reduces carbon emissions from 740 kg per tonne (OPC) to 80 kg per tonne."

- Monika Shrivastava, Head of Sustainability, JSW Cement

emissions during usage - get much attention, embodied carbon, which accounts for emissions during construction represents a significant portion, especially in highways where 50-60 per cent of carbon is embodied," said Monika Shrivastava, Head of Sustainability, JSW Cement,

while highlighting the importance of addressing both embodied and operational carbon footprints in road and infrastructure projects. She noted that using ground granulated blast furnace slag (GGBS) as an ecofriendly alternative to ordinary Portland cement (OPC) reduces carbon emissions from 740 kg per tonne (OPC) to 80 kg per tonne, significantly lowering the environmental impact. Since cement manufacturing emits significant amounts of CO2, around 20 per cent of the company's energy is sourced from renewables, including solar power.



"If bio-bitumen can be harnessed, it could revolutionise the industry."

Satyanarayan Purohit, Vice President, Dilip Buildcon



"In infrastructure development, the focus must be on the three R's: reduce, reuse, and recycle."

- Dr Satish Pandey, Principal Scientist, CRRI

The company aims to increase this from 20 to 60 per cent by 2030, aligned with the company's broader sustainability goals.

Use of eco-friendly materials

"In many of our road projects, we've implemented pavement quality concrete (PQC) and residual pavement methods with cement content limited to 450 kg per cubic metre," said Satyanarayan Purohit, Vice President, Dilip Buildcon, emphasising the company's commitment to sustainable construction practices. As a case in point, he highlighted the use of ground granulated blast furnace slag (GGBS) in construction of the Zuari Bridge in Goa, where approximately 90,000 metric tonne of GGBS were utilised, and reducing carbon emissions by around 40,000 tonne. Purohit mentioning challenges in using recycled plastic in road construction noted that sourcing remains an issue. Looking ahead, he advocated further research into bio-bitumen, which could impact India's road construction economy saying, "If bio-bitumen can be harnessed, it could revolutionise the industry."

Waste to wealth

"In infrastructure development, the focus must be on the three R's: reduce, reuse, and recycle," said
Dr Satish Pandey, Principal Scientist,
Central Road Research Institute
(CRRI). "India has the second-largest
road network globally, which
consumes approximately 1.2 billion
tonne of natural aggregates annually
for construction and maintenance,"
said Dr Pandey. To tackle this growing
shortage of natural aggregates, CRRI
has developed steel slag road
technology, which repurposes waste
steel slag as a substitute for natural

MS Agarwal, emphasising the critical role of the steel industry in infrastructure development and sustainable highway construction. "Our commitment to delivering greener steel aligns with the increasing demand from customers for environmentally friendly products," said Jha about the sector's adoption of electric arc furnaces (EAFs). As The Indian steel sector is set to undergo a major transformation, with the Ministry of Steel targeting netzero emissions by 2070, requiring an investment of around \$230 to \$240 billion, Jha stressed the need for innovative energy sources, such as hydrogen, to replace traditional coal-based processes.



"Steel is the backbone of infrastructure and its production has both challenges and opportunities."

- Neeraj Kant Jha, Assistant Vice President - Sales and Marketing, MS Agarwal

aggregates. India produces around 20 million tonne of steel slag annually, a figure that is expected to triple by 2030.

Steel and CO₂ footprint

"Steel is the backbone of infrastructure and its production has both challenges and opportunities, especially as global standards push for reduced carbon emissions," said Neeraj Kant Jha, Assistant Vice President – Sales and Marketing,

Materials, machinery and skilled workforce

"Machinery alone cannot construct roads; it is the trained workforce that ensures quality and sustainability. If any link in this chain is weak—be it subpar manpower or machinery—the goal of achieving sustainable infrastructure will falter," cautioned Prof Dharamveer Singh from the Department of Civil Engineering at IIT Bombay. He pointed out that despite having access to world-class machinery and materials he had witnessed numerous road failures within just two years of construction due to inadequate training and quality control. He also suggested adoption of innovative technologies to improve road longevity and reduce reliance on natural aggregates.



"Machinery alone cannot construct roads; it is the trained workforce that ensures quality and sustainability."

- **Prof Dharamveer Singh,** Department of Civil Engineering, IIT Bombay



Transforming Challenges into Opportunities

A look at the transformative shift from traditional EPC contracts to more dynamic frameworks such as Build-Operate-Transfer (BOT) and Hybrid Annuity Models (HAM).



involvement in road projects," said moderator Suneet Maheshwari, Chairman, Udvik Infrastructure, expressing a desire to explore NHAI's insights on attracting Indian developers back into the sector. He opened the session by highlighting the pivotal role of NHAI and emphasised upon the importance of understanding the current landscape.

he evolution of road infrastructure models has become a focal point in discussions surrounding sustainable development and investment in India. Recent dialogues highlighted the transformative shift from traditional Engineering, Procurement, and Construction (EPC) contracts to more dynamic frameworks such as Build-Operate-Transfer (BOT) and Hybrid Annuity Models (HAM), underscoring the crucial role of the National Highways Authority of India (NHAI) in fostering public-private partnerships that are vital for the country's infrastructure growth. At this point in time, MoRTH and



"The Government is now looking to reduce its debt to ₹1 trillion by 2024-25."

- Suneet Maheshwari, Chairman, Udvik Infrastructure

National Highways Authority of India (NHAI) missed their national highway construction targets in six of the past 10 years. Also the government is now looking to reduce its debt to ₹1 trillion by 2024-25. "We have NHAI, which everyone has been discussing, but it would be interesting to hear the Maharashtra State Road Development Corporation (MSRDC) perspective, given their active



"HAM, in the last 10 years, has done wonders to the road sector."

- Sandeep Upadhyay, Managing Director, Centrum Infrastructure

HAM: Revolutionising road infrastructure

"HAM, in the last 10 years, has done wonders to the road sector," said Sandeep Upadhyay, Managing Director, Centrum Infrastructure, about the transformative impact of the Hybrid Annuity Model (HAM) on the road sector over the past decade. "All these EPC companies, which were struggling at one point in time with respect to keeping pace in terms of raising capital, investing, taking the traffic as well as the construction risk at the same time, convincing the bankers, I think found the HAM model very interesting. As the name itself suggests, it's a hybrid," he said and describing it as a "deferred EPC



"Many of the established road developers who are taking market risks have completely vanished."

- Jagannarayan Padmanabhan, Senior Director and Global Head of Transport, Logistics and Mobility, CRISIL

model," Upadhyay highlighted its suitability for EPC players, providing a strategic framework that allows for a 15-year operational horizon – an innovative approach that has not only facilitated investment, but also streamlined the process of securing financing from banks, ultimately revitalising the sector.

Balancing HAM, EPC and BOT

"Many of the established road developers who are taking market risks have completely vanished from this particular part of it so it is becoming more an EPC or a deferred EPC game and nobody wants to take a market risk," said Jagannarayan Padmanabhan, Senior Director and Global Head of Transport, Logistics and Mobility, CRISIL, expressing concerns over the shifting dynamics in the road development sector, noting that many established road developers have retreated from taking market risks. "And that's probably one of the discussion points that we should have on how to bring back that and who can take that kind of a market risk. And there are some people who want to take it, but the enabling environment is a lot more focused towards ham and EPC projects. So that's the somewhat not so good part in terms of the HAM coming through and which has kind of edged out BOT players completely."

"While the sector has seen successful projects under the Hybrid Annuity Model (HAM) we must also encourage Indian bidders to take on market risks to maintain a competitive landscape," he asserted, emphasising upon the need for a balanced approach between EPC projects and risk-bearing models.

efforts of **RAHSTA** for fostering collaboration and coherence within the ecosystem, which is crucial for enhancing the overall effectiveness and affordability of road construction in the country.

Driving infrastructure success

"Right now we are executing Rs 810 billion worth of projects," said SK Survase, Chief Engineer, MSRDC, adding that a bid has been made for an additional ₹1,110 billion worth of projects. He revealed that there are projects valued at ₹1710 billion in the DPR stage, bringing the total project pipeline to an impressive ₹3 trillion,



"Bidding capacity of contractors is closely linked to their financial capabilities."

Ashish Kumar Singh, Chief General Manager – Finance,
 National Highway Authority of India (NHAI)

Bidders, finance & equipment

"I have seen the capacity technological capacity being built up there outside in India and that's why I asked that what are the foreign parts there so I saw some equipment which are made in India," said Ashish Kumar Singh, Chief GM, Finance, National Highway Authority of India, acknowledged the increasing presence of domestically manufactured equipment, reflecting a shift towards self-reliance. Singh emphasised that the bidding capacity of contractors is closely linked to their financial capabilities, noting that improved financing options can add substantial value to projects. He commended the

"for which bankers are ready to fund us." He expressed confidence in securing funding from bankers, contingent on support from the Government of Maharashtra in terms of equity and bank guarantees. With a solid land bank in place, he emphasised that MSRDC is poised to continue its success in delivering these significant infrastructure projects.

The discussion focused on leveraging 98 per cent of India's roads for infrastructure development, emphasising the shift from EPC to BOT models to enhance quality and sustainability. Even as the Government plans to add 50,000 km of high-speed corridors by 2047, the immense potential for transforming India's road network into valuable assets can be seen from the fact that while national highways comprise only 2 per cent of the country's total roadways, a staggering 98 per cent of roads present untapped opportunities.



"Right now, we are executing ₹810 billion worth of projects."

- SK Survase, Chief Engineer, Maharashtra State Road Development Corporation (MSRDC)



The Road to Sustainability

Innovations are driving sustainable road development across India.



the new roads offer smoother driving conditions and higher speeds.
However, this increase in speed has led to a surge in accidents, not due to construction or design flaws but because drivers are unaccustomed to the improved infrastructure. "The issue lies in driving behaviour and habits, which haven't adapted to the higher speeds enabled by the new roads," he said.

Leveraging technology

"As India's infrastructure projects grow more ambitious, meeting tight construction deadlines has become increasingly critical," said Nirmalaya Chatterjee, Country VP (Indian Subcontinent) Nemetschek Group. "We

ver the past decade, India's road sector has experienced a significant transformation, fuelled by strong government backing and a surge in private sector investment, according to Anshumali Srivastava, Chief General Manager - Tech, National **Highways Authority of India** (NHAI). Speaking about the evolution of the sector since 2014, Srivastava highlighted how the shift from solely budgetary support to publicprivate partnership (PPP) models has been a game changer. Despite increased government spending, Srivastava noted that the sector still has an appetite for further investment, with private players stepping in to fill the gap.

Reason for road accidents are faster roads

"While India's road infrastructure



"The shift from solely budgetary support to PPP models has been a game changer."

- Anshumali Srivastava, Chief General Manager - Tech, National Highways Authority of India (NHAI)



"While India's road infra has significantly improved, there has been an unintended rise in accidents."

- Dr Tom V Mathew, Professor and Head - Civil Engineering, IIT Bombay

has significantly improved with high-quality construction and advanced geometric designs, there has been an unintended rise in accidents," said Dr Tom V Mathew, Professor and Head – Civil Engineering, IIT Bombay. Speaking about the advancements in road building, Dr. Mathew emphasised that

cannot double our workforce or contractors to match these targets. The solution is how effectively we can leverage technology to enhance efficiency and productivity," he added, highlighting the vital role of digital tools in meeting India's infrastructure demands.

Cement targets net zero

"India's cement and concrete production is set to double or even triple by 2070," Kaustubh Phadke, India Head, The Global Cement & Concrete said emphasising the industry's commitment to achieving net-zero emissions by that same year. "As India's demand for construction materials continues to surge, the Global Cement and Concrete Association (GCCA) is aligning with the country's ambitious sustainability goals," He said. He added, "We are striving to reach net-zero emissions in concrete production by 2050, while also supporting India's broader net-zero target by 2070 and the vision of a 'Viksit Bharat' by 2047."

"As a structural engineer,"
Aniruddha Nakhawa, Structural
Consultant and Project Engineer,
Builders Association of India (BAI),
"We are here as builders to introduce
all the technologies given by all the
members of the dais. One of our
builders from Gujarat has set a world
record for construction of 100 km



"As India's infra projects grow more ambitious, meeting tight construction deadlines has become critical."

- Nirmalaya Chatterjee, Country VP (Indian Subcontinent) Nemetschek Group



"India's cement and concrete production is set to double or even triple by 2070."

- Kaustubh Phadke, India Head, The Global Cement & Concrete



"One of our builders from Gujarat has set a world record for construction of 100 km road in 100 hours."

- Aniruddha Nakhawa, Structural Consultant and Project Engineer, Builders Association of India (BAI)

road in 100 hours."

The discussion emphasised how these innovations are driving smarter, more sustainable road development across India, aligning with the country's broader ambitions for economic growth and infrastructure modernisation.

Japan-India Road Engineering Seminar



(3rd from right) Hashimoto Masamichi, Assistant Vice Minister (Engineering and Road), Government of Japan, felicitating the officials from MMRDA and MSRDC.

Infrastructure, Transport and Tourism, the Government of Japan (MLIT), assisted by Deloitte, organised a seminar that aimed to share the Japan's road and bridge cutting-edge technologies. These technologies are particularly useful for mega infrastructure projects like the Mumbai Trans Harbour Link (MTHL) project and the Versova Virar Sea Link (VVSL) project, thereby promoting business networking to establish synergy between Japanese and Indian companies. Participants also included officials from Mumbai Metropolitan Region Development Authority, and Maharashtra State Road Development Corporation.

A Visual Journey

The RAHSTA Expo 2024, held on October 9 and 10, 2024 at Jio Convention Centre, Mumbai, brought together industry leaders, innovators, and stakeholders for two days of exploration, collaboration, and transformation.



REDLINE focuses on simplified, smart operations for optimal roadwork results.



Cat 320D3 GC hydraulic trackhoe excavators offer the ideal balance of control, digging, trenching, and lifting capacity.



REPOS' doorstep diesel delivery is a modern method that is revolutionising the fuel business.



ACE backhoes are used in the construction and infrastructure sector for digging, moving, grading and loading earth and other loose aggregates.



This machine from Sany offers smooth and high-quality paved surfaces with precision asphalt spreading.



Puzzolana Paver features an intuitive operator console with an LCD display for controlling all machine operations and carrying out parameter adjustments.



JSW Steel has revolutionised steel slag application as a construction aggregate in roads and pavements



Nemetschek Group is a forerunner of digital transformation in the AEC/O industry and covers the entire life cycle of construction and infrastructure projects.



SAIL is the largest government-owned steel producer, with an annual production of 18.29 million metric tonne.



Zydex offers a diverse set of chemical technologies for pavement and construction industries.



Tata Hitachi's product lineup included a wide range of excavators, rigid dump trucks, wheel loaders and backhoe loaders.



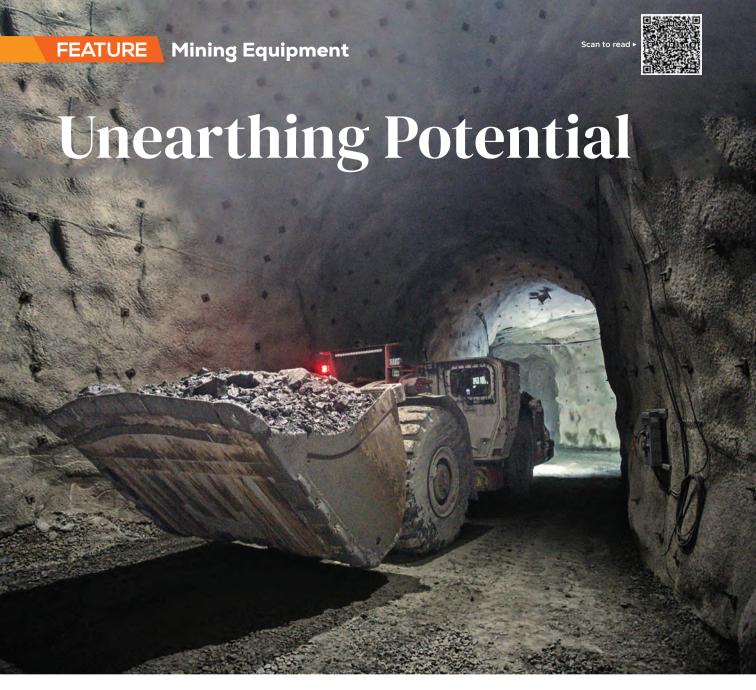
AdBlue converts harmful NOx from your diesel vehicle exhaust into harmless nitrogen and steam



Mahindra EarthMaster backhoe loader SX Smart 50 comes with a 36.2 kW (50 HP), best-in-class fuel efficiency, and optimal backhoe performance.



The smallest model of LiuGong's electric equipment family provides a quiet, energy-saving and environmentally-friendly solution.



Today, mining is a \$1 trillion industry, providing materials for everything from the energy sector to the commercial goods market.

s the global population and living standards rise, the demand for minerals intensifies. To meet the extensive needs for resources, materials, and technologies necessary for modern economies, mining operations must delve deeper into the Earth. Underground mining is a multifaceted and demanding process that relies on specialized equipment to extract valuable minerals and

commodities from beneath the surface. Common tools include drills, loaders, conveyors, and haul trucks, along with advanced machines like longwall mining equipment and continuous miners.

The government plans to introduce a Production Linked Incentive (PLI) scheme for underground mining machinery and heavy earth-moving equipment by 2025-26. This initiative, spanning

five years, aims to enhance the largely untapped underground coal mining sector in India.

Currently, Coal India (CIL) imports high-capacity machinery, including electric rope shovels, hydraulic shovels, dump trucks, crawler dozers, drills, motor graders, and wheel dozers for its operations. These assets, valued at Rs 3,500 crore, incur an additional Rs 1,000 crore in customs duties. To mitigate imports

and promote domestic manufacturing, CIL has outlined a strategic plan to gradually eliminate these imports over the next six years.

The government anticipates that coal will remain the primary energy source well beyond 2030, driven by increasing power demands, and therefore projects a significant need for equipment for both opencast and underground mines in the upcoming decade. CIL has begun acquiring advanced heavy earth movers and continuous miners equipped for remote operation and real-time tracking to boost efficiency and safety.

The government also emphasised the importance of forming partnerships with leading global equipment manufacturers. It seeks to promote the use of domestically manufactured machinery in coal production, transportation, and monitoring, ensuring that productivity is not compromised.

This initiative is expected to minimize the downtime associated with imported equipment, which frequently becomes inoperative due to unavailable spare parts. This will be achieved by producing key components such as engines, transmission systems, differentials,

and motors while implementing duty restrictions on the necessary parts.

Says Rajesh Nath, Managing Director, VDMA Rajesh Nath India, "Mining would Managing continue to play an Director, VDMA important role in India. In India actuality, mining accounts for 4 per cent to 5 per cent of our total GDP. Around 60 to 65 per cent of India's electricity still comes from coal. By 2025, the Ministry of Coal wants to expand coal production from its current level of 740 to 750 million



Yashvardhan Baila Director – Business Development, Taurian MPS

tonne to one billion tonne. India is still one of the few nations in the world where mining is still a major industry. Because of this, even German businesses are optimistic about India."

Yashvardhan Bajla, Director - Business Development, Taurian MPS, says, "The mining industry is

experiencing trends like increased demand for efficiency and digitalisation. There's a push toward electrification to reduce emissions, requiring equipment that's both powerful and eco-friendly. Taurian addresses these needs with its Terratrak hybrid track-mounted units that offer efficient, emission-free operation. These crushers meet the industry's demand for reduced environmental impact while also reducing operational costs by up to 80 per cent."

Digitalisation in mining

Automation is a key element of Industry 4.0, delivering benefits to multiple industries in terms of safety, efficiency, and productivity. Automated drilling rigs, drones, and hauling trucks are just some examples of automated and remote-controlled machinery that are seeing increased adoption in the modern underground

> mine, replacing human miners that have traditionally been the backbone of the industry.

Autonomous mining equipment, such as dozers, drilling rigs, load-haul dump machines (LUDs), excavators, and trucks, is outfitted with advanced software, sensors,

and robotic components. Features of these machines include semiautonomous and fully autonomous operation, proximity detection, and fleet tracking.

Several companies have entered the race to develop fully autonomous

QUICK BYTES

- The increasing demand for essential minerals like coal, iron ore, and copper, driven by infrastructure development and industrial growth, is propelling the market for underground mining equipment.
- Advancements in automation, safety technologies, and energyefficient machinery are enhancing operational efficiency and safety in underground mining, making modern equipment more attractive to mining companies.

mining equipment. Rio Tinto, for instance, is employing autonomous drilling systems at its mines in Australia. With this technology, a single operator can simultaneously control four autonomous rigs, improving safety and reducing labour costs while promoting better efficiency and productivity.

Remote-operated vehicles such as drones are being used for safety inspections and exploring mines, collecting raw data, which mine planners can use when situated a safe distance from the mine. They can also be used for blast engineering and stockpile inventory monitoring tasks.

Cat MineStar Edge is Caterpillar's cutting-edge cloud-based, subscription managed application that creates an operational ecosystem that gives our customers near-real-time visibility to every aspect of their operation. It allows them to efficiently execute their mine plan and deliver optimal quality to the plant and to the surface. Cat MineStar Edge makes it possible to measure, manage, analyse, and optimise its customers entire operations. The interesting point about the solution is that it is OEM agnostic.

FEATURE Mining Equipment

Cat MineStar Edge solution doesn't require extensive infrastructure expenditure from the business makes it an attractive value proposition for our customers. Being a cloud-based solution, it just requires minimum hardware installations to function with any existing infrastructure. With this, data points such as fuel consumption, payload, asset utilisation, etc. are immediately posted into the cloud device, allowing the mine operator or mine owner to monitor how effectively the asset is being used.

Said Bajla, "Taurian washing systems recently introduced the CycloFrac, which showcases significant technological advancements in ultra-fines filtration. The system employs advanced cyclone technology to recover particles as fine as 75 microns (200 meshes); ensuring valuable materials are not lost. Highfrequency dewatering screens reduce moisture content, enhancing product quality and processing efficiency. An integrated water management system recycles up to 90 per cent of process water, promoting sustainability and reducing operational costs. The system can be used for highly specialised application like frac sand, silica sand, iron ore recovery, etc."



Prasanta Ganguly Head - OTR Marketing (Domestic Sales), **BKT Tires**

Says Prasanta Ganguly, Head - OTR Marketing (Domestic Sales), BKT Tires, "BKT has introduced several innovations in tyre design for the mining sector, particularly in

all-steel radial tyres. Our latest radial OTR tyres are engineered to provide enhanced durability, better load distribution, and longer service life. We've also incorporated smart tyre technology that allows for real-time monitoring of tyre health, enabling

operators to track pressure, temperature, and wear levels. These advancements help reduce downtime, optimise performance, and improve safety in mining operations."

BKT sets itself apart through a combination of advanced technology, customisation, and unmatched customer support. Our all-steel radial tyres are engineered to meet the toughest conditions, offering superior durability and performance. Adds Ganguly, "We also pride ourselves on customising tyre solutions to fit the specific needs of each mining site, ensuring optimal performance and longevity. Our commitment to sustainability, innovation, and customer-centric service further strengthens our position as a leader in the mining tyre sector."

Said MT Swamy, General Manager - Sales, Kennametal, "Kennametal is an over 80-year-old company that offers material science expertise and strong manufacturing capabilities. It provides solutions for various industries, with a focus on improving productivity and reducing downtime for customers. Our tools, materials and wear-resistant solutions enable customers to run longer, cut faster and machine with greater precision."

Kennametal operates in the road rehabilitation, surface mining, underground mining, foundation drilling, and trenching applications within the construction industry. Kennametal believes that the market for urban infrastructure development in India will be robust for the next decade due to the governments focus on improving infrastructure such as roads, metro trains, ports, airports, and bridges.

Sandvik continue to add solutions to help the digitalisation in mining. A complete digital platform for optimised operations, from planning to execution, is the latest addition.

An increasing number of mines have already incorporated the use of OptiMine, a comprehensive suite of digital solutions for analysing and optimising mining production and processes underground. For several years mines around the world have made use of fully autonomous mining equipment from Sandvik, such as underground trucks and loaders. The first AutoMine automation system Opens in new window was developed and delivered in 2004. To help the industry obtain the benefits of digitalisation, Sandvik is continually upgrading its offerings. An exciting new product to be rolled out in 2022 is a collision-avoidance system developed by the Newtrax business unit. The acquisition of Australian software company Deswik Opens in new window, a top-tier supplier of mine planning software, supports digitalisation throughout the mining value chain.

The mining industry is increasingly adopting digitisation. Sensors, big data, Artificial Intelligence, digital twins, and many Industry 4.0 technologies are being implemented to improve monitoring, exploration, data analytics, predictive maintenance, and worker safety. The mine of the future will become a smarter more interconnected, data-driven environment.

Predictive maintenance is a key trend in the mining industry, made possible by increasing digitisation and data analytics and the development of smart sensors, AI, and machine learning. Vast amounts of data from multiple points can be retrieved, analysed, and used to action maintenance tasks, reducing downtime and improving productivity while improving safety.

"There needs to be a conscious endeavour to reduce the carbon intensity by the public and private sectors such as the direct reduced iron (DRI) electric arc furnace (EAF) IF route, which is expected to become dominant over the years," says Amit





Amit Bhargava Partner & National Head - Mining & Metals, KPMG India

Bhargava, Partner & National Head -Mining & Metals. KPMG India, highlighting strategies to align with carbon reduction targets. "Further, the steel scrap requirement is projected to

double by 2030. Several promising technologies are under evaluation, including COREX with an oxygen converter for direct and automatic use of export gas for power generation, COURSE 50 for highly efficient CO2 separation and recovery from blast furnace exhaust gas, and Volteron, a first-of-its-kind iron reduction and steel processing route that produces iron via direct electrolysis, expected to be operational by 2027."

Said Tridib Majumder, Managing Director, Quaker Houghton India,

"The products we have in the metals industry contribute to reducing friction, energy savings and improving finish primarily in cold rolling of flat steel products. We have



Tridib Majumder Managing Director, Quaker Houghton India

rust-preventives to ensure there is no corrosion after the steel is rolled. For the benefit of both steel and non-ferrous customers, Quaker Houghton continuously improves our products and develops novel solutions. For the Transportation OEMs, we have fluids that go into improving process efficiency once steel or iron is used to build a vehicle car, 2-wheeler, 3-wheeler bus, or truck. We have fire-resistant hydraulic fluids for the mining segment. There are numerous hydrocarbon gases in subterranean mines which have a tendency of catching fire. This can cause the

entire equipment to be destroyed or damaged in the fire."

Said Vivek Misra, Associate Vice President, Business Excellence and



Vivek Misra Associate Vice President. **Business** Excellence and Transformation. Smartchem Technologies

Transformation. **Smartchem** Technologies, "We produce technical ammonium nitrate in the mining chemicals industry, which is used to make explosives. These explosives are then used in the blasting of various

minerals, such as coal, limestone, and iron ore, as well as in other infrastructure-related areas. Power generation also makes use of ammonium nitrate. By supplying infrastructure and energy, our two business sectors help the country flourish. We concur with the PM's goal of an Atmanirbhar Bharat. In order to support these efforts, we are attempting to expand our capabilities."

SIT S.p.A. is the leader in the design and production of a vast and

complete range of couplings that include rigid couplings, flexible couplings, zero backlash couplings, toothed couplings, couplings with shaft, bellows and



Amit Nangre Executive Director, SIT PTC

disc couplings or to the clients own design. Said Amit Nangre, Executive Director, SIT PTC India, The technical complexity of what we offer from the catalogue gives it uniqueness. We promise to supply the customer with everything that is listed in the catalogue. Since our company has been in operation for 200 years, the couplings we produce have been put to the test for that entire time. The product must be excellent and benefit the customer if it is

still on the market."

He adds, "Currently, the market is huge for our products. We don't offer a whole selection of products in India. As a product, the coupling has over Rs 100 crore in sales across all categories, types, and capacities. Our aim In India is to acquire a major market share. We are closely working with many OEMs to understand their requirements and give them a proper solution."

Miner safety

Miner safety is a critical concern as deep underground mines are hazardous environments that are hard to reach if there is a disaster. Several new technologies have appeared to improve miner safety in recent years, taking advantage of innovative developments in wearable technologies, sensors, and advanced monitoring systems.

- Wearable, sensor-integrated technologies, such as smart helmets, can monitor the health of workers and any hazards in their environment.
- Biometric devices provide real-time alerts on factors such as worker stress.
- Proximity sensors such as RFID tags can locate and track workers and equipment in real-time.
- Augmented and virtual reality can display essential maintenance and safety data.
- Sensors can detect the presence of gases in the environment, reducing exposure.

The underground mining equipment market in India has been experiencing growth due to increasing demand for minerals and the expansion of mining operations. Overall, the outlook for the underground mining equipment market in India remains positive, driven by these trends and the ongoing demand for various minerals.



"Sany leads in sustainable practices for mining industry."

Sanjay Saxena, Chief Operating Officer, Sany India and South Asia, speaks on the current state of the mining equipment market globally and in India specifically.

How do you perceive the current state of the mining equipment market globally and in India specifically? What are the key trends and developments shaping the market landscape?

The global and Indian mining equipment markets exhibit notable differences in machinery utilisation. While India ranks among the largest markets, it predominantly relies on low-capacity excavation and hauling equipment, largely due to the availability of low-cost operators and competitive mining contract rates. Operator costs in India account for just 8 per cent of total operating expenses, compared to a global average of 30 per cent. However, in recent years, Indian mining companies have been shifting towards higher-capacity equipment, driven by

longer-term mining contracts, traffic limitations at

mining sites, labour

availability challenges, and growing environmental concerns. This trend, observed over the past encouraged

higher-capacity machines that enable customers to maintain cost-efficiency without increasing operational expenses.

Furthermore, the Indian market is increasingly adopting alternative energy solutions, such as electric and hybrid mining trucks and excavators, which address both environmental concerns and reduce operational costs, aligning the sector more closely with global sustainability trends.

What are the primary products or services offered by your company in the mining equipment market?

At Sany India, we pride ourselves on offering a comprehensive range of products and services tailored to meet the diverse needs of the mining equipment market. Our portfolio includes:

- Mining excavators: We provide a robust lineup of mining excavators with operating weights ranging from 50 tonne to 130 tonne. These machines are engineered for maximum efficiency and productivity, making them ideal for various mining applications.
- Mining trucks: Our mining trucks, with haulage capacities of 60 tonne, 70 tonne, and 95 tonne, are designed to handle the demanding conditions of mining environments while ensuring optimal performance and reliability.
- **Underground mining solutions:** Sany offers advanced underground mining solutions, including road headers, longwall mining packages, and roof support systems. These products are designed to enhance safety and



Sany offers advanced underground mining solutions, including road headers, longwall mining packages, and roof systems.

efficiency in underground operations.

Alternative fuel equipment: As a leader in innovation, Sany is at the forefront of introducing alternative fuel equipment to the mining industry. Our offerings include electric mining trucks, hybrid trucks, and electricpowered excavators, aimed at reducing the environmental impact of mining operations while maintaining high performance.

Through our extensive range of products and commitment to innovation, Sany India is dedicated to supporting the mining industry with solutions that enhance productivity and sustainability.

What are the main drivers of growth in the mining equipment industry?

The mining equipment industry is witnessing significant growth due to several key factors. A major driver is the surge in demand for power, which has, in turn, increased the need for coal. The Indian government's push to reduce coal imports has further

fueled this demand, ensuring a steady requirement for advanced mining machinery.

Additionally, the government's emphasis on infrastructure development has accelerated growth in the cement and steel sectors, driving further mining activities in critical resources like limestone and iron ore. This combined momentum across multiple industries has led to a strong and sustainable demand for mining equipment, positioning companies like Sany India to meet these expanding needs with our robust and innovative product offerings.

How do you ensure that your equipment meets the specific needs and challenges of mining operations in India?

At Sany India, we are committed to delivering mining equipment that is tailored to the unique demands of India's diverse mining landscape. All our products adhere to the highest safety standards as mandated by the Directorate General of Mines Safety

(DGMS), ensuring that safety is never compromised. Our machines are engineered to perform in a variety of mining environments, whether it's open-pit or underground operations.

Furthermore, we offer customised support solutions designed to enhance equipment uptime and ensure uninterrupted operations. This not only boosts productivity but also contributes to the overall efficiency of mining activities. With our customer-centric approach and robust machinery, we aim to meet the evolving challenges of mining in India.

How do you engage with mining companies to understand their requirements and provide tailored solutions?

At Sany India, we prioritise building strong, consultative relationships with our mining customers to fully understand their specific needs.

To read full interview, Log in to: www.EquipmentIndia.com



"Mining industry prioritises stability, performance, and after-sales service."

Prasanta Ganguly, **Head - OTR Marketing** (Domestic Sales), BKT Tires, speaks on the innovations or technologies in tyre design that BKT has introduced specifically for the mining sector.

Can you describe any recent innovations or technologies in tyre design that BKT has introduced specifically for the mining sector?

BKT has introduced several innovations in tyre design for the mining sector, particularly in all-steel radial tyres. Our latest radial OTR tyres are engineered to provide enhanced durability, better load distribution, and longer service life. We've also incorporated smart tyre technology that allows for real-time monitoring of tyre health, enabling operators to track pressure, temperature, and wear levels. These advancements help reduce downtime, optimise performance, and improve safety in mining operations.

How does BKT differentiate its tyre products from competitors in the mining sector?

BKT sets itself apart through a combination of advanced technology, customisation, and unmatched customer support. Our all-steel radial tyres are engineered to meet the toughest conditions, offering superior durability and performance. We also pride ourselves on customising tyre solutions to fit the specific needs of each mining site, ensuring optimal performance and longevity. Our commitment to sustainability, innovation, and customer-centric service further strengthens our position as a leader in the mining tyre

sector.

What are the key trends currently shaping the mining industry, and how do you see these impacting tyre requirements?

The mining industry is increasingly focused on stability, performance, and comprehensive after-sales service. These trends are driving the need for tyres that offer superior durability and reliability to ensure consistent operations in extreme conditions. Highperformance tyres are essential to support heavy mining equipment while delivering optimal load distribution, fuel efficiency, and extended life cycles. As mining companies emphasise stability, they require tyres that can minimise equipment downtime and maintain operational efficiency as well as safety.

Additionally, after-sales service has become a critical factor for optimum tyre performance and end users looking for partners who provide continuous support through tyre performance monitoring, maintenance support at site, and prompt issue resolution. BKT addresses these trends by offering advanced tyre solutions equipped with smart technology for real-time performance tracking, ensuring optimal performance and stability while providing the comprehensive after-sales service that mining operations require.

What are the main challenges faced by mining companies regarding tyre performance and durability?

Mining companies usually operate in harsh and variable environments, accelerating tyre wear and increases the risk of damages during service, thereby down time of equipment.

To read full interview, Log in to: www.EquipmentIndia.com



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Hyundai's ARC Facility Delivers Premium Rebuild Services



The ARC workshop facility is designed according to HD Hyundai's global quality standards.

he Indian market is up-and-coming and shows stable growth potential, driven by favourable macroeconomics, supportive government policies, and significant infrastructure investments. The construction equipment market in India for FY2023-24 has surpassed 1,00,000 units per year, making it the third largest market globally. Specialised machines, such as excavators, account for approximately 30 to 32 per cent of total construction equipment demand.

"Customers want solutions that keep their equipment performing well and lasting longer, minimising downtime and costs. The authorised rebuild centre (ARC) at Durgapur, West Bengal meets these key requirements with high-quality rebuild and refurbishment services," says Rajiv Chaturvedi.

HD Hyundai has achieved a record of 47,000+ excavators sold from its India smart factory since its inception in 2008. With a large population of existing excavators in India, HD Hyundai sees a very big opportunity to add value for customers by rebuilding their existing machines at competitive rates, thus making them save on capex.

The ARC workshop facility is designed according to HD Hyundai's global quality standards. The company initiated its own ARC in 2021 at Chakan Pune which caters mainly to Western and some parts of the Central Region. It then opened 2nd ARC with Unity Earthtech

(Dealership in Faridabad (NCR region) catering to the Northern region. The company has rebuilt over 150+ excavators and has a robust pipeline of customer orders in hand.

HD Hyundai has recently inaugurated its third ARC centre operated by Knowteq Equipcare LLP, in Kajora, Durgapur under technical support and guidance from HD Hyundai. This Eastern Region ARC will cater to all customers in the East and North East regions. This facility is specifically designed for the rebuild and refurbishment of old Hyundai excavators, accidental Hyundai excavators, etc. It is equipped with all state-of-the-art modern manufacturing and testing facilities for major structural repairs,

REPORT

critical components overhauling like engines, and major hydraulic aggregates.

The inauguration of the ARC in Durgapur took place on September 17, 2024, auspicious day of Vishwakarma Pooja, in the presence of the chief guest, Seong Woo Shim, Managing Director of HD Hyundai Construction Equipment India and Mr. Rajiv Chaturvedi - Vice President and HCEI Team. The senior management team from Knowteq Equipcare LLP, including their General Manager, Sarup Agarwal, was also present.

Tarun Jha, Head of Service at Hyundai, emphasized the activities of the ARC in the East Zone followed by an address by Mr. Joydeep Bakshi- National Head of Sales, and Mr. Amitesh Saha - Regional Manager of the Eastern Region.

Sarup Agarwal, General Manager, Equipcare, highlighted the ARC's facilities and emphasised the quality of rebuilding at their newly opened ARC, which Hyundai customers will benefit. He shared insights about Equipcare's future goals in collaboration with



Hyundai and expressed his confidence and excitement in this journey to offer world-class rebuilding support to all customers of Hyundai in the East Region.

"At ARC Durgapur, we are dedicated to providing rebuild and refurbishment facilities for HD Hyundai excavators because we understand our customers' need for reliability and long-term value from their equipment. By adhering to

global quality standards and offering major structural repairs and critical component overhauls, we are committed to delivering exactly what our customers are looking forextended equipment Life and maximum returns on investment. Our dedication stems from a desire to meet these expectations while ensuring optimal performance and durability, providing our customers with complete peace of mind."



C.A.S.H

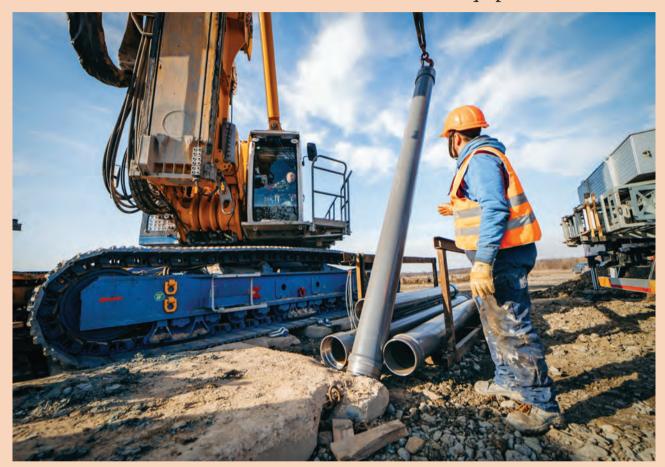
• Components • Accessories • Spares • Hardware



Telematics technology has revolutionised the management of construction equipment.

Revolutionising Construction

Telematics technology has revolutionised the management of construction equipment.



he construction industry serves as a cornerstone of economic development, providing essential infrastructure and public works that support communities and economies. As construction projects become increasingly complex and expansive, the effective management of construction equipment is vital. Monitoring and control systems have emerged as pivotal tools in enhancing operational efficiency, safety, and productivity on job sites. This article delves into the critical role of these

systems and the transformative impact of technology in construction management.

Construction equipment, ranging from excavators to cranes, represents a significant investment for companies. Ensuring these assets are used optimally is crucial to maximising productivity and minimising costs. Effective monitoring systems can drastically reduce idle time and enhance utilisation rates. By tracking equipment usage and performance metrics, project managers can make informed

decisions that streamline operations.

Real-time data and decision-making

In the dynamic environment of construction, access to real-time data is paramount. Modern monitoring technology allows project managers to track the status of tasks, monitor resource utilisation, and identify potential bottlenecks before they escalate into major delays. Cloudbased platforms and data analytics tools facilitate quick, data-driven decision-making. For instance, if

equipment is underutilised at a site, managers can redeploy it to where it is needed most, improving overall project timelines.

One of the most significant advancements in construction monitoring is the ability to remotely oversee job sites. Utilising sensors, drones, and IoT devices, project managers can monitor parameters such as temperature, humidity, vibration, and structural stability in real time. This capability enhances safety by allowing for the early identification of potential hazards and enabling proactive maintenance strategies to prevent costly downtime. Furthermore, remote monitoring enhances project flexibility, allowing for adjustments in construction schedules and resource allocation without necessitating physical presence on-site.

Role of Telematics in CE Management

Telematics technology has revolutionised the management of construction equipment. Available for all prime pieces of machinery, telematics solutions allow construction firms to monitor various aspects of their equipment, including fuel levels, fault codes, and maintenance data.

Telematics systems provide numerous advantages for construction companies, such as:

- Asset allocation analysis: Realtime data enables project managers to assess whether equipment is underutilised or overextended. By having a clear understanding of equipment usage, companies can minimise overuse and avoid unexpected downtime.
- Maintenance and repair tracking: Telematics helps businesses track maintenance schedules and repair needs. For rental equipment, data can guide companies in adjusting their equipment requirements,

- ultimately reducing costs.
- Operational efficiency: Companies like Hitachi Construction Machinery have developed telematics solutions that comply with the ISO 15143-3 (AEMP 2.0) standard. By providing operational data about machines, these systems enhance efficiency, productivity, and safety while reducing lifecycle costs.

Enhanced safety measures

Safety remains paramount in the construction industry. Monitoring technology is instrumental in enhancing safety measures on construction sites. Wearable devices equipped with biometric sensors can track workers' health and alert supervisors to signs of fatigue or distress in real time. Proximity sensors and geofencing technology can also play a crucial role in preventing accidents by alerting workers when they enter hazardous areas or approach heavy machinery.

Ensuring the structural integrity of buildings and infrastructure is another critical aspect of construction monitoring. Advanced monitoring systems can continuously track parameters like structural vibrations, deflections, and settlement. By providing early warnings of potential structural issues, these systems allow for timely intervention and corrective measures. This proactive approach helps ensure that buildings and infrastructure meet the highest standards of safety and durability, safeguarding both workers and the general public.

Overcoming implementation challenges

While the benefits of monitoring and control systems are clear, implementing these technologies is not without challenges. Construction firms may encounter issues such as:

· Cost of technology: Initial

- investment in monitoring systems can be substantial, particularly for small and medium-sized enterprises. However, the long-term savings and efficiency gains often justify the upfront costs.
- Training and adaptation: Ensuring that staff are adequately trained to use new technologies is essential for successful implementation.
 A well-planned training program can help ease this transition.
- Data management: With the increase in data generated from monitoring systems, managing and analysing this information can be overwhelming. Investing in robust data management tools is crucial for maximising the value of the data collected.

Conclusion

As the construction industry continues to evolve, the importance of monitoring and control systems will only grow. Embracing technological advancements will enable companies to deliver projects more efficiently, safely, and cost-effectively. The integration of AI and machine learning into monitoring systems is poised to further enhance predictive analytics capabilities, allowing for even more informed decision-making.

Monitoring technology is transforming the construction industry by providing real-time insights, enabling remote monitoring and control, enhancing safety measures, and ensuring structural integrity. As technology continues to advance, construction companies that leverage these tools will gain a competitive edge. By harnessing the power of data and analytics, the future of construction promises to be not only more efficient and safer but also more sustainable. The shift towards smarter construction practices is not just beneficial; it is essential for the continued growth and resilience of the industry.

Revolutionising Mining with Efficiency and Innovation

At IMME 2024, Vasanth Thangavelu, General Manager - Brand Marketing South AP, ExxonMobil Lubricants, highlighted Mobil™'s strong commitment to supporting India's mining sector through advanced lubrication solutions.

MobilTM's participation at IMME 2024 demonstrates its commitment to mining industry. Can you shed light on the significance of this event for Mobil?

IMME 2024 is an integral event for Mobil™, reflecting our commitment to advancing India's mining sector, an industry crucial for powering the nation's infrastructure and driving economic growth. At Mobil™, our vision is to be a trusted partner that enables industries to thrive even in challenging conditions.

For us, IMME is an important platform that helps in engaging with key stakeholders and gain insights into the evolving needs of the mining sector. By aligning our innovative lubrication solutions with the specific requirements of mining operations, we are dedicated to enhancing efficiency, reducing operational costs, and extending the lifespan of heavy machinery. Our commitment goes beyond providing high-quality lubricants; it encompasses delivering expertise, insights, and cutting-edge solutions that empower the mining industry to maintain optimal productivity, regardless of the challenges faced.

India's mining industry is rapidly expanding. How does Mobil™ support this growth through its offerings and services?

As the third-largest energy consumer in the world, India faces a growing demand for power and electricity, driving an increase in coal consumption. Additionally, India aims to reach a total crude steel capacity of 300 million tonnes per annum (MTPA) and a crude steel demand/ production of 255 MTPA by the fiscal

year 2030-31. With this evolving landscape, Mobil™'s role is to provide solutions that ensure smooth and agile operations. Our approach is built on understanding the operational challenges mining companies face, such as extreme temperatures, heavy loads, and abrasive environments, and providing customised solutions to meet these challenges head-on.

We assist industries by delivering much more than lubricants; our technical support teams work closely with clients to optimise lubrication systems, believing that our clients know better about their business and that we aim to provide them the technical assistance they need. This collaboration ensures machinery performs at its peak while reducing energy consumption and maintenance costs. Additionally, we offer digital tools and services, such as Mobil™ Lubricant Analysis (MLA), to provide data-driven insights, helping companies predict maintenance needs and avoid costly downtime while improving the overall efficiency of their operations.

Optimal lubrication is critical in heavy industries like mining. How does Mobil™'s expertise address these needs?

In industries like mining, where machinery is subjected to some of the harshest operational conditions, efficiency and reliability are nonnegotiable. Therefore, we at Mobil™ offer lubrication solutions that go beyond traditional methods, addressing the distinct challenges of these heavy-duty environments. Our advanced lubricants reduce friction and wear, ensuring machinery operates at peak capacity, even under







Elevate Your Paving Precision with the ABG P5320D

The ABG P5320D Asphalt Paver is designed to revolutionize your paving projects with its powerful performance and intuitive controls. Engineered to handle the toughest tasks, this machine ensures every pave is smooth, efficient, and built to last. Whether you're working on highways or urban roads, the ABG P5320D offers the reliability and precision you need to get the job done right.

Key Features:

- **Unmatched Productivity**: Built to support up to 40-ton trucks with a high-capacity hopper and heavy-duty push rollers. Maximum paving width of 7.5 meters.
- **Efficient Power**: 105 kW Volvo engine with low RPM, high torque, and auto engine idle for reduced fuel consumption.
- Advanced Control: New-generation EPM for intuitive operation with all-round visibility, adjustable console, and hydraulic roof.
- **Flawless Finish**: Automatic conveyor and auger control with ABG's patented automatic track tensioner for consistent paving results.



INTERACTION



extreme conditions.

One of the key products in our portfolio is Mobilgrease XHP™ 462 Moly, designed for the demanding environments mining machinery faces. It's a high-temperature, lithium-complex grease that offers superior adhesion and resistance to water contamination—two common issues during mining operations. For many of our customers, Mobilgrease XHP™ 462 Moly has proven transformative, with up to 3X increase in re-greasing intervals* significantly reducing maintenance downtime.

Further, our Mobil™ DTE 10 Excel series is engineered for highperformance hydraulic systems, providing exceptional hydraulic efficiency, reducing energy consumption by up to 6 per cent*, and lowering operating temperatures. Its advanced formulation enhances system cleanliness and oxidation stability, leading to longer equipment life and improved reliability. Additionally, it offers superior wear protection and excellent filterability, ensuring consistent performance even in extreme conditions. These features make it a go-to solution for

heavy-duty operations looking to optimise efficiency and reduce operational costs.

As we approach 100 years of Mobil™ Delvac in 2025, we take pride in Mobil™ Delvac Modern™ 15W-40 Advanced Fleet, an extra high performance diesel engine oil that helps extend engine life in severe on and off-highway applications. It can deliver fuel economy benefit up to 1 per cent***. This series is formulated using Synthetic Technology and an optimised additive system that delivers excellent performance in both new and older engines. It meets or exceeds the requirements of the API CK-4, CJ-4, CI-4 PLUS and CH-4 service categories.

Our mining offerings are designed with the thought process of lowering operational costs and increasing machine efficiency, while ensuring compliance with evolving regulatory standards.

With mining operations becoming more complex, how does MobilTM continue to innovate to meet the evolving demands of the industry?

The mining sector, like many

other industries, is facing increased complexity and demands as operations scale up and new technologies emerge. Mobil™ is at the forefront of addressing these evolving needs through continuous innovation. We invest heavily in R&D to develop next-generation lubrication solutions that keep pace with industry advancements.

One of the ways we support the industry is by integrating digital tools and analytics into our offerings, such as our Mobil™ Lubricant Analysis program. This technology provides real-time insights into the performance of lubricants and machinery, helping companies make data-driven decisions to enhance efficiency, reduce maintenance costs, and prevent unscheduled downtime.

Moreover, our technical teams are constantly working to refine our lubrication solutions, ensuring they provide maximum protection in the face of harsh operating environments. ExxonMobil engineers conduct a thorough assessment of your plant's current lubricants, lubrication requirements, and practices, providing a comprehensive review and documentation of operations. By applying their expert insights, they identify and record areas where a change in lubricant or practices could enhance performance. This continuous push for innovation allows us to meet the evolving demands of the mining sector, ensuring our clients can operate with greater confidence and efficiency.

MobilTM's latest campaign, 'Fill with MobilTM,' has been creating waves in the industry. Can you share the values behind this initiative and why it resonates so strongly with key sectors?

'Fill with Mobil™' campaign embodies our commitment to delivering more than just products; it's about offering tailored solutions

for various industries. When you fill with Mobil™, you gain exceptional lubrication backed by 150 years of expertise, collaboration, and the trust of over 35,000 OEMs.

'Fill with MobilTM'—three impactful words that highlight our long-standing tradition of collaborating with equipment builders to create optimal lubricants. This exceptional partnership distinguishes us in the industry, prompting leaders to encourage their customers to... Fill with Mobil™. This campaign is more than a slogan for us; it reflects a shared sentiment among all those who have experienced Mobil's legacy.

We believe that choosing the right lubricants significantly enhances machinery performance and efficiency. When you align with Mobil™, you're choosing a trusted brand that guarantees superior

protection and operational excellence, ultimately contributing to the success of all ecosystem partners.

*The increase in re-greasing intervals relates solely to the product performance when compared with conventional lithium based EP 2 grease. The enhanced re-greasing interval claimed for this product is based on field results of the grease in accordance with applicable industry standards and protocols. Results may vary on operating conditions and equipment

**The energy efficiency of Mobil DTE 10 Excel relates solely to the fluid performance when compared to conventional Mobil-branded hydraulic fluids. The technology used allows up to 6 per cent increase in hydraulic pump efficiency when tested in standard hydraulic applications under controlled conditions. The energy efficiency claim

for this product is based on test results on the use of the fluid conducted in accordance with all applicable industry standards and protocol. Results may vary based on operating conditions and equipment.

***This fuel economy trials were done on a chassis dynamometer as per the "overall bus driving cycle". which replicates a realistic Indian driving condition.

(Exxon Mobil Corporation has numerous affiliates, many with names that include ExxonMobil, Exxon, Esso and Mobil. For convenience and simplicity, those terms and references to "corporation", "company", "ExxonMobil", "EM", and other similar terms are used for convenience and may refer to one or more specific affiliates or affiliate groups.)

For more details, please visit mobil.co.in/business



COVER STORY:

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FEATURE:

- Mining Equipment
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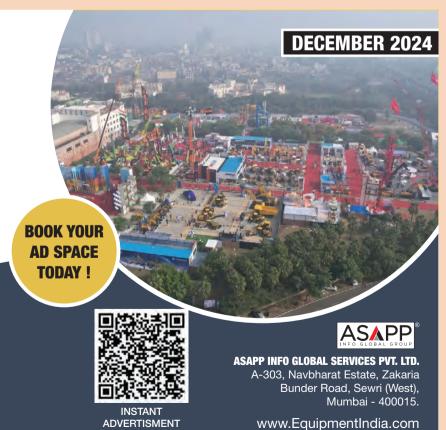
Undercarriage Parts

Issue closes on 23th November 2024

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"We are committed to achieving carbon neutrality target by 2040."

Seshan Iyer, President - Industrial Business, Schaeffler India, speaks on the steps taken by the company to achieve the objectives of sustainability.

How is Schaeffler assisting its customers in their path to net zero emission?

Schaeffler India supports customers in achieving their net zero emission targets by providing sustainable products, solutions, and expertise. We offer a wide range of energy-efficient products and services that help them reduce their energy consumption and carbon footprint. We also work closely with them to optimise their processes and implement sustainable manufacturing practices. Additionally, we share our knowledge and expertise through training programs and workshops to assist them on their sustainability journey. Remanufacturing of bearings and deployment of roll-shop maintenance support at steel plants are a few

What steps are being taken by your company to achieve the objectives of sustainability?

> Sustainability is at the core of Schaeffler India's strategy. We are committed to achieving

> > **Product**

our ambitious carbon neutrality target by 2040. This commitment spans our entire value chain:

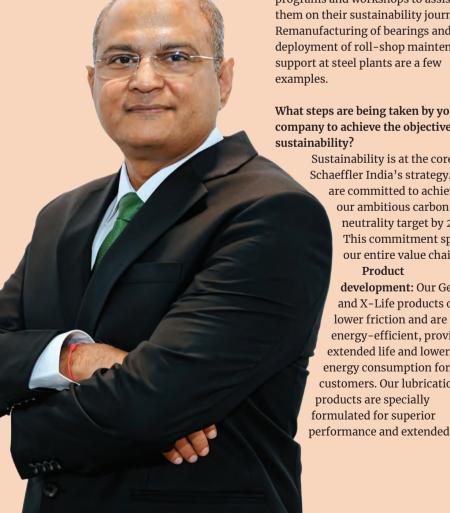
development: Our Gen-C and X-Life products offer lower friction and are

energy-efficient, providing extended life and lower energy consumption for customers. Our lubrication products are specially formulated for superior

operations, increasing the mean time between relubrication and thereby reducing the consumption of lubricants. For example, our E-mobility solutions for electric vehicles help automotive companies design and manufacture electric vehicles, contributing to lower emissions in the transportation sector. Schaeffler Lifetime Solutions offers a wide gamut of online condition monitoring solutions that help customers understand and predict the failures of rotating machinery, thereby reducing frictional losses before failure.

R&D: We invest heavily in R&D to drive innovation and accelerate the transition to a greener future. Our research focuses on employing advanced surface technologies and highly engineered sealing technologies that offer superior solutions with higher dynamic load ratings, higher speeds, and minimal contaminant ingress, resulting in superior performance and lower energy and lubricant consumption. We work closely with OEMs in the wind and solar energy space.

Manufacturing: We continuously adopt and employ new technologies in manufacturing processes through lean manufacturing practices, digitalization, and renewable energy integration. Our manufacturing sites implement circular economy principles, such as recycling and reusing materials, to minimise waste. The manufacturing machines at our plants have implemented Schaeffler Optime and Prolink Solutions for condition monitoring of rotating machinery to support sustainability goals. Our refurbishment/





remanufacturing facility in Jamshedpur offers customers a wide gamut of refurbishment solutions, helping them extract the maximum life out of a bearing, thereby supporting overall sustainability goals and reducing the plant's carbon footprint over the long term.

Supply chain/logistics: We collaborate with our suppliers and logistics partners to optimise transportation routes and reduce emissions throughout our supply chain. We are also exploring the use of sustainable packaging materials and alternative fuels for transportation.

Waste management: We are committed to minimising waste generation and maximising recycling. We have implemented comprehensive waste management programs at our plants and actively partner with recycling companies to ensure responsible disposal of waste materials.

Overall business: We have integrated sustainability into our core business strategy and decision-making processes. We measure and track our progress towards our sustainability goals regularly and transparently.

How important are "green engineering/manufacturing" practices for India to gain competitive advantage in the global marketplace?

Green engineering and

manufacturing practices are critical for India to gain a competitive advantage in the global marketplace. As sustainability becomes a key differentiator for businesses, companies adopting these practices will be better positioned to attract investments, win new customers, and access new markets. Additionally, these practices can lead to cost savings through reduced energy consumption and waste generation. The Indian government's recent focus on promoting green manufacturing provides further impetus for companies to adopt these practices.

Why is it imperative for Indian manufacturers to adopt modern technologies & automation for green manufacturing?

Modern technologies like digitalisation, robots, AI, and 3D printing are essential for improving competitiveness and achieving green manufacturing in India. These technologies impact manufacturing in every aspect and can enhance efficiency, optimise processes, and reduce waste and the carbon footprint. For example, digitalisation can enable real-time monitoring and control of production processes, leading to reduced energy consumption and improved resource utilisation. Robots can automate repetitive tasks, freeing up human workers for higher-value activities and reducing safety risks.

AI can optimise production planning and maintenance schedules, further enhancing efficiency. 3D printing has a lower impact on the environment than traditional technologies, reduces waste and carbon emissions, and enables the creation of lightweight and complex components, reducing material usage and waste.

How do you view the performance of the manufacturing sector? What is your expectation for FY24 & FY25?

The Indian manufacturing sector is facing headwinds due to the global economic slowdown and geopolitical uncertainties. However, the sector has shown resilience in the past and is expected to bounce back in the coming years. Some of the important aspects that will support the growth of the manufacturing sector include the government's focus on investing heavily in infrastructure development that will kickstart major core industries, boosting domestic manufacturing through initiatives like "Make in India" and PLI schemes, expected to provide further impetus to the sector. We at Schaeffler India are well-positioned to meet the market demand as we move forward.

How do you plan to scale up your business "sustainably"? What kinds of growth opportunities are you looking to tap in the coming years?

We plan to scale our business sustainably by focusing on organic growth and expanding into new markets and segments. We will continue to invest in R&D and innovation to develop new sustainable products and solutions. We will also leverage our global expertise and network to collaborate with partners and customers to drive sustainable growth. Manufacturing expansion plans and localisation of products will also be of key importance as we move forward.

Caterpillar Revolutionises Motor Grader Industry with Performance and Technology

aterpillar India has won the award as the Bestseller in the "Motor Graders" category in India. The research was conducted by the FIRST Construction Council (FCC), an infrastructure think tank, established in 2003, focused on providing the latest updates on the construction industry in India. The award was presented at the 12th Equipment India Awards 2024, held at Jio Convention Centre, Mumbai, on October 10, 2024.

demands and make them successful. Our wide range of Motor Graders include 120, 120 GC, 140 GC and SEM 915. The new Cat 120 Motor Grader powers through any job with the utmost performance. The new Cat 120 GC and 140 GC Motor Graders combines reliable performance with lower owning and operating costs.

Our all-new next gen Cat Motor Grader are engineered to take the customer satisfaction to a new horizon. Our new Cat Motor Grader

PERFORMAN PERFORMAN

Mukul Dixit, Director – Sales and Marketing, Global Construction and Infrastructure Division, Caterpillar India.

"We thank **Equipment India** for recognising our efforts and presenting this prestigious award to Caterpillar. We dedicate this award to our valued customers and extended partners for bestowing confidence on Cat® machines. We will continue to strive to fulfil our commitments and improve customer experience and deliver success", said **Mukul Dixit**, **Director – Sales and Marketing**, **Caterpillar's Global Construction and Infrastructure Division**.

Caterpillar offers multiple solutions and variety of products to help our customers meet their consumes less fuel compared to its predecessor, pushing up performance to a great extent, all the while bringing down the operating cost. The ground-up redesign of the all-new cab ensures enhanced visibility with connecting rear windows, seat options along with the new information display screen. The new filtration technology and the extended maintenance intervals reduce the maintenance cost. The new hydraulic valves provide continuous matching of hydraulic flow and pressure to power demand and ensure precise, predictable,

and consistent implement movement.

"Cat technologies give the edge that is needed to improve machine and operator efficiency while working safer", said Mukul Dixit.

Cat motor graders are equipped with technologies like Cat Product Link™ along with GPS connect, which not only help improve traceability and visibility but also enable the systems to observe, identify and understand different facets of heavy machinery operation without human intervention and improves the maintenance and operation of machines. Cat Motor Graders are also equipped with AccuGrade™ Grade Control System which enhances grading accuracy and virtually eliminates the need for survey stakes and reduces guesswork and costly rework by moving dirt right the first time, reducing the operating costs.

The revolutionary Caterpillar solution is factory integrated, sensor-independent, and features a suite of products which includes cross slope, sonic, laser, Global Positioning System (GPS), and Automatic Total Station (ATS) technology. Automatic blade control allows operators to improve efficiency and productivity by achieving grade faster and in fewer passes than ever before, reducing the need for traditional survey stakes or grade checkers helping the customers to complete their project way before their timeline.

Stable Blade technology is proactive and senses the blade bounce before you to reduce machine speed until you are on smoother ground. It lessens wear and tear on the blade. Remote Services in Cat Motor grader is a

COMMUNICATION FEATURE



suite of cutting-edge technologies that improve job site efficiency. The two key functions are Remote Troubleshoot and Remote Flash which enables the dealers to run diagnostic testing and update the software remotely. With all these new technologies, our new Cat motor grader offers options to power through any job with the utmost performance and helps the customers to finish the job at the right time with the right grading.

"Our long-standing Cat dealers Gainwell Commosales India and Gmmco and their extensive service network is our strength", said Mukul Dixit. Our dealers are accessible round the clock and offer an end-to-end solution that includes first-rate after-market support and full spectrum of maintenance services like Condition Monitoring (CM) which provide best-in-class customer experience by fostering repairs before failure and Schedule Oil Sampling (SOS) which provides complete fluid analysis to maintain equipment health.

"Caterpillar offers 'Aftermarket Performance Customer Value Agreements' (CVAs), to support hassle-free service to customers at any point in the machine lifecycle to help maximise machine performance and utilisation", said Mukul Dixit.

This CVA includes dealer technician support using genuine Cat parts for certain planned maintenance and fluid health management to help identify issues before they cause unexpected downtime. The Aftermarket Performance CVA can help customers control costs through component protection, covering the failure of select components, such as hydraulic and fuel injection pumps. Customers can also obtain asset information and support for their equipment via Cat App, Cat Inspect and other digital tools which will help them gain access to information such as machine hours, location, and fuel burn. Helpful machine data and insights are just one click away - available 24/7 from customers' mobile phone. It is an 'all in one' plan to support the machine's health and keep machines running longer with genuine Cat parts, and to make owning equipment easier for Cat customers.

Given the emphasis on strategic economic development, there has been a strong focus on ambitious nationwide initiatives aimed at enhancing infrastructure. This gives us great opportunity in road construction, inland waterway

systems, dedicated freight corridors, rail and airport infra in urban and tier 2 and tier 3 cities. Projects like the Bharatmala initiative, which aims to connect 550 districts through national highway linkages and establish 50 new national corridors, are indicative of the extensive infrastructure demand and growth of the equipment industry.

"Caterpillar is dedicated to delivering top-quality products and solutions tailored to the customers' needs. Our R&D efforts are guided by customer demands, and we stand at the forefront of adopting advanced technologies", said Mukul Dixit.

"Our equipment solutions continue to evolve of how and where our machines will operate in the long term. With this insight, we concentrate on addressing customer challenges by enhancing the intelligence of our machines. Whether the project involves infrastructure, construction, or quarrying, Caterpillar provides a diverse range of products designed for various applications, ensuring higher productivity, adherence to tight project timelines, competitive operational costs, and enhanced safety", said Mukul Dixit.

Rubber King Tyre: A Journey

of Excellence

Rubber King Tyre manufactures and exports a diverse portfolio.

stablished in 1981, Rubber King Tyre has swiftly emerged as a force to reckon with. As a subsidiary of the esteemed Gawarvala Group, it epitomises innovation, quality, and commitment. Here's why Rubber King Tyre deserves our attention:

- Holistic product range: Rubber King Tyre manufactures and exports a diverse portfolio, including butyl tubes, automotive flaps, and tyre curing bladders. Their products are the backbone of heavy machinery, ensuring safety, efficiency, and durability.
- Eco-friendly approach:
 Sustainability is at the core of their ethos. Rubber King Tyre embraces eco-friendly practices, reducing waste and minimising environmental impact. Their commitment to recycling and responsible manufacturing sets a commendable example.
- Innovative solutions: The company's recent launch of 11 new OTR tyres at CII 2024 underscores their dedication to cutting-edge solutions. From the next-gen port tyre for reach stackers to high-traction variants for motor graders and mining tipper trucks, rubber king tyre pushes boundaries.

Concrete equipment trends

Concrete design is undergoing a metamorphosis, driven by technology and sustainability. Here are the trends shaping the industry:

Eco-friendly and sustainable

concrete:

Reduced carbon emissions, recycling, and energy efficiency define the new concrete era. Rubber King Tyre's commitment to sustainability mirrors this global shift.

Decorative and stamped concrete: Concrete is no longer just utilitarian; it's an artistic canvas. Stamped concrete allows patterns and textures akin to natural stone or wood, without compromising durability.

 Smart concrete mixers and 3D printing: Technology is revolutionising construction.
 Smart mixers optimise concrete quality, while 3D printing promises efficient, customised structures.

OTR tyres

The OTR tyre market is evolving rapidly. Rubber King Tyre's contributions are noteworthy:

- Digital transformation: IoT and smart tyre technologies monitor parameters in real-time. Imagine OTR tyres embedded with sensors for temperature, pressure, and tread wear – a game-changer for safety and efficiency.
- Lighter, stronger, smarter:

Carbon cast technology reduces weight, enhancing shipping, erection, and substructure costs. Rubber King Tyre's 18.00–25 40PR Port Champion Plus exemplifies this trend.

Mining and construction:
 Their Hard Rock Champion
 series tackles rough terrains,
 supporting mining tipper
 trucks. OTR tyres are no longer
 mere components; they're
 strategic assets.

Driven by purpose

Rubber King Tyre exemplifies excellence. Their commitment to innovation, sustainability, and customer satisfaction resonates across the industry. As we celebrate their journey, let's recognise that every tyre they produce carries the weight of progress, connecting infrastructure and driving growth.

(Communication from the management of the company)

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26 - 29 November 2024. Dubai World Trade Centre, UAE bia5alobal.com/visit

85,000 construction pros meet here for a reason.

Global innovations. Global conversations. Global opportunities.

2.5k+ 60k+

exhibitors

products

230+

speakers

165+

Participating

130+

Secure





Featuring 5 specialized events











Main supporting partner









Bonfiglioli invests ₹320 cr in India expansion

Bonfiglioli Transmissions, the Indian subsidiary of Bonfiglioli Group, celebrated a significant milestone with the foundation stone laying ceremony for its new industry and automation facility in Cheyyar, Tamil Nadu, and the inauguration of its technology and innovation hub in Chennai.

The 25-acre Cheyvar plant, scheduled to commence operations by 2025, reinforces Bonfiglioli's commitment to the 'Make in India' initiative and solidifies its position as one of India's largest gearbox manufacturers. The facility will feature state-of-the-art machinery, create 150-200 job opportunities, and cater to growing domestic demand for heavy-duty industrial gearboxes.



Bonfiglioli's latest investment is a strategic continuation of its previous year's investment in Pune, expanding its manufacturing capabilities for light and medium duty industrial gear boxes. Bonfiglioli's new Global competence centre, The Bonfiglioli Technology Space in Chennai, represents another milestone in the global Bonfiglioli innovation

ecosystem, housing 180 engineers with diverse expertise. This cutting-edge facility will focus on research, development and technical support, integrating advanced technologies to create breakthrough solutions. The centre will also house testing laboratories that could be used to simulate real field working conditions.

Cummins India launches Retrofit Aftertreatment System

Cummins India has launched Retrofit Aftertreatment System (RAS), an innovative clean air solution that allows customers to use their existing CPCBII and CPCBI gensets, and comply with the latest genset emission regulations.

This highly efficient and indigenously designed retrofit emission control device effectively reduces particulate matter (PM), carbon monoxide (CO), and hydrocarbon (HC) emissions from genset exhaust up to



90 per cent. The product is thoughtfully designed to be compact, providing a space saving solution with minimal operational and maintenance expenses.

Pankaj Kapoor, VP - Distribution, Cummins India, said, "At Cummins,

we are steadfast in our commitment to help our customers in transitioning to cleaner and greener technologies. RAS offers an innovative and dependable solution for customers with CPCBII and CPCBI gensets, ensuring compliance with stringent emission standards."

Atlas Copco WEDA pumps optimise lithium extraction process

A mine in northern Chile has doubled its lithium extraction rate since installing Atlas Copco's WEDA drainage pumps. Operators at the South American mine wanted to improve their lithium extraction process and turned to Atlas Copco's distribution partner, TRILE, for expert advice and a reliable solution. In addition to optimising its process, the mine has also reduced its maintenance costs by 60 per cent.

Danfoss appoints Shree Gurumurthy as SVP of Global Operations

Danfoss Power Solutions has announced the appointment of Sriram (Shree) Gurumurthy as Senior VP of Global Operations.

Previously serving as VP of Global Manufacturing Strategy, Gurumurthy will continue to report to Eric Alström, President of Danfoss Power Solutions, and will join the leadership team based in Eden Prairie, Minnesota.

In his new role, Gurumurthy will spearhead the newly established Global Operations function, focusing on enhancing efficiency and achieving top-tier operational performance and profitable growth across the company. His responsibilities will encompass several critical areas, including safety, environmental health and quality, supply chain management,

manufacturing footprint strategy, Danfoss Business Systems, indirect procurement, manufacturing systems and services, distribution centers, and communications. Gurumurthy has played a pivotal role in optimising Danfoss Power Solutions' manufacturing footprint since joining the company during the Eaton Hydraulics acquisition in 2021.

Gradeall focus on the OTR tyre problem

Best known for their renowned MK2 tyre baler and sidewall cutter machines, Gradeall is now addressing the challenges posed by massive Off-The-Road (OTR) tyres.

For years, these enormous tyres have been a significant challenge in waste management due to their size, weight, and difficulty in disposal. However, Gradeall is providing a much-needed solution. Conor Murphy, Director from Gradeall, proudly shares; "These machines are the result of five years of dedicated research and development. We have created a reliable, user-friendly method to downsize these large tyres, responding to the demands of our customers and enhancing our existing tyre recycling range."

Scania India announces Silvio Munhoz as its new Managing Director

Scania India has appointed Silvio Munhoz as the new Managing Director, effective September 1, 2024. Silvio succeeds Johan P Schlyter, bringing decades of extensive experience in the automotive industry to his new role.

Silvio's leadership journey includes key positions such as Managing Director of Codema, and interim President and CEO of Scania Brazil. Throughout his career, he has demonstrated a strong strategic vision, a customer-centric approach, and a deep commitment to sustainable innovation, driving success across multiple markets. His appointment marks a new chapter in Scania India's



growth, as the company continues to focus on delivering state-of-the-art transport solutions and reinforcing its sustainability initiatives in the region.

Commenting on his new role, Silvio Munhoz said, "I am truly honoured to

lead Scania India during a time of immense transition within the automotive industry. My focus will be on reassuring Scania's commitment to the Indian market while expanding the adoption of sustainable and innovative power and transport solutions. I look forward to working with the talented team at Scania India and building upon the solid foundation established by my predecessor, Johan P. Schlyter."

Copeland announces ₹500 crore investments in India

Copeland, a global leader in sustainable climate solutions, announced a ₹500 crore investment in India to expand its manufacturing facility in Atit, Maharashtra and for the construction of a new global R&D centre in Pune, Maharashtra, The manufacturing, engineering and R&D investments in India will expand existing engineering capabilities, increase production capacity of Copeland's compression solutions and advance the innovation of sustainable heating, cooling, refrigeration and industrial solutions.

Underscoring Copeland's commitment to India, these expanded India facilities will provide for the addition of an advanced scroll compressor line catering to both the domestic and Copeland's key international markets in the region. The investments will expand Copeland's existing Pune manufacturing facility by



an additional 7,350 sq m over the next five years and the addition of a 15,000 sq m R&D centre focused on advancing Copeland's climate solutions for its customers.

"India is an important growth market for Copeland, and this expansion reaffirms our commitment to both the India market and innovation," said Ross B. Shuster, chief executive officer, Copeland. "These planned investments will enable us to increase production capacity and reduce lead times for our customers in the region while supporting India's energy and environmental goals."

Baker Hughes compressors for Angola FPSO project

Baker Hughes will supply compression solutions to Saipem for TotalEnergies' Kaminho Floating Production Storage and Offloading (FPSO) project in Angola. Baker Hughes' centrifugal BCL compressor and Integrated Compressor Line (ICL) technology will be used to minimise emissions, eliminate routine flaring, and reinject associated gas into the reservoir for storage. The Kaminho FSPO project is the first large deepwater development in the Kwanza basin and comprises the conversion of a Very Large Crude Carrier (VLCC) to an FSPO unit which will be connected to a subsea production network. Designed to minimise greenhouse gas emissions and eliminate routine flaring, this FPSO is all-electric and associated gas will be fully reinjected into the reservoirs. Production start-up is expected in 2028, with a plateau of 70,000 barrels of oil per day.

Pettibone's New Extendo 1044X

Telehandler

Pettibone has unveiled its Extendo 1044X Telehandler, which achieves a 10,000-pound lift capacity without outriggers. The company says the lack of outriggers on the 44.5-foot-high telehandler means faster setup times, better jobsite maneuverability and fewer components that require maintenance. It has a 30-foot reach and an operating weight of 23,900 pounds, depending on its configuration.

"These efficiency gains are complemented by exceptional lifting performance that allows the 1044X to compare favorably with competitive outrigger-equipped units in the same weight class," Pettibone says.

The 1044X runs on a 74-horsepower Deutz engine that



does not require diesel exhaust fluid to meet Tier 4 Final emissions regulations. The engine has been mounted on the side of the telehandler to improve operator visibility to the curb and maintenance access. The four-wheel-drive telehandler is designed to traverse rough terrain and features limitedslip front axle differential.

Operators will find a cab with climate control, flat bolt-in glass, split door design, a rear window that opens, lockable storage under the seat and water-resistant components so the interior can be washed down. Pettibone says it added ergonomics to the seat, pedal, steering wheel and joystick. An analog/LCD gauge cluster comes standard. A 7-inch digital display with integrated back-up camera is optional. The 1044X has a turning radius of 14 feet 4 inches, and the Dana Powershift transmission offers three speeds, forward and reverse, the company says.

JCB Unleashes its Largest Excavator - the 370X

JCB has rolled out its largest excavator, the 87,000-pound 370X, designed for heavy-duty digging, breaking and other tasks. The new model runs on a 322-horsepower Cummins engine, gets an upgraded undercarriage, heavier counterweight and increased hydraulic pressures from its predecessor, the company says.

Despite the increased power, the 370X boasts higher fuel efficiency and less noise. That's partly because the 8.9-litre, 6-cylinder engine can achieve max output at only 1,700 rpm, according to JCB. The engine is equipped with automatic engine shutdown and Auto Idle to further reduce fuel consumption.

Also increasing performance is the latest tandem hydraulic pump from Kawasaki that boosts hydraulic



two variable displacement pumps each have a max hydraulic flow of 80 gallons per minute. The system also comes standard with a hydraulic cooling fan with reverse function. For even greater performance, the company offers optional auxiliary hydraulic circuits with up to 15 attachment settings. JCB says it also gave the hydraulic hoses larger diameters and strengthened the boom and arm.

monoboom. Customers have a choice of three different arm lengths: 8.6, 10.6 or 13.2 feet. Optional heavy-duty arms with additional crush bars and reinforcement are available.

A new 2.75-cubic-yard XHD bucket is standard, and a 3.3-cubicyard bucket is available. Bucket pin diameters have been increased. JCB says it also has a new hydraulic breaker, the HM330T, designed for the 370X.

Kubota Debuts Smallest Compact Track

Loader Ever

Kubota unveiled its smallest compact track loader this week at Equip Expo. The new SVL50x runs on a 49.6-gross-horsepower Kubota engine and is only 48.5 inches wide for fitting in tight spaces. It also comes with some debut features from Kubota, which has loaded the small loader with lots of tech and other functions for easier operation. Kubota says the "x" stands for "extra."

The new CTL is a response to a growing trend, particularly in homebuilding, of denser construction, according to Kubota.

"With the trend of putting more houses on less land, and the space between lots getting tighter and tighter, Kubota is filling a need in the market for a narrow, cabbed track loader among construction and landscaping professionals," says Jerry Corder, Kubota product manager, construction equipment. "The new SVL50x gives operators a smaller, feature-packed machine, some of which have never been



seen on a Kubota compact track loader."

The SVL50x can be configured with four options, from an open ROPS operator station to a one-piece sealed cabin decked out with Kubota's premium features.

The one-piece sealed cab "helps prevent dirt, dust, rain and debris from entering the operator space while providing a quiet operating environment," Kubota says. It comes with a 7-inch color LCD touchscreen for operation functions and information, such as battery charge, hydraulic oil and coolant temperature, auxiliary mode and fuel level. A rearview camera is also standard and is viewed on the touchscreen.

Komatsu Boosts Productivity of New Dump Trucks

Komatsu's new HD465 and HD605 mechanical haul trucks get upgrades aimed at improving productivity and fuel efficiency in quarry, mining and aggregate operations.

The -10 models replace the -8 models in the lineup and get increased horsepower and higherstrength steel for a reduced operating weight. The HD465-10 weighs in at 60 tons and offers a high payload capacity and efficient hauling capabilities, while the 70-ton HD605-10 is designed for reliability

and durability.

The new models sport the same Komatsu SAA6D170E-7 engine as the -8 line, but it has been tuned to provide a 5.5 per cent increase in horsepower (818 gross horsepower) and 9.6 per cent increase in max torque (3,016 foot-pounds).

The MacPherson strut-type independent front suspension has a special A-frame between each wheel and the main frame, which increases the turning angle of the wheels, creating a smaller turning radius and a smoother ride over uneven surfaces.

Operators can set a constant downhill travel speed using the Auto Retard Speed Control (ARSC) function, allowing them to focus on just steering the machine.

On the new models, different speeds can be set based on the truck load status. The speed while hauling material up a 10 per cent grade has also been increased by 15.2 per cent compared to -8. Economy and Economy Light fuel modes help regulate fuel use during lighter work applications to improve efficiency.



CONVEYORS



1 | Andhra Pradesh Power Generation Corporation

Details: Tenders are invited for supply of screw conveyor and pf shut off gate spares for ball tube mill

bbd 4760.

Submission date: 30 October 2024 **Location:** Kadapa, Andhra Pradesh

Contact: Chief Engineer, VV Reddy Nagara-516312, Kadapa, Andhra Pradesh. T: 0856-3262875, F:

0856-3232102, rtpp.purchase@apgenco.gov.in

2 | Northern Railway

m-24 (super abrasionresistant) as per is-1891 (part-1) -1994 (reaffirmed 2000)

Submission date: 04 December 2024

Location: Delhi

Contact: Principal Chief Materials Manager, New Delhi, Delhi

3 | Northern Railway

Details: Tenders are invited for supply of waste conveyor belt (open end) size-13000 x 800 x 10 mm thick 500/3 ply, 5 mm thick top rubber+ 3 mm ply nylon+ 2 mm thick bottom rubber covering grade m-24 (super abrasionresistant) as per is-1891 (part-1)-1994 (reaffirmed 2000) plasser part no 64.11.2666

Submission date: 02 December 2024

Location: Delhi

Contact: Principal Chief Materials Manager, New Delhi, Delhi

4 | Bharat Coking Coal

Details: Tenders are invited for design, engineering, supply, civil works, installation, erection, testing and commissioning of belt conveyor required for transportation of coal by belt conveyor from ABOCP mine to 5MTPA Madhuband Washery for new 5 MTPA NLW Madhuband Washery

Submission date: 12 November 2024 **Location:** Dhanbad, Jharkhand

Contact: General Manager (E&M), E&M Division, Koyla Bhawan,, Dhanbad-826005, Jharkhand. M:

08580025678, gmenm.bccl@coalindia.in

5 | Bokaro Power Supply Company

Details: Tenders are invited for supply of conveyor belt related rubber work in CHP BPSCL

Submission date: 31 October 2024 Location: Bokaro, Jharkhand Tender Value (Rs): 4,735,302

Contact: Sri A.K Das, Chief General Manager (Material Management), Hall No. – M 01, Old Administrative Building ISPAT Bhawan, Bokaro Steel City-827001, Jharkhand. T: 06542-240380,

contract@bpscl.com

6 | Western Railway

Details: Tenders are invited for preventative maintenance and repair/overhaul of 8-wheeler tower

wagons and wagon mounted rail crane under construction unit of Rajkot for two years

Submission date: 28 October 2024 Location: Mumbai, Maharashtra Tender Value (Rs): 13401096.88

Contact: Dy Chief Electrical Engineer/Construction, Churchgate, Mumbai, Maharashtra

7 | North Western Railway

Details: Tenders are invited for supply of EOT crane cap 15/5 t ju **Submission date:** 26 November 2024 **Location:** Multiple, Rajasthan

Contact: Principal Chief Materials Manager, Jaipur, Rajasthan

8 | North Western Railway

Details: Tenders are invited for supply of EOT crane cap 30/10t

Submission date: 13 November 2024 Location: Multiple, Rajasthan

Contact: Principal Chief Materials Manager, Jaipur, Rajasthan

9 | Eastern Railway

Details: Tenders are invited for supply, installation and commissioning of diesel hydraulic road

mobile crane, capacity 20 tonne, etc.

Submission date: 28 October 2024 Location: Kolkata, West Bengal Contact: Principal Chief Materials Manager, Kolkata, West Bengal

DUMPERS



10 | Urban Development Department Chhattisgarh

Details: Tenders are invited for supply of hopper tipper dumper (version 2) (q3)

Submission date: 01 November 2024 **Location:** Bagbahara, Chhattisgarh

Contact: Cheif Municipal Officer, Nagar Palika Parishad, Bagbahara, Chhattisgarh

11 | Urban Development Department Chhattisgarh

Details: Tenders are invited for supply of hopper tipper dumper (version 2) (q3)

Submission date: 28 October 2024 Location: Kanker, Chhattisgarh

Contact: Rahul Thawaney, Municipal Council Kanker, Collectorate Road, Kanker, Chhattisgarh

12 | Urban Development Department Chhattisgarh

Details: Tenders are invited for supply of twin bin dumper placer product material transport (q3)

Submission date: 25 October 2024 **Location:** Chirimiri, Chhattisgarh

Contact: Sant Kumar Rana, Ward No. 01, Malviya Nagar, Post West Chirimiri, Distt. Korea-497773,

Chhattisgarh

13 | Security Printing and Minting Corp of India

Details: Tenders are invited for hiring an agency for supply of one hydraulic dumper one backhoe

loader jcb and one hydraulic tractor trolley along with driver.

Submission date: 25 October 2024

Location: Narmadapuram, Madhya Pradesh

Tender value (Rs): 889,680

Contact: Manager (Material), Admin. Office, Security Paper Mill, Narmadapuram, Madhya Pradesh

EXCAVATORS



14 | Urban Development Department Chhattisgarh

Details: Tenders are invited for Supply of crawler hydraulic excavator (v2) (q2)

Submission date: 26 October 2024 **Location:** Dhamtari, Chhattisgarh

Contact: Kamlesh Kumar Thakur, Nagar Palika Nigam, Dhamtari, Chhattisgarh

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in JCB India Ltd



We are excited to introduce the all-new ICB NXT 215LC Fuel Master Tracked Excavator, unveiled by Mr. Deepak Shetty, CEO & Managing Director of JCB India along with our Customers and Dealer partners from across India, at our Pune Manufacturing Facility. The event celebrated the handover of these Fuel Master Excavators to our early adopters. This launch reaffirms JCB's dedication to innovation and nation-building through more fuel-efficient and sustainable products and solutions.

in Shalabh Chaturvedi

On the auspicious occasion of hashtag#Dussehra signfying victory of 10 goods over 10 evils, we are humbled to receive the Best Seller in hashtag#Compaction_Equipment in hashtag#India for the 10th time in a row. This achievement reflects the hard work, innovation, and dedication of CASE Construction, Equipment India team, who strive every day to push



boundaries and set new standards in the hashtag#vibratory_compactor segment. I want to thank our hashtag#customers for their trust and support, and our hashtag#partners for their collaboration. This award inspires us to continue delivering hashtag#excellence. Here's to many more years of success together. Thank you!

in Nitin Gadkari

Assam's highways are paving the way for growth and prosperity, reflecting Hon'ble PM Shri Narendra Modi Ji's vision for a connected and progressive



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Hitachi. The event was graced by our esteemed customers, finance partners, and the senior
management team of Tata
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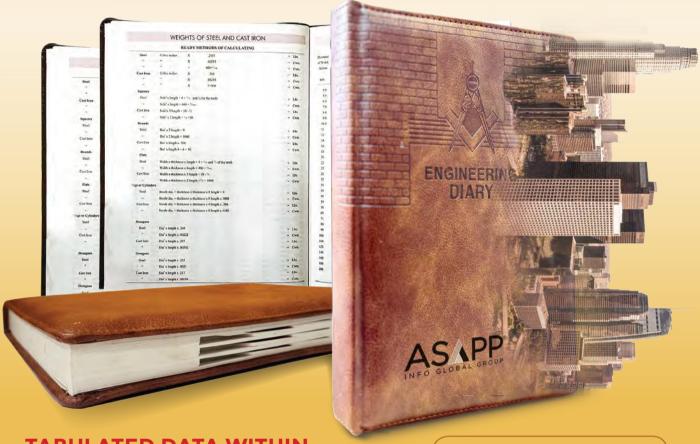
in Terex Corporation



Terex has completed its acquisition of Environmental Solutions Group (ESG).
The addition of ESG to the Terex portfolio represents an exciting step forward for both companies as we leverage our combined strengths and shared values to drive long-term, sustainable value for our stakeholders.



2025 ENGINEERING DIARY



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- Conversion Tables
- Weights & Measures
- Unit Conversion Factors & Conversion Power Tables
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