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FROM THE DESK



CHEERS TO SIX YEARS OF WISDOM AND EXPERIENCE!

We have crossed yet another milestone with this 6th anniversary edition. Make in India is a major national programme of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The Construction Equipment OEM market is expected to benefit from the Make in India campaign, and increased focus on Infrastructure sector by the government. Make in India Campaign aims to turn India into a global manufacturing hub. The campaign projects India as an investment destination for manufacturing. The initiative is to reform the manufacturing sector, which currently contributes only 15 per cent to India's Gross Domestic Product (GDP), and to increase the manufacturing sector's contribution to 25 per cent of GDP. The Indian Construction Equipment Industry boasts of a large presence of global CE OEMs alongside domestic players, which has led to enhanced focus on R&D and innovation in the sector. 'State-of-the-Art' manufacturing technologies being used by CE OEMs in India is at par with the world. Further, it is also important to note that domestically manufactured equipment is being exported to major markets across the globe, including the EU, UK and US, implying that Indian construction equipment meet global quality standards and are well-accepted in advanced markets globally. Needless to say, this is a clear indication that India has the potential to become a global hub for exports of construction equipment. It is also essential to develop a robust supply chain operating ecosystem with the objective of eliminating supply chain disruptions, increasing localization levels & ensuring world-class quality standards at an optimal cost of procurement and operation. The Indian CE Industry has taken a number of initiatives towards indigenizing its products. Almost 90% of CE products by volume are more than 50% indigenized already. However, a key challenge still faced by the industry is its high dependence on import of precision components, hydraulics, undercarriages and electricals/electronics. The components, accessories and spares market are all set for a renewed growth in future in the light of increased construction activities. A look at some of the key products, their importance in the equipment functions and the market trends... Infrastructure sector including construction, mining and material handling segments continues to grow in India for the past few years with a host of positive measures from the government resulting in creation of more infrastructure projects.

Check out this special edition to get a sense of where we came from, where we are going, and the impressions we are making along the way.

Happy Anniversary! Happy a Pleasant Reading...

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Editor-in-Chief

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24 COVER STORY



India's Construction equipment industry has witnessed steady growth over the past decade. The demand for construction equipment is expected to grow in line with expansion of infrastructure, industrial, mining and real estate development in India.

Equipment Times looks at how 'Make in India' policy is helping the construction equipment sector to improve its technological status and competitiveness in the global market, company's growth in the coming years, export market and important initiatives to cater to the requirement of International market, future strategies at a time when technological disruptions are rapidly defining businesses in the sector, challenges and suggestions to further ease a business-friendly climate.

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MAKING INDIA Atmanirbhar!

The construction equipment's components, accessories and spares market is all set for a renewed growth in future in the light of 'Make in India' Programme.

Equipment Times looks at the 'Make in India' programme and mission motivating construction equipment and component industry to participate in it, views on making India as a global construction equipment and component manufacturing hub, future strategies at a time when technological disruptions are rapidly defining businesses in the sector, challenges in the sector.

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- **Cover Story:** Green Initiaves in CE sector • **Special Focus:** Tunnel Boring Machine
- **Feature:** Skid Steer Loaders • **CAS:** Bearings & Grease, Jaw Crusher

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PRESIDENT OF INDIA VISITS TEREX RECYCLING SYSTEMS STALL AT WATER AND WASTE EXPO SHOW

Terex India recently showcased its recycling solutions in solid waste management at two prominent recycling events, the CII's Water and Waste Expo and the Clean India Expo, in New Delhi. The company's commitment to the Swachh Bharat Mission was further strengthened by the visit of the President of India, Droupadi Murmu, to the Terex Recycling Systems stall at the CII's Water and Waste Expo Show.

The President showed great interest in the company's process and how it contributes to the Swachh Bharat initiative. Terex India's Managing Director, Jaideep Shekhar, explained the company's cutting-edge recycling solutions, highlighting their commitment to reducing environmental pollution. The President was accompanied by a high-level delegation comprising of Dr. Mahendra Nath Pandey, Hon'ble Minister, Ministry of Heavy Industries.

Terex India also welcomed other high-level government officials to their stall at CII Show including Shri. Kaushal Kishore, Minister of State for Ministry of Housing and Urban Affairs, Government of India.

Terex India also recently took part in the Clean India Expo, co-located with the Smart Cities India expo, at Pragati maidan, New Delhi. Terex India showcased its comprehensive recycling solutions under the Terex Recycling Systems brand.

Terex India has three main businesses: minerals processing, lifting, and recycling. The Terex Recycling Systems brand launched in India last year, is a new business line which will design and build stationary and modular recycling systems that will provide customers a



"one stop shop" to meet their recycling needs.

Jaideep Shekhar says, "Recycling is an industry without competition in India, and we aim to be the first to provide a complete solution for solid waste management. We have been collaborating with the Indian Government and

several municipal corporations on waste management projects for several years now. We believe our complete solution as Modular plants building complete unit for waste recycling will have a significant and lasting impact on urban planning and synergies with objectives of Swachh Bharat Mission. We are committed to offering sustainable solutions that reduce carbon footprint, support the Swachh Bharat initiative, and promote a cleaner and healthier environment."

INDUSIND BANK SIGNS USD 100 MILLION LOAN AGREEMENT WITH JBIC

IndusInd Bank announced that its GIFT City IBU branch has entered into a USD 100 million long-term loan agreement with the Japan Bank for International Cooperation (JBIC). The funds thus raised, will be used by IndusInd Bank to foster the growth of Japanese construction equipment companies in India through need-based credit facilities to the upstream and downstream companies. Mizuho Bank Ltd. Japan, the Shizuoka Bank Ltd. Singapore and the Jyo Bank Ltd. Japan will also co-finance in this facility.

Under this initiative, IndusInd Bank will provide credit facilities to companies that comprise the supply

chain of the Japanese original equipment manufacturers (OEMs) in India. Currently, the program will cover the component suppliers and dealers of the selected Japanese OEMs, as well as the final buyers of the construction machinery manufactured by those companies.

Injeti Srinivas, Chairperson, IFSCA, said, "We are pleased to note that IndusInd Bank GIFT City IBU has partnered with Japan Bank for International Cooperation (JBIC). The monies raised will be used for financing companies who are engaged in strengthening India's Infrastructure. This is also in line with the IFSCA's objective to make GIFT City as hub for raising long term finance."

CONSTRUCTION EQUIPMENT MANUFACTURERS CALL FOR SINGLE EMISSION NORMS FOR ALL MACHINES

The Indian Construction Equipment Manufacturers Association (ICEMA) has requested to bring all construction equipment machinery under a single set of laws. The industry body has written to the relevant government departments about this matter.

According to ICEMA, India's current emission rule, which took effect on April 1, 2021, is limited to roadable CEVs with rubber tyres/rubber cushioning or steel drums. However, off-road and off-highway equipment, which account for about 30-35 per cent of the total construction equipment sold in India is exempt from these requirements. Indian CE manufacturers' competitiveness continues to suffer even though the new standards have brought roadable CEVs up to global standards. This is due to unregulated off-highway equipment used in applications such as mining, quarrying, and irrigation projects, among others and includes a wide range of products such as crawler excavators, large wheel loaders, wheeled dozers, crawler dozers, large motor graders, tracked pavers, tracked milling machines, and tracked milling machines.

INDIA CRAWLER EXCAVATOR MARKET TO WITNESS GROWTH BY 2031

The India Crawler Excavator Market is a growing industry, with increasing demand for heavy-duty construction equipment across the country. Crawler excavators are highly versatile machines used for digging, demolition, and earthmoving activities in various sectors such as construction, mining, and agriculture. The market is driven by the growing construction and infrastructure development activities in the country, as well as the government's

push towards the Make in India initiative. The major players in the market include companies such as Tata Hitachi, JCB India, and Komatsu India, among others. The market is expected to continue its growth trajectory in the coming years, driven by factors such as increasing urbanization and industrialization, rising demand for automation and technology-enabled equipment, and the government's focus on infrastructure development.

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MESSE MUENCHEN INDIA JOINS HANDS WITH KDCL AND GCA FOR GUJARAT CONEX

One of the largest state economies in India, Gujarat offers exciting opportunities for the construction equipment and heavy vehicles industry to deliver innovative technologies for the multi-billion-dollar infra projects currently under construction in the state today. With vast experience



in serving this industry through bauma CONEXPO INDIA, Messe Muenchen India is delighted to launch Gujarat CONEX 2023 with co-organiser K and D Communication Ltd (KDCL), in

association with the Gujarat Contractors Association (GCA) as the joint organiser.

This inaugural edition of Gujarat CONEX will serve as the satellite show for the western region of India, while the main show bauma CONEXPO INDIA will continue serving the pan-Indian market through its main edition in Greater Noida every alternate year. Gujarat CONEX will be held on 21-23 September 2023 at the Helipad Exhibition Centre in Gandhinagar.

With some of the most critical connectivity projects currently being executed in Gujarat, this exhibition will serve as the right platform to bring together local industry insights and international technology solutions through conferences, networking opportunities, buyer-seller forums, and many more such touch points.

JCB LITERATURE FOUNDATION ANNOUNCES JURY FOR THE JCB LITERATURE PRIZE 2023

The JCB Literature Foundation announced the jury for the JCB Prize for Literature 2023. As the leading literary prize enters its sixth year, the varied entries will be judged by Mahesh Dattani, playwright and stage director; Somak Ghoshal, author, critic and learning designer; Kavery Nambisan, author and surgeon; Swati Thiyagarajan, conservation journalist and filmmaker; and chaired by Srinath Perur, author and translator. The jury reflects their diverse background which would help in finding a balanced voice as the best fiction book later this year. The prize is sponsored by JCB India Limited, the country's leading manufacturer of earthmoving and

construction equipment and heralded by the JCB Literature Foundation.

Speaking on the occasion, Mita Kapur, literary director of JCB Prize for Literature, said, "India speaks and reads in so many languages, and the books that are submitted for the JCB Prize are a true representation of the many Indias that reside within one. The 2023 jury brings together immense experience from a diverse range of backgrounds, languages, art forms and mediums of expression. With their precise gaze and nuanced understanding of storytelling, we are confident that the jury will read, evaluate and find gems from the submissions that are entered this year."

VOLVO INDIA GOING STRONG AT RS 4,250 CRORE REVENUE IN 9MFY23

Volvo Group India's consolidated revenue increased to Rs 4,250 crore in the first nine months of FY23. This is on the back of increased demand for trucks and construction equipment in line with improved industrial and infrastructure activities post Covid-19-led disruptions. The company had reported Rs 4,260 in total for FY22 and still less in FY21 when it could garner just about Rs 3,410 crore, as per data collated by India Ratings and Research. The rating

agency said that it expects the revenue to show strong improvement in FY23, owing to strong growth in the truck business, incremental shared service business, and orders in hand for construction equipment and mining equipment backed by proposed infrastructure projects in India. The operating profitability is also expected to improve and will remain healthy, supported by the increased revenue contribution from trucking and mining equipment businesses.

VE COMMERCIAL VEHICLES SELLS 11906 UNITS IN MARCH 2023

VE Commercial Vehicles (a Volvo Group and Eicher Motors joint venture) recorded sales of 11,906 units in March 2023 as compared to 8803 units in March 2022 recording a growth of 35.2%. This includes 11677 units of the Eicher brand and 229 units of the Volvo brand.

Following are the key highlights for March 2023:

- Eicher branded trucks and buses have recorded sales of 11,677 units in March 2023 as compared to 8581 units in March 2022 representing a growth of 36.1%.
- In the domestic CV market, Eicher branded trucks and buses have recorded sales of 11263 units in March 2023 as compared to 7929 units in March 2022, representing a growth of 42%.
- On the exports front, Eicher branded trucks and buses have recorded sales of 414 units in March 2023 as compared to 652 units in March 2022, representing a decline of 36.5%.
- Volvo Trucks and Volvo Buses have recorded sales of 229 units in March 2023 as compared to 222 units in March 2022, representing a growth of 3.2%.



VECV is a joint venture between the Volvo Group and Eicher Motors. In operation since December 2008, the company includes the complete range of Eicher branded trucks and buses, Volvo Buses, exclusive distribution of Volvo Trucks in India, engine manufacturing and exports for Volvo Group, non-automotive engines and Eicher component business. A multi-brand, multi-division company, backed by innovative products & services, VECV today, is recognized as an industry leader for modernizing commercial transportation in India and the developing world.



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SARENS TAKES DELIVERY OF THE FIRST LIEBHERR LR 12500-1.0 CRAWLER CRANE

International heavy lifting and transport specialist Sarens has taken delivery of the first unit of Liebherr's 2,500 tonne capacity crawler crane, the LR 12500-1.0. The handover took



place at the Port of Rostock on the coast of north east Germany on 1 April, a year after the first announcement of this new model. In the ceremony Sophie Albrecht, Liebherr Board member, handed over the crane to Marc Sarens, Sarens director and Board member. The family-owned company will use its new lattice crawler

crane primarily in the renewable energy industry, for example, lifting components for offshore wind turbines.

Commenting on the latest acquisition Carl Sarens, director technical solutions, projects and engineering, said, "The capacity of the LR 12500-1.0 is enormous. Operations in the renewable energy sector, such as here in Rostock, are a particular focus for the crawler crane. The handling of offshore wind turbines in ports is becoming more and more important and the individual

weights of the components are constantly increasing. The initial assembly of the new crane worked very well."

Rostock will be the first place the LR 12500-1.0 will be put to work. It will lift 50 monopile foundations for offshore wind turbines. Each one has a diameter of up to nine metres and a length of up to 90 metres. As they weigh more than 1,400 tonnes they will be lifted into the water in tandem with an 800 tonne capacity Liebherr LR 1800-1.0 lattice boom crawler crane. Total lift weight, including all load handling attachments and other rigging, will be 1,750 tonnes.

SPECIAL SIX AXLE 450 TONNE GROVE ALL TERRAIN CRANE FOR SCHUCH

Schuch Heavylift in Germany has ordered a custom-built 450 tonne capacity all terrain crane as one of the eight new Grove wheeled mobiles it ordered in the last year.

The specially-built GMK6450-1 is a version of the GMK6400-1 with extra capacity. It was developed by Manitowoc Lift Solutions. The six axle GMK6450-1 has the same 60 metre Megaform boom in five sections as the 400 tonner. Maximum tip height is 136 metres when fitted with the optional 25 to 79 metre luffing jib. An option on this custom model is to remove the boom, allowing an axle loading of less than ten tonnes. To make the most of the benefit, a second circuit was installed



in the suspension system to allow the MegaDrive system to optimise the chassis for different axle loads. Also specified was the MegaWingLift capacity enhancement system for steeper boom angles.

The other new cranes for Schuch Heavylift, part of the Schuch Group, were two 60 tonne capacity GMK3060L-1s, a 150 tonne GMK5150XL and four 250 tonne GMK5250XL-1s.

IRISH DEBUT FOR DEVELON EXCAVATORS

Products from Develon - formerly known as Doosan Construction Equipment - are being exhibited for the first time in Ireland at the CQMS'23 (Construction & Quarry Machinery Show) exhibition, which started today.



The equipment is being shown by EMS (Embankment Machinery Sales), based in County Kildare, which is responsible for sales and service for the full range of Develon crawler and wheeled excavators from 14 to 100 t in the provinces of Leinster, Munster & Connacht in Ireland. EMS is also the dealer in the same areas for the full range of Develon mini- and midi-excavators from 1 to 11 t. Products being exhibited for the first time at a show in Ireland include the DX27-7 (2.8 t) & DX50Z-7 (5.4 t) mini-excavators, alongside the brand new DX85R-7 (8 t) reduced tail swing (RTS) model. All are next generation Stage V mini-excavators designed to offer maximum performance, optimum stability, increased versatility, enhanced operator comfort, controllability, durability, ease of maintenance and serviceability.

JLG TO LAUNCH REVAMPED CLEARSKY SOLUTION

JLG will launch a fully redesigned IoT telematics platform, ClearSky Smart Fleet, later this year, the company has announced. Dubbing the system as a "true, two-way fleet management and machine interactivity" platform, the latest ClearSky solution has been redesigned from the ground-up with new "innovative elements" added to "transform the way customers work." Key features include: Digitized daily processes for operational efficiencies; Accurate and efficient machine location; Additional equipment service capabilities; Streamlined logistics with Automated Site Networks; Actionable, on-demand machine and fleet insights According to Ara Eckel, director of product management for JLG's connected solutions, ClearSky Smart Fleet

will be standard on most new machines produced later this year, and customers with existing JLG products can continue to use the legacy ClearSky program for their connected needs. Both platforms will be integrated into Online Express, JLG's 24/7 e-Commerce site. The platform is expected to launch this Summer or Fall.

"Telematics today can only do so much," Eckel said. "ClearSky Smart Fleet reimagines what's possible, paving the way to a new frontier for connectivity solutions in the industry. More than yet another singular piece of software, it's built as a robust, constantly evolving IoT platform capable of delivering new functionality, new insights and new ways to run cost-effective operations."



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UNITED INVESTS IN LOW EMISSION GENERATORS

United Rentals has added a number of JuiceBox generators from US-based manufacturer Evergreen Mobile Power to its equipment rental fleet.

Said to offer a 40% lower operating cost than their diesel counterpart, the generators are powered by a "safe and clean propane or natural gas" and provide a low-emission alternative to diesel machines, according to Evergreen.

The generators come with a compact footprint of 50 inches (1.2 metres) length x 50 inches (1.2 metres) width x 54 inches (1.3 metres) height and deliver instant power of up to 20 kW. The sets can also be linked together to address higher power demands.

To allow users to customise the generators to various power needs, dual interchangeable and removable electrical panels are included, while, according to



United, they also run quieter than traditional generators.

Dan Gribbell, PHVAC region sales and marketing director, United Rentals, said, "Diesel engine emission regulations are driving companies to look for new options they can deploy."

"Adding JuiceBox generators to our fleet provides another way we are helping our customers create lower-emission worksites without compromising safety or productivity. With low operations costs and greenhouse gas emissions, the JuiceBox provides a smarter choice for the environment and a customer's wallet."

In recent years, United has continued to invest in low-emission and zero-emission equipment, and now offers sustainable options in aerial lifts, trucks, vans, compact excavators, e-dumpsters and battery systems.

LIEBHERR LAUNCHES NARROW TRACK 700 TONNE CRAWLER CRANE

Manufacturer Liebherr has launched a narrow track version of its 700 tonne capacity crawler crane for erection of wind turbines with hub heights up to 170 metres. The LR 1700-1.0W is touted as being the most powerful narrow track crawler crane on the market. It replaces the LR 1600/2-W, a narrow track version of the 600 tonne capacity LR 1600/2. Benefits include more power and greater lifting height. Turbines with hub heights of 170 metres can be accommodated.

Reducing the spacing between the crawler frames allows travel on the narrow roads between individual wind turbines during the wind park construction phase.

It was 20 years ago when Liebherr developed the first narrow track lattice boom crawler crane, the 400 tonne LR 1400/2-W. As turbines got bigger so did the craneage, hence the turn of the LR 1600/2-W in 2010. Around 50 units are operating around the world, Liebherr said.

FIRST POWERSCREEN PREMIERTRAK 600E DELIVERED IN UK AND IRELAND

A civil engineering company in Northern Ireland has taken delivery of a Premiertrak 600E (PT600E) jaw crusher from mobile crushing, screening and conveying equipment manufacturer Powerscreen.

The PT600E is said to be the first of its kind to be delivered in the United Kingdom and Ireland.

Collen Bros (Quarries) which specialises in asphalt products, quarry materials and high PSV (polished stone value) aggregates, bought the machine, which has been designed also with the construction, demolition and recycling

industries in mind.

The PT600E is part of the growing Powerscreen Hybrid range and has been designed for large-scale operators who require high production.

Powerscreen said that with significant operational savings, reduced fuel consumption and ultimately reduced CO₂ emissions, this machine is a popular choice for customers who want to maximise efficiency while minimising their carbon footprint.

The machine supplied to Collen Bros includes an extra-large feeder as well as a pre-screen option, which removes a



large proportion of fines from the feed material.

Collen Bros has also invested in an electric CT80 Powerscreen conveyor, which along with the PT600E has been paired up with a Chieftain 2100XE incline screen.

'GREEN' SPIDER LIFTS TO TAKE CENTRE STAGE AT APEX

Palazzani is to put the spotlight on some of its most eco-friendly access equipment at the upcoming APEX 2023 exhibition in Maastricht, The Netherlands. The company's exhibit will focus on motorisation, hybrid and ECO machinery, with ECO versions of the XTJ 52, TZX 250 and XTJ 35.1 Ragno spider lift models taking centre stage. Although based on and as a replacement for Palazzani's previous TSJ 35 model, the new Ragno

TSJ 35.1 includes the manufacturer's "latest generation technology for easier maintenance" and performance. The TSJ 35.1 spider is available in both a full green ECO power version that includes an AC electric motor and a lithium-ion battery, and as hybrid model with an electric motor and diesel engine. While the TSJ 35.1 offers an outreach of 15m and a working height of 35m, the Ragno XTJ 52+ is described as "the colossus of the Palazzani range". The

XTJ 52+ spider is a bi-energy unit that is equipped with a diesel engine and an electric motor. It features the company's Area manager system, which automatically adjust the machine's 19.5m maximum outreach according to its stabilisation and load. It offers a rotation of 660-degrees and, with "an exception working" envelope, is best suited to construction and maintenance applications, making it a versatile model for rental companies.

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India's Construction equipment industry has witnessed steady growth over the past decade. The demand for construction equipment is expected to grow in line with expansion of infrastructure, industrial, mining and real estate development in India.

Equipment Times looks at how 'Make in India' policy is helping the construction equipment sector to improve its technological status and competitiveness in the global market, company's growth in the coming years, export market and important initiatives to cater to the requirement of International market, future strategies at a time when technological disruptions are rapidly defining businesses in the sector, challenges and suggestions to further ease a business-friendly climate.

India is poised to become the world's third-largest economy by 2025, as per a study published in Lancet¹. Driving this transformational journey is a multitude of growth drivers, including a growing construction industry that contributes nearly 9% to the Indian economy² and is estimated to become the world's third largest by 20223.

The construction industry is vital to India's growth in more ways than just one. Aside from being integral to the GDP of the nation, it is also pivotal to the survival and evolution of an array of industries, in enabling the infrastructural growth that will fuel the nation's aspiration to become self-reliant, apart from providing employment opportunities to millions of people.

After experiencing disruptions in the prevalent business environment, the industry is all set to rebound its growth trajectory at an estimated 11.6% in 2021/22. This will be fuelled by huge investments in infrastructure by the Government and private players. The Government has, in its budget, made its intent clear to support the private sector in building world-class infrastructure in India.

The Construction Equipment OEM market is expected to benefit from the Make in India campaign, and increased focus on Infrastructure sector by the government.

Make in India Campaign aims to turn India into a global manufacturing hub. The campaign projects India as an investment destination for manufacturing. The initiative is to reform the manufacturing sector, which currently contributes only 15 per cent to India's Gross Domestic Product (GDP), and to increase the manufacturing sector's contribution to 25 per cent of GDP.

Three years ago, Nitin Gadkari, Union Minister for Micro, Small and Medium Enterprises (MSMEs) and Road Transport & Highways has said that government's target is to make the country a manufacturing hub of construction equipment in the world. He had said, to achieve the objective of self-reliance, we need to reduce imports and boost the manufacturing of various components and parts in the automobile sector which are presently being imported. He appealed to all the industries in the sector to develop industrial clusters, Technology Centres, Research labs and upgradation of technology and skills.

Gadkari had assured the stakeholders to extend all possible support in developing technology centres in India. The Minister also stressed on the need for research and cost reduction without compromising quality.

The Minister called for research, innovation and technology upgradation and emphasized on the need of joint ventures and foreign collaborations to get easy finance and compatible technology. Maximum use of LNG, CNG and bio fuels can definitely reduce the cost.

CONSTRUCTION EQUIPMENT INDUSTRY...

The Indian Construction Equipment Industry boasts of a large presence of global CE OEMs alongside domestic players, which has led to enhanced focus on R&D and innovation in the sector. 'State-of-the-Art' manufacturing technologies being used by CE OEMs in India is at par with the world.

LEADERS...

Dimitrov Krishnan, President, ICEMA & Managing Director, Volvo CE India, said,



"The Indian Construction Equipment (CE) industry continues to remain dependent on import of certain precision components like, hydraulic components, undercarriage and electrical & electronics, along with some fully-built machines not manufactured in India. This restricts industry's alignment with the Govt's Make in India initiative. Moreover, the industry expects its current market size to grow from USD 6.5 Bn to USD 25 Bn by 2030."



Deepak Shetty, CEO & MD, JCB India, said, "For over four decades, JCB has remained committed to the India growth story. From introducing the Backhoe Loaders in India in 1979 to the global manufacturing force the company has become today, JCB India has been making the nation and its communities stronger every day. Driven by constant innovation, revolutionary products, and adherence to global quality standards, JCB has sold over 3,50,000 machines - furthering the 'Make in India' initiative and steering millions towards empowerment."



Amarnath Ramachandran, Managing Director, Arx Mining and Construction Equipment, said, "The 'Make in India' mission is certainly a huge step in the right direction. While there is a huge impetus on manufacturing products here and also an incentive for overseas companies to setup JVs or wholly owned companies here to participate in our growth story, our industrial infrastructure is still lagging."



SORAB AGARWAL
Executive Director,
ACE

Sorab Agarwal, Executive Director – ACE, said, “ACE takes pride in being a part of Building India’s tomorrow. In previous years despite all the challenges, the industry recorded a modest growth which is a testimony to the growing thrust of the government on infrastructure development duly aided by products that CE companies manufacture to enable the same. With continued focus on creating a strong pipeline of infrastructure projects, industry is optimistic about the future growth prospects not only in the context of serving the domestic market but also gearing up to serve the global demand.”



V.G. SAKTHIKUMAR
Managing Director,
Schwing Stetter India

V.G. Sakthikumar, Managing Director, Schwing Stetter India, said, “India has the potential to become a global manufacturing hub for construction equipment due to its skilled workforce and quality-driven manufacturing. However, high logistics costs and input material costs make it challenging to maintain consistency and reliability in the export market. Nonetheless, the Indian construction equipment sector has a competitive edge in terms of quality and cost, making it an attractive option for many countries.”



SUNIL K GUPTA
President, KION India

Sunil K Gupta, President, KION India, said, “Initiatives like ‘Self-reliant India’ ‘Make in India’, and ‘Vocal for Local’, have been impactful providing benefits and advantages to strengthen the Indian manufacturing industry ecosystem. With the introduction of the National manufacturing policy and PLI scheme in 2022,

India is offering ease of doing business, a workforce of skilled-talented young minds, and a sustainable future ahead. Foreseeing a favorable market, India is receiving a noteworthy inflow of foreign direct investment (FDI) which may boost the manufacturing industry growth.”



SANJEEV BAJAJ
Chief Officer,
Escorts Kubota

Sanjeev Bajaj, Chief Officer, Escorts Kubota, said, “Government of India continued its focus on infrastructure growth by increased planning outlay across all the sectors. For the coming years we have aggressive planning and anticipated the volume growth. We have made our Mid Term Business Plan till FY28 and in anticipation of the industry a very aggressive Product Range, Marketing Channel and Capacity Planning is aligned and allocated adequate budget to fund that growth. We are optimistic about the future of the business in coming years.”



JAIDEEP SHEKHAR
VP & Managing Director-
APAC & EMEAR,
Terex India

Jaideep Shekhar, VP & Managing Director-APAC & EMEAR, Terex India, said, “The Indian government’s emphasis on infrastructure development and increased budget outlays is expected to create significant demand for construction equipment in the long term. However, realizing India’s potential as a global construction equipment manufacturing hub will require significant investments in infrastructure, technology, and skills development. Overall, with the right investments and policies in place, India has the potential to become a major global player. Terex’s recent moves to strengthen its foothold in India’s construction equipment market suggest that there is significant potential for India to become a global construction equipment manufacturing hub. With the launch of new technologies and products such as the Franna brand of pick-and-carry mobile cranes and the EvoQuip range of crushing machines, Terex is positioning itself to capitalize on this growing market.”

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V. SENTHILKUMAR
Managing Director,
Propel Industries

V. Senthilkumar, Managing Director, Propel Industries, said, "Although Propel has always been 100% localized, the 'Make in India' program has provided a conducive environment for domestic manufacturing in this sector. Incentives are provided to bring down the dependence on imports, localization of products and parts are encouraged all the while providing a positive boost in the employment sector. Furthermore, it can allow us, as a collective, to take strides on the technological front by stimulating intense research and development, and adoption of new ideas, promoting indigenous manufacturing."



B.K.R. PRASAD
General Manager –
Marketing, Tata Hitachi
Construction Machinery
Company

B.K.R. Prasad, General Manager, Marketing, Tata Hitachi Construction Machinery Company, said, "Make in India is an important initiative by the government to enhance domestic industry capacity and skills to produce high quality products both for the domestic and export market. An initiative which helps in the expansion and growth of the manufacturing sector too – essential to enhance employment and maintain an appropriate trade balance. CE manufacturing in India has come a long way from being largely imported (in the early to late nineties) to a large part being manufactured locally to cater to the evolving customer requirements and tough local operating conditions."

Anup Nair, Managing Director- India and South Asia, Martin Engineering, said, "As we all know, 'Make in India' is a major national flagship program of the Government of India designed to facilitate investment, foster



ANUP NAIR
Managing Director- India
and South Asia, Martin
Engineering

innovation, enhance skill development, protect intellectual property, and build the best-in-class manufacturing infrastructure in the country. It has been striving to ensure that the business ecosystem in the nation is conducive for investors doing business in India and contributing to the growth and development of the Nation."



DHEERAJ PANDA
Chief Operating Officer
(Sales, Marketing &
Customer Support),
SANY India & South Asia

Dheeraj Panda, - Chief Operating Officer (Sales, Marketing & Customer Support), SANY India & South Asia, said, "The 'Make in India' initiative has aided the construction equipment sector in improving its technological progress and global competitiveness. This programme has fostered the development of new and innovative products, as well as the use of modern manufacturing processes, resulting in higher quality. On our part, we have planned to increase our focus on working towards the localization rate from 40% to 75% in the next 3 to 5 years, which will not only help with cost control but will also ensure that we are able to serve our customers despite global supply chain disruptions and make products that are better suited for the Indian market."



SHARWAN AGNIHOTRI
Head – Corporate Sales
& Export, Hyundai
Construction Equipment
India

Sharwan Agnihotri, Head – Corporate Sales & Export, Hyundai Construction Equipment India, said, "Hyundai CE India today has state-of-the-art manufacturing facility in Chakan, Pune. We manufacture a wide range of world-class excavators for India and also for the global markets. All Global HCE factories operate on same platform on the principles of 'Zero-defect' and 'One Global Quality'. Our philosophy of excellent workmanship ensures at par performance with global products and assures the customers with 'Big Savings and High Profitability'."

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**SATENDRA TIWARI**Head of Manufacturing,
Pithampur, CNH
Industrial

Satendra Tiwari, Head of Manufacturing, Pithampur, CNH Industrial, said, "The 'Make in India' programme by the Government of India has been a significant boost for the construction equipment sector in the country. It has encouraged companies to manufacture their products in India, leading to increased domestic production of construction machinery and equipment. This has not only created job opportunities but has also contributed to the growth of the sector. This has also helped construction equipment OEMs to invest in manufacturing operations, manufacturers to upgrade their production processes and improve the quality of their products. This in turn has helped India-made equipment to become more competitive in the global market by producing high-quality equipment that meets international standards."

**PARESH PATEL**Managing Director,
Alltech Industries India

Paresh Patel, Managing Director, Alltech Industries India, said, "India has the potential to become a global construction equipment manufacturing hub, owing to its skilled workforce, low labor costs, and a favorable business environment. The government's 'Make in India' programme has been a great enabler in promoting the growth of the manufacturing sector in the country. As a manufacturer of road construction machinery, we see a lot of potential in the country, and we are committed to playing our part in making India a global hub for construction equipment manufacturing."

Rajesh Kaul, Vice President, Sales & Marketing, Commercial Vehicle Business, Tata Motors, said, "The Government's 'Make

**RAJESH KAUL**Vice President, Sales &
Marketing, Commercial
Vehicle Business,
Tata Motors

in India' initiative can help foster a favourable environment for the development of advanced manufacturing facilities, adoption of cutting-edge technologies and increased access to skilled labour. At Tata Motors, we strongly believe that the 'Make in India' initiative has played a crucial role in motivating the industry to participate in the country's economic growth. The Government's efforts to simplify business processes and provide a supportive environment for manufacturing have helped us to improve our efficiency, productivity and competitiveness."

Neville Mevawala, Head of Sales & Marketing, Godrej Material Handling, Godrej & Boyce, said, "As India's manufacturing

**NEVILLE MEVAWALA**Head of Sales &
Marketing, Godrej
Material Handling, Godrej
& Boyce

industry is continuously transforming, it is witnessing significant industrial development and a conscious adoption of green manufacturing processes by corporate India. By FY24, Godrej Material Handling hopes to hold a 28% market share for electric forklifts in India thanks to a strengthened portfolio of environmentally friendly products."

**SAFAR MOHAMMAD KHAN**General Manager -
Sales and Marketing
(HDD & Digital Tracking
Systems), Apollo Techno
Industries

Safar Mohammad Khan, General Manager - Sales and Marketing (HDD & Digital Tracking Systems), Apollo Techno Industries, said, "Make in India is a major national programme of the Government of India designed to facilitate investment, the primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector. It is being led by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India. The Make in India programme is very important for the economic growth of India as it aims at utilizing the existing Indian talent base, creating additional employment opportunities and empowering secondary and tertiary sector." ■

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DIMITROV KRISHNAN

President, ICEMA & Managing Director, Volvo CE India

How is the Indian CE industry responding to Make-in-India programme?

The Indian CE industry is constantly striving to align with the Government's Make-in-India programme by bolstering local manufacturing of components, resulting in higher domestic value addition. The indigenisation level in the industry has improved over the years, and today more than 60% of the CE industry's products are ~80% indigenised, and around 30% products are nearly 50% indigenised. As part of its vision 2030, the industry is working towards further enhancing the current indigenisation level to 70%. A dedicated PLI scheme for the CE industry could act as a strong facilitator towards this direction.

What are the challenges and suggestions for the construction equipment industry in terms of the 'Make in India' initiatives?

The Indian Construction Equipment (CE) industry continues to remain dependent on import of certain precision components like, hydraulic components, undercarriage and electrical & electronics, along with some fully-built machines not manufactured in India. This restricts industry's alignment with the Govt's Make in India initiative. Moreover, the industry expects its current market size to grow from USD 6.5 Bn to USD 25 Bn by 2030. Therefore, there is a need to enhance the capability as well as the capacity of the industry to meet the growing demand and simultaneously reduce its import dependence. The Government's support in the form of a dedicated Performance Linked Incentives (PLIs) for



the CE industry can play an instrumental role in attracting investments as well as the latest technologies through global manufacturers who currently do not have a footprint in India. This will help drive indigenization and competitiveness of the CE industry.

How do you look at the performance of the construction equipment industry in the coming quarters?

The Indian Construction Equipment (CE) industry recorded its strong performance in FY2022-23 by registering an excellent 26% growth with sales crossing the one lakh unit mark. Going forward, we anticipate well-distributed and reasonably predictable markets in the forthcoming quarters, as well as Government's continued support in the form of policy reforms and incentives to sustain this growth. Additionally, the Government's continued emphasis on infrastructure development, buttressed by increased capital expenditure announced in the Union Budget 2023, will contribute to sustain the growth trend in FY2023-24, and there could be an increase in the market size by 15-20% during the year. ■

The Indian Construction Equipment (CE) industry recorded its strong performance in FY2022-23 by registering an excellent 26% growth with sales crossing the one lakh unit mark.

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JCB India - COMMITTED TO THE INDIA GROWTH STORY



For over four decades, JCB has remained committed to the India growth story. From introducing the Backhoe Loaders in India in 1979 to the global manufacturing force the company has become today, JCB India has been making the nation and its communities stronger every day. Driven by constant innovation, revolutionary products, and adherence to global quality standards, JCB has sold over 3,50,000 machines - furthering the 'Make in India' initiative and steering millions towards empowerment. India is today not only an important market for JCB but is also the global manufacturing hub for the Group. With all plants operating on the principle of One Global Quality. Products made in these factories are exported to more than

125 countries around the world.

The company expanded its operations in 2006 and 2007 by setting up two factories at Pune for its 'Heavyline' business. These factories manufacture Tracked Excavators, Wheeled Loaders, Compaction equipment and Fabrications for the Group. With over 400 engineers, Pune also has JCB's largest Design Centre outside of the United Kingdom. Further investment in India was made at Jaipur in 2014 with the inauguration of a 114-acre, eco-friendly, green manufacturing facility. This facility today manufactures Mini Excavators, Telehandlers, Backhoe Loaders, Skid Steers and Fabrications where 34% of the workforce on the shop floor comprise women.

A sixth factory in Vadodara spread over

a 44-acre campus was inaugurated in April 2022, and has 48% of its workforce as women. The world-class manufacturing facility feeds Global Supply Chains for JCB's factories across the world.

Over the years JCB has invested Rs. 2,000+ crores in India and today employs 5,000 people in its Indian operations. It has a network of more than 60 dealers and 700+ outlets spread throughout India that further employ 8,000 professionally trained personnel. These far-reaching outlets provide vital product support to customers for their equipment. Five strategically set up warehouses at Pune, Chennai, Faridabad, Guwahati and Kolkata support these dealerships and outlets for parts supplies.

It has also built and supported an indigenised supply chain for the manufacturing of its products. Over 380 world-class Indian suppliers are aligned with JCB's Group objectives and have grown along with JCB through various supplier development initiatives.

JCB has always remained committed to India and plans to continue doing so. It has launched innovative India-centric products and expanded by way of new factories with Customer Focus and One Global Quality at the core of its operations.

Sales of construction equipment — a barometer of economic activity — is expected to increase in healthy double digits in the ongoing financial year on the back of increased government spending on infrastructure projects, especially in rural areas.

The industry estimates sales of construction equipment (domestic sales and exports) to grow 15-20% in fiscal 2023. Since JCB has a high market share in the sector, the demand for JCB equipment will increase accordingly. One in every two machines is a JCB and we



expect that we will continue to support the government at the same level.

Currently, India is the third-largest CE market after China and USA, and we are on our way to becoming the second-largest in the world by 2030.

JCB has a 16-week detailed induction program at the welding training school at the Jaipur facility for ITI and Diploma graduates. Comprehensive skills developed through these programmes have helped young men and women excel in their careers, especially women engineers, who are now making their careers in traditionally male-dominated areas of manufacturing such as welding and assembly.

The company is creating employment and entrepreneurship amongst youth through its 18 Operator Training Centres in India. It provides a one-month certified course on machine operations and maintenance, including classroom and practical training. Over 30,000 candidates have been trained on operating JCB machines safely and productively, to date.



DEEPAK SHETTY
CEO & Managing Director,
JCB India

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The 'Make in India' mission is a huge step in the right direction.

AMARNATH RAMACHANDRAN

Managing Director, Arx Mining and Construction Equipment

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

The 'Make in India' mission is certainly a huge step in the right direction. While there is a huge impetus on manufacturing products here and also an incentive for overseas companies to setup JVs or wholly owned companies here to participate in our growth story, our industrial infrastructure is still lagging.

A huge manufacturing jump will call for new, large modern industrial areas, with good facilities, manpower availability and logistics. Our construction industry is riding on the efficiency of the NHAI. Other industry needs agencies like this to boost their growth. We can say that the Make In

India programme is truly successful when the manufacturing contribution to GDP increase substantially and we bridge the forex deficit by exporting quality goods.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

While the order book in some segments are good, execution is still painful due to instability in the overseas supply chain. Undue delays and very long lead times put a strain on cash flow. While shipping from the west has improved, both in terms of time and cost, crippling energy costs in Europe have made key aggregates more expensive. At Arx, in the coming year, will add on rough terrain / All terrain cranes to our cargo handling portfolio and a very large mining excavator to our mining portfolio. We also plan to export our products. So, while the Indian demand will provide a stable base, Europe will help us enhance margins.

What are your views on making India as a global construction equipment manufacturing hub?

Only small to medium machines have aggregates which are fully localised. While there is no customs duty or inputs for exports, lack of availability of key aggregates for larger machines are unavailable which is a critical requisite for India to become a global construction equipment manufacturing hub. This, again, increases lead times for manufacturing. If Indian companies are planning to manufacture aggregates, then a lot of expenditure is required for R&D



and also for application engineers to sell and validate installations.

The Chinese have joint ventures with a lot of aggregate companies to produce in China. We don't have too many of those, except for a few sectors like backhoe loaders, cranes, compactors and excavators.

Tell us on your export market and important initiatives to cater to the requirement of International market?

Our export market initiatives are around building quality into the product itself. Cabins, sheet metal components have to be aesthetically good apart from functioning well also. Having one build in the shopfloor ensures consistency. As our prototypes are still under validation, we will commence seeding machines in key areas after the first batch is made, we will start with Sub-Saharan Africa, Middle-east and Southeast Asia first.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

The way forward as a business in the future is very interestingly poised. There is a very strong global call to stop fossil fuels, diesel engines, etc. On the ground, in India, we need to have infrastructure to start getting CNG/LNG freely. This will reduce emission. Since a majority of our power generation (75%) is from coal, and we still have a shortage of power. Going fully electric would mean more mining for coal. The best intermediate option is to plan two phases:

Clean diesel / petrol hybrids. Move to battery operated vehicles in which the batteries are charged with a small diesel / petrol engine. Hydrogen fuel. This option would keep the strain off the grid.

At Arx, we are working with some concepts of electric and hybrid prototypes.



We plan to launch an all-electric / hybrid empty container handler soon.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

There is no alternative other than to train operators to fit our requirement. Our industry also faces an additional challenge that project sites are in remote locations. The younger generation, like their predecessors, feel that the cities are more attractive.

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

There is no getting away from emission norms as they are here to stay. It is, for the better part, a level playing field as everyone has to adhere to the same. The cost of tier change is, however, huge and the government needs to formulate a scrap policy for older machines to keep the demand up. The first year's impact is the highest as most customers will pick-up second-hand machines to be more profitable. One way forward to lessen this impact is for government tenders to mandate new equipment for new projects for a few years. ■

A huge manufacturing jump will call for new, large modern industrial areas, with good facilities, manpower availability and logistics.

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ACE takes pride in being a part of Building India's tomorrow.

SORAB AGARWAL
Executive Director, ACE

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

ACE – Action Construction Equipment Ltd. is the largest Mobile Crane manufacturer in India and World's largest manufacturer of Pick 'N' Carry cranes. In addition to Mobile Cranes, ACE also offers Mobile / Fixed Tower Cranes, Crawler Cranes, Piling Rigs, Truck Mounted Cranes, Lorry Loaders, Backhoe Loaders/Loaders, Vibratory Rollers, Motor Graders, Forklifts, Warehousing Equipment, Tractors & Harvesters and other Construction Equipment. ACE has a consolidated presence in all major Infrastructure, Construction, Heavy Engineering and Industrial Projects across the Country and is now making headways into Earthmoving and Road Machinery segments also. ACE has In-house "R&D" Department (DSIR – GOVT. of INDIA approved) which works continuously towards product upgradation, development of new models and value engineering. ACE has widest sales and service network operating from 100+ locations.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

Any industrial or Infrastructure activity will drive the demand of Cranes as all the material handling activities are primarily done by cranes, and ACE is the largest

Mobile Crane manufacturer in India. Further, our Pick n Carry cranes are the first equipment getting in any particular infra site and the last to move out.

With Govt. determined to initiate infra activity worth Rs. 10 lac Crore in this financial year, not only our crane industry but the entire construction equipment industry has great days ahead.

Infrastructure push by government with increased focus in public private partnership projects & inflow of FDI's in the construction space has been instrumental in driving demand. The government has outlined several road works, building works and smart city development projects. All these will require construction and earth-moving equipment, which will result in the fast-paced growth of the construction equipment sector in India.

Further, Infra push will be dependent upon accelerating in availability of Finance and Construction companies emerging with stronger balance sheets.

National Infrastructure Pipeline (NIP) is the key demand driver for the CE industry. Road transport, railways, irrigation, water resources, airports are the key projects covered under the NIP program. It is expected that infrastructure spending by the government will continue to remain robust in the coming years.

What are your views on making India as a global construction equipment manufacturing hub?

ACE takes pride in being a part of Building India's tomorrow. In previous years despite all the challenges, the industry recorded a modest growth which is a testimony to the growing thrust of the government on infrastructure



development duly aided by products that CE companies manufacture to enable the same. With continued focus on creating a strong pipeline of infrastructure projects, industry is optimistic about the future growth prospects not only in the context of serving the domestic market but also gearing up to serve the global demand. India is well positioned to become a global manufacturing hub in line with government's vision plan on the backdrop of strong capital outlay for infrastructure projects coupled with schemes like PLI which promotes Make in India and Make for the world.

Infrastructure is the key for growth in a country & India's Construction sector is considered as the second largest employer and contributor to economic activities in the country.

Construction sectors are improving at very fast pace, there is an emerging requirement of higher capacities & innovations in CE. India construction equipment market is expected to grow at a CAGR of 8.9% during 2022-2028 & we are optimistic to this. We are working rigorously to play our part in "Lifting India's growth".

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

Technology is now at centre-stage & its use will not only be providing economically viable solutions for the manufacturers, operators and customers, but also environmentally viable solutions in the future.

The use of technology in machinery provides opportunities to improve the design and production of products using the service feedback. This can reduce considerably, the overall cost of the machinery through its lifespan along with a reduction in material consumption.

The company provides option of Telematics which in turn digitises the equipment. It helps the owners of the machinery to remotely monitor & supervise the various functional parameters of the machine & remain updated of its health & maintaining the same to optimum level for better performance.

At ACE we are already utilizing some of the best technology available worldwide and we constantly work to upgrade and



adapt all possible technology to Indian working conditions. Making sure Nothing Beats an ACE!

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

Reducing emissions and saving the environment is the way forward and the whole world is adopting the same at a good pace.

As mentioned above, we have introduced India's First fully electric mobile crane in BAUMA 2023 which will be subsequently followed by other tonnages.

Apart from the above, we are very much open to the idea of evolving machines based on Hydrogen IC Engines or Fuel Cell technology. As soon as the operating environment with respect to commercially viable hydrogen becomes conducive, we are very hopeful that the shift towards hydrogen technology would start to happen in the next 2-3 years in our country. ■



Our company has experienced robust growth over the past three years, and we expect similar levels of growth in the coming years.

V.G. SAKTHIKUMAR

Managing Director, Schwing Stetter India

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

- The Make in India program is a positive initiative that is encouraging domestic manufacturing in India. The construction equipment sector is benefitting from this program due to the large size of the equipment and the high logistics costs associated with importing them. As a result, companies with strong manufacturing capacities are seeing growth opportunities in India. The program is improving the competitiveness of the construction equipment sector in the global market by promoting local manufacturing and reducing reliance on imports.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

Our company has experienced robust growth over the past three years, and we expect similar levels of growth in the coming years. However, we remain cautious about the impact of parliamentary elections on the demand for machinery, like it happened in first half of 2019. In the long-term, we are optimistic about the growth potential of the Indian infrastructure and construction equipment market.

What are your views on making India as a global construction equipment manufacturing hub?

India has the potential to become a global manufacturing hub for construction equipment due to its skilled workforce and quality-driven manufacturing. However, high logistics costs and input material costs make it challenging to maintain consistency and reliability in the export market. Nonetheless, the Indian construction equipment sector has a competitive edge in terms of quality and cost, making it an attractive option for many countries.

Tell us on your export market and important initiatives to cater to the requirement of International market?

Our company has been exporting construction equipment to many countries, and we have seen a growing demand for Indian-made products due to their quality and cost competitiveness. In the current global climate, there is a clear preference



for Indian products due to factors such as the war in Europe and high energy costs there.

Give us an understanding of your company's performance in the last 3 years?

Our company has experienced growth organically and inorganically over the past three years. We have added more products through research and development and have also been trading imported machinery, for which there is a huge market but not enough volume to manufacture in India.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

Our future strategies involve launching new products and incorporating technological advancements to remain competitive in a rapidly changing business environment. We have already launched a series of concrete batching plants and concrete pumps for 3D printing and have worked with SCHWING equipment to develop recent tech demonstrators.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

The scarcity of skilled operators is affecting the prospects of the construction equipment market. We believe that making certifications mandatory for operating equipment and investing in skilling programs will play a crucial role in addressing this issue. Our company is



committed to training and skilling people and has created infrastructure, including simulators and classrooms, and signed MOUs to address this challenge.

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

Compliance with emission norms is an important issue for CE manufacturers. Every time we meet the emission norms, the cost of the product goes up due to the cost of the engine. However, customers may take time to adapt to the new version, which can lead to slump in sales. Nonetheless, we understand that compliance with emission norms is necessary and strive to meet these requirements.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

The challenges we face include managing fluctuating demands and maintaining a stable supply of equipment. We would ideally like to have a constant demand to avoid financial strain and the need for output optimisation or manpower alignment. To further ease the business-friendly climate, we believe that the government could focus on reducing logistics costs, improving infrastructure, and promoting skilling programs to address the shortage of skilled operators. ■

India has the potential to become a global manufacturing hub for construction equipment due to its skilled workforce and quality-driven manufacturing.





With the presence of all the key global & Indian brands, the market is becoming very competitive day by day.

SUNIL K GUPTA
President, KION India

How do you see the government's 'Make in India' program and mission motivating the industry to participate in it? How is this helping the MHE equipment sector to improve its technological status and competitiveness in the global market?

Pursuant to the Aatmanirbhar Bharat Abhiyan, Make in India has become an important step in shaping India as an efficient, equitable, and resilient manufacturing hub. With ~15% share of the nation's GDP, the manufacturing sector plays a substantial role in the Indian economy. Through the implementation of different programs and policies, the contribution of the manufacturing sector may increase significantly.

Initiatives like 'Self-reliant India', 'Make in India', and 'Vocal for Local', have been impactful providing benefits and advantages to strengthen the Indian manufacturing industry ecosystem. With the introduction of the National manufacturing policy and PLI scheme in 2022, India is offering ease of doing business, a workforce of skilled-talented

young minds, and a sustainable future ahead. Foreseeing a favorable market, India is receiving a noteworthy inflow of foreign direct investment (FDI) which may boost the manufacturing industry growth.

The Indian MHE market is also getting benefitted from such events, witnessing strong growth in automation and electrification. The ventures like the Sagarmala and Bharatmala projects, and dedicated freight and industrial corridors, expansion of port terminals in the logistic sector are further accelerating demand for material handling equipment in the industry.

KION India is well-positioned to cater to the market demand. Our comprehensive product range of industrial trucks and supply chain solutions offer smarter intralogistics and warehousing operations with higher productivity, better performance, improved efficiency in narrow aisle spaces, and smart energy management in repetitive material handling tasks.

What are your views on making India a global equipment manufacturing hub?

Indian MHE market is witnessing strong growth with a double-digit CAGR, in the last few years and is likely to grow at a higher pace in coming years. With the presence of all the key global & Indian brands, the market is becoming very competitive day by day.

I believe that there are a few promising key factors in favor of higher growth in the Indian MHE sector. The continued growth of Retail, e-commerce, food and beverages, pharmaceuticals, and FMCG sectors drives warehousing market growth,

KION India Factory 2.0 established in 2019, is India's largest and most modern Material Handling Equipment facility.



with many players moving into larger and taller warehouses. This has opened up new opportunities for more mechanization and high-end equipment. Secondly, the steady inflow of foreign direct investments is fuelling rapid industrialization. The companies setting up new plants are looking at new factories from a global perspective and are implementing mechanization from day one. Thus, the MHE market is going to flourish on the road to India becoming a global manufacturing hub.

India is emerging as one of the best global investment options to Make in India and Make for the world, with an upgrade in technology and manufacturing standards. KION believes to be at the technological forefront of the industry in terms of innovation, customer focus, and investments in new technologies. KION India, a fully owned subsidiary of KION GROUP AG, is one of the leading players in the Indian MHE (Material Handling Equipment) industry. We are a proud multi-national group company, MAKES IN INDIA, and are continuously working on upbrining advanced technology intralogistics solutions through our multi-brand offerings OM, Linde, Baoli, and Dematic. Since started in 2011, there has been no turning back, we have been thoroughly expanding our capabilities and uplifting manufacturing standards, offering global standard solutions and services, and setting new benchmarks in Indian MHE Market. We proudly contribute to India's journey toward becoming a global MHE equipment manufacturing hub.

Tell us about your manufacturing plant capabilities and important initiatives to cater to the requirement of the Indian and International markets?

KION India's manufacturing plant facility, popularly known as Factory 2.0, is India's largest and most modern material handling equipment manufacturing facility, which consists of a well-equipped R&D center, modern production lines for industrial trucks, an advanced quality testing facility, a parts warehouse, spacious training center, and a forklift driving school, etc. The in-house R&D team, well-aligned and supporting to worldwide R&D centers of KION Group, exchanges learning, best practices, and technology



translating into product advancements. With 125+ customer touchpoints, the KION India service team is close-knit with our customers and offers the best of its solutions and services.

KION India has a versatile range of complete MHE solutions having more than 300 product variants specifically categorized for different applications and customer segments. Our multi-brand offering includes IC forklifts ranging from 1.5T to 20T; E forklifts from 1.5T to 18T; stackers with mast heights up to 6.5 m; battery-operated pallet trucks; and tow trucks up to 25 T& electric reach trucks with mast height up to 15m, Order picker, VNA, AGV & AMR.

We are expanding the horizons of intralogistics, being one of the world-leading groups in industrial trucks and supply chain solutions. We are continuously challenging ourselves to set higher benchmarks with our capabilities, quality supplies, and better customer satisfaction. At KION India, Sustainability plays an overriding role. We are committed to the betterment of HSE & sustainability at our premises, around our employees, and linked with products and services. Factory 2.0 is a 100% solar-powered facility, with >1000 old trees planted, an environmental park having a vegetable garden for employees, and a

▲ **Linde R-Series Reach trucks are Flexible Top Performers in the warehousing sector, available with the mast height up to the 15 meters.**

water treatment plant ensuring recycling and complete utilization of groundwater.

Give us an understanding of your company's performance in the last 3 years? Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

The last three years were very challenging due to the Covid-19 pandemic, the Russia-Ukraine War, rising inflation, and the subsequent unprecedented increase in commodity prices and supply chain disruptions. KION India determinedly coped with all the challenges and registered the highest-ever order intake and production volume in 2022. KION India is well positioned to benefit from global megatrends and has been surpassing market growth during recent years.



▲
OM EVX Plus + + + Series counterbalance forklifts (IC & E segment) are loaded with features that ensure better productivity, performance, serviceability, safety, and life.

Foreseeing the government's strong commitment and supporting policies, KION India aims to expand the horizons of intralogistics to add value to the MHE market. We are passionate to grow and outpace in the industrial truck and material handling industry. As a one-stop solution provider of intralogistics MHE, our objective is to keep evolving as the most preferred and trusted MHE solution provider.

CE manufacturers are now under pressure to manufacture machines that are not only cost-effective but also comply with emission norms. What are your views on it?

The Indian market environment has mostly been cost-sensitive, and many companies are under cost-controlling

pressure to win the market. Now that with a focus on the environment and sustainability, the MHE market is witnessing a demand for cleaner and greener technology products. Future warehouses are likely to be based on non-pollutant energy-efficient material handling equipment, such as battery-operated electric forklifts; pallet trucks & stackers. With this futuristic approach, KION India's R&D team is continuously stepping up its product offering to deliver these market needs. After a successful launch of CEV Stage IV competent IC counterbalance trucks, it is now upgrading the same with CEV Stage V - new pollution norms. With the increase in market demand for automation, digitalization, and sustainability, you will see more innovative, robust, automatic & cost-effective MHE solutions in the coming years.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

According to the World Bank, India ranked 63 rd in 2022 in ease of doing business across the world among 190 countries, replicating improvement in a business-friendly environment. A country's business regulatory environment is a particularly influential determinant in a country's economic growth levels. India's focus on consistently improving the country's business environment and implementing innovative measures to boost manufacturing and investments in the country has unlocked the potential and will be presenting better opportunities for domestic businesses, multinational companies, and the government.

With the presence of most of the global players, the Indian MHE market is getting more competitive day by day and the market trend is to upgrade the MHE technologies for the future. Considering environmental awareness, demand for battery-operated/ electric MHE is likely to grow at a higher pace in near future. Further improvements in the business-friendly environment will encourage the enterprises to become more innovative and will aid technology upgrades in the Indian MHE. I am looking forward to KION India contributing more to the advancements and upgrades in the Indian MHE industry. ■

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India has been attracting foreign investments and many large companies are eager to invest in the various sectors of the country.

SANJEEV BAJAJ

Chief Officer, Escorts Kubota

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

"Make in India" is a major initiative of Government of India designed to facilitate investment, to build best in class manufacturing infrastructure and the capability in the country.

As per the latest reports by ICEMA, Construction Equipments Industry in India constitutes 97% India manufactured products and roughly 8% of total manufactured are exported. Which is a good indication of self-reliance of India.

At component level, industry is

dependent upon imports for specific components of electrics & electronics, specific grades of steel, engine technology parts etc. This is either due to capacity, capability or cost of manufacturing.

However, with Make in India push, today the technology and quality are becoming exceedingly capable, and India is moving at the faster pace, in meeting the Global standards. There is no doubt that dependency on imports is declining rapidly, and we believe that very soon, the need of all the critical components & technology on imports will decline further.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

Government of India continued its focus on infrastructure growth by increased planning outlay across all the sectors. For the coming years we have aggressive planning and anticipated the volume growth. We have made our Mid Term Business Plan till FY28 and in anticipation of the industry a very aggressive Product Range, Marketing Channel and Capacity Planning is aligned and allocated adequate budget to fund that growth. We are optimistic about the future of the business in coming years.

What are your views on making India as a global construction equipment manufacturing hub?

India has been attracting foreign investments and many large companies are eager to invest in the various sectors of the country. The government of India also has supported the idea of making our



country, preferred destination for foreign investors.

As we know that India is largely self-reliant for the current CE industry requirements. At the same time, about 8-10% Equipments produced in India are exported. We believe this proportion will go up significantly in next few years. Also, there is a clear trend of India becoming a manufacturing hub for large multinational players to supply to their other plants or subsidiaries. These volumes are apart from the direct export sales, mentioned above.

Primary reasons for this trend are the levels of Quality which can be now produced in India, the availability of Technology and Skilled labour and at much Lower Costs, with Stable Economic Outlook and Policies to support.

Tell us on your export market and important initiatives to cater to the requirement of International market?

The exports for the construction equipment industry for the last few years was largely coming from SAARC countries & Africa etc. However, this is changing now, and Indian manufactured products are now being sold in many more regions.

We are also focussed on expanding our channel in Global markets from 20+ countries today to 30+ in a short time. We have product line up to suit these countries and we are adding more models with features specific to country to gain our share.

We also believe with India moving on to BSV emission norms, these opportunities will further expand.

Give us an understanding of your company's performance in the last 3 years?

Last 3 years were quite challenging and exciting at the same time. Firstly, due to pandemic, markets were disrupted and supply chain was impacted drastically. Later the emission change to BSIV and the high inflation also made things very unpredictable.

It was important for the industry to come back strongly and prepare for the future growth and we feel we have done that very well.

We have grown as an organisation in terms of volumes & profitability. Our product line-up has become very



aggressive & our dealer network has become one of the strongest in the country today. Escorts joined hands with Kubota to become one company in India and today we have 4 product categories in our portfolio, Pick & Carry cranes, Backhoe Loaders, Mini Excavators (from Kubota) and Road Compaction Equipments.

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

Industry is moving at a fast pace in terms of Product Technology, People Safety & Emission Standards along with the push to make products more Efficient and Cost effective. We are taking these priorities as the basis into making our product strategies.

We have always been the front runner in identifying the need of the customer and our strategy is to provide our customers productive & effective solutions, also making the working environment of the operator safe. Beyond business we are focused on impacting the lives of the people positively and we hereby are committed & strengthening our brand positioning.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

Escorts Kubota Limited has always invested towards training of people and ensuring safe and comfortable work environment. We have best in class training setup in India and we also use digital technology to train ours as well as customer team. ■

Government of India continued its focus on infrastructure growth by increased planning outlay across all the sectors.



Through extensive product innovation, we have grown multi-fold in the last 14 years.

JAIDEEP SHEKHAR

VP & Managing Director - APAC & EMEAR, Terex India.

What are your views on making India as a global construction equipment manufacturing hub?

The Indian government's emphasis on infrastructure development and increased budget outlays is expected to create significant demand for construction equipment in the long term. However, realizing India's potential as a global construction equipment manufacturing hub will require significant investments in infrastructure, technology, and skills development. Overall, with the right investments and policies in place, India has the potential to become a major global player. Terex's recent moves to strengthen its foothold in India's construction equipment market suggest that there is significant potential for India to become a global construction equipment manufacturing hub. With the launch of new technologies and products such as the Franna brand of pick-and-carry mobile cranes and the EvoQuip range of crushing machines, Terex is positioning itself to capitalize on this growing market.

Tell us on your export market and important initiatives to cater to the requirement of International market?

Terex started its India operations in Hosur in 2009 and now more than a decade later, the company enjoys a strong market presence through its various brands – Powerscreen, Finlay, Terex Minerals Processing Systems (MPS), and Terex Washing Systems (TWS), Franna, Evoquip and Terex Recycling Systems – all of which are providing optimum solutions to major infrastructure projects across India. Through extensive product innovation, we have grown multi-fold in the last 14 years, starting from four models in 2009 to more than 80 models in 2022, covering various brands. We have added new products to our portfolio and developed new variants during the past few years. About 40% of annual production is exported to over 65 countries in Asia, Africa, Europe, Middle East & the USA.

Our new variants of products, such as Pick and Carry Cranes, are being manufactured at our Hosur facility for the Indian market, but we plan to export them to markets in neighbouring countries in the coming years. Overall, Terex's extensive product portfolio and initiatives show a strong focus on meeting the requirements of both the Indian and international markets.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

As rightly pointed out, the major challenge in this industry is the lack of skilled and trained personnel to operate





crushing and screening equipment. Terex India has been working closely with its customers to ensure availability of skilled manpower who are adept at operating more technological, intelligent equipment in a safe and efficient manner. A dedicated training centre at the Terex Hosur facility provides advanced training to crusher operators and plant supervisors. This is accredited as a training partner of the Infrastructure Equipment Skill Council (IESC), under Skill India and NSDC program of Government of India.

Terex maintains an extensive product support operation, backed by experienced technical service and parts personnel. At Terex, we appreciate the importance of fast turnaround and guarantee to minimize downtime. This customer-centric approach has helped Terex in achieving success in the segments we enter. We also run training programs at our factory in Hosur where operators from across the country are trained with the best practices of crushing & screening equipment maintenance. We also conduct regular training programs at customer sites to train their operators.

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

We are committed to focusing on sustainable infrastructure development and strive to provide sustainable solutions that aim to reduce our overall carbon footprint and have recently launched machines with fuel-efficient hybrid dual-powered technology. Additionally, we are already using Stage IV emission compliant engines



and prepared to take up any upcoming emission compliance requirements. From an environmental perspective, we are excited to work with the Indian Government and various municipal corporations on waste management projects and we strongly believe we can offer our expertise and know-how in recycling processes to make a real and lasting impact. The coal sector is also set to grow rapidly for the next few years, so while we already have a range of equipment which customers are currently using in their coal mines, we are also launching new models in Hybrid and dual powered machines, which will further help in reduction of fuel consumption. ■



Propel has grown tremendously in the past three years and increased market share in both domestic and international arenas.

V. SENTHILKUMAR

Managing Director, Propel Industries

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

Although Propel has always been 100% localized, the "Make in India" program has provided a conducive environment for domestic manufacturing in this sector. Incentives are provided to bring down the dependence on imports, localization of products and parts are encouraged all the while providing a positive boost in the employment sector. Furthermore, it can allow us, as a collective, to take strides on the technological front by stimulating intense research and development, and adoption of new ideas, promoting indigenous manufacturing.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

The Indian government's strong push for infrastructure growth and stable market

sentiments are strong foundations for accelerated growth of the CE industry. We foresee good growth prospects for Propel and we will ramp up our production and introduce innovative products to satisfy evolving market needs.

What are your views on making India as a global construction equipment manufacturing hub?

The opportunity of India emerging as a construction manufacturing hub is high between the vast pool of skilled workers and engineers and India being in the midst of several developing countries.

Tell us on your export market and important initiatives to cater to the requirement of International market?

Propel has a presence in 20 countries around the world, including Saudi Arabia, Egypt, Oman and Thailand to name a few. We are focussing on increasing our share of the export market and enter new countries. The new range of products we introduced in EXCON 2022 have kindled greater interest from across the globe. Here, high quality and safe, innovative and technologically sound solutions are at the fore front of

100% of the power used by Propel Industries is generated using renewable resources, Solar and Wind.





our research and product development stages, making us the first Indian Crushing Equipment company to hold the CE certificate. Moreover, after-sales services are key to cater to our customers, both in India and abroad. Propel has many plans in place already which will roll-out in the short to medium term to ensure a premium aftersales support is in place worldwide. This will involve the set-up of regional parts and service hubs around the world, and also the set-up of a strong dealer network.

Give us an understanding of your company's performance in the last 3 years?

Propel has grown tremendously in the past three years and increased market share in both domestic and international arenas. We have focused on IOT to improve plant uptime and productivity. 24/7 service and spare support are crucial reasons for our success. We have a system of consistent market research and customer feedback that helps us design innovative products.

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

We have realized the importance of using technology, after incorporating IoT and automation, which aided in cost optimization and productivity, enhancing safety. Propel is committed to discovering potential technologies that can help improve our products and services.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

Lack of skilled manpower is a problem for the CE industry but the government's Skill India initiatives and several CSR programs by private companies are helping solve the problem. But there is a lot more to be done and we hope the government gives further impetus to its existing initiatives and

also introduces new programs to further alleviate this problem.

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

Being energy self-sufficient was a dream, now fulfilled. 100% of the power used by Propel Industries is generated using renewable resources, Solar and Wind. Our gardens are replenished with water treated and recycled in the Sewage treatment plant. Moreover, with the number of infrastructure projects lined up for India's betterment and transformation, the CE industry's involvement will ascend. Low emission from the machinery will help maintain the current air quality in a particular area as the transformation occurs. At Propel, there has always been a great emphasis on innovating green technology, which has been set in motion with the electrification of our track equipment. We offer multi configuration, high capacity (in the range of 200 TPH to 400 TPH) dual powered track plants which includes Jaw, Cone, VSI and Screen. In addition to those, we have recently launched our Electric Dumper Propel 45CED that is powered by a 350 kW power motor and zero emission, India's first of its kind. These not only lower carbon footprints the hybrid machines provide huge savings in operation costs.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

The CE industry hopes that the government will support the industry by introducing Production Linked Incentive schemes and making capital more available by creating a special infrastructure focussed bank. Further, improvement in ease of doing business metrics will also be welcome. ■

Propel has a presence in 20 countries around the world, including Saudi Arabia, Egypt, Oman and Thailand to name a few.



Tata Hitachi welcomes the investment in infrastructure over the next several years, as announced by the Government.

B.K.R PRASAD

General Manager – Marketing, Tata Hitachi Construction Machinery Company

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

"Make in India" is an important initiative by the government to enhance domestic industry capacity and skills to produce high quality products both for the domestic and export market. An initiative which helps in the expansion and growth of the manufacturing sector too – essential to enhance employment and maintain an appropriate trade balance.

Construction Equipment (CE) manufacturing in India has come a long way from being largely imported (in the early to late nineties) to a large part being manufactured locally to cater to the evolving customer requirements and tough local operating conditions. The government's 'Make in India' programme and mission has certainly motivated the CE industry to focus on localization and indigenize technologies in the last several years.

From Backhoe Loaders to Mobile Cranes & Excavators, 'Make in India' now caters to most of the CE market comprising Compacting Equipment, Drills, Crushers, Concrete Equipment, Batching Plants, Pavers, Graders, Mining Dumpers, and Crawler Cranes, among others. 'Make in India' has further been supported by the sustained growth of Indian Infrastructure investment over the last decade leading to increasing volumes. Increased cost efficiencies have been achieved through modern, technologically advanced design and manufacturing processes; to the extent that most of the Indian Construction Equipment are today competitive in the international market where they are specifically required.

Several OEMs, including Tata Hitachi, manufacture and export a wide variety of Construction Equipment to the Global markets ranging from the Middle East, Africa, South East Asia as well as far as Europe, Latin America, and North America.

The industry association, Indian Construction Equipment Manufacturers Association (ICEMA), is also closely working with the government to encourage increased investment in manufacturing. The idea is to further enhance global competitiveness by increasing localization of critical components to the benefit of the country's economy from exports, as well as to enhance employment opportunities.

It is worth mentioning here that we, at Tata Hitachi, have been at the forefront of this journey of Aatmanirbharta for over six decades of our incorporation. We were the first to bring hydraulic excavator technology into India through our



collaboration with our principal, Hitachi Construction Machinery, Japan and in partnership with them have constantly sought to bring in advanced high-end technology into India, and at the same time fostering high levels of indigenisation of the same.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

Tata Hitachi welcomes the investment in infrastructure over the next several years, as announced by the Government.

We compliment the government's investments with our wide product range to cater to various opportunities created by this boom and will aid our customers in expanding their business efficiently and improving their profitability.

We will continue to introduce next-generation machines for our customers based on emerging requirements and developments to offer the most cost-effective, high performance, and reliable products and solutions.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

At Tata Hitachi, we are always seeking to enhance the profitability of our customers by providing them with technologically advanced, cost-effective reliable and fuel-efficient machines.

In our EX-Super+ Series hydraulic excavators, our superior hydraulics keeps the fuel efficiency high, and at the same time increases machine speeds to enhance productivity in terms of cost per ton of excavation. In our ZAXIS GI Series excavators, along with superior hydraulics, a very intelligent computer controls the performance and optimizes the parameters to maximize speeds and minimize fuel consumption.

Tata Hitachi's TL340H PRIME wheel loader – India's 1st hydrostatic wheel loader – has been designed with efficiency at its core. While most competition players offer traditional hydrodynamic technology, TL340H PRIME's hydrostatic technology is equipped with a variable displacement pump to further its fuel savings advantage.

How is the scarcity of skilled operators affecting the prospects of the CE market?

The scarcity of skilled operators has a negligible impact on the CE industry because the helper on the machine gradually assumes the role of the operator whenever he gets an opportunity. The operator acts as his guide and teaches him the basics. This allows the helper to operate the machine on the actual job site when the production and skill requirements are less demanding. Gradually, the helper gains confidence and when a new machine is added to their employer's fleet, the senior operator operates the new machine while the helper steps into the old one as an operator.



What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

Amongst the challenges, one of the most important is that of increase in interest rates, which is having a dampening effect on our businesses. The reason being that most of our customers are single machine owners. Their financials are, therefore, not very strong and an increase in rate of interest is leading to challenges of a limitation of funds.

In addition, commodity prices, which spiralled way back earlier, have begun to cool, but not to the extent of easing business. For example, the steel prices nearly doubled from pre-pandemic level in early 2022. However, it came down only by 20-25% in recent months. Hence, the impact remains substantial. As a result, we are not able to realize these increases from the customers to that extent.

The third major challenge that we are facing is that most of the state governments are cash strapped and they are not able to fund projects to the levels they had planned. ■

Construction Equipment (CE) manufacturing in India has come a long way from being largely imported (in the early to late nineties) to a large part being manufactured locally to cater to the evolving customer requirements and tough local operating conditions.



Wherever there's a need for bulk material handling, Martin Engineering is present, and this all is in India with a full-fledged plant in Pune.

ANUP NAIR

Managing Director- India and South Asia, Martin Engineering

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment and its allied sector to improve its technological status and competitiveness in the global market?

As we all know, 'Make in India' is a major national flagship program of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property, and build the best-in-class manufacturing infrastructure in the country. It has been striving to ensure that the business ecosystem in the nation is conducive for investors doing business in India and contributing to the growth and development of the Nation. This has been

done through various reforms that have led to increased investment inflows and economic growth. Several trends mark a shift in Indian manufacturing, which includes an increase in domestic value addition & local sourcing, a greater focus on R & D, innovation, and sustainability measures. Our government took concrete steps towards improving various business parameters in this regard. Recently introduced initiative like the Production Linked Incentive (PLI) scheme has been instrumental in attracting investments into the 14 core business sectors.

With this initiative at the forefront, businesses in India aim that the products that are 'Made in India' are also 'Made for the World,' adhering to global quality standards across construction equipment and its allied sector. We are aware of the impact of the 'Make in India' on the construction sector, which is leading towards the development of townships, roads & bridges, hospitals, recreational facilities, residential/commercial premises, hotels, resorts, educational institutes, city, and regional level infrastructure and it's pretty remarkable.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

We are into bulk material handling products and provide advanced solutions for transporting bulk materials to minimise the impact on the environment and maximise cost efficiency. We are present not only in the cement and steel sector but also in power plants, ports, food verticals such as sugar, and several other industries.



Wherever there's a need for bulk material handling, Martin Engineering is present, and this all is in India with a full-fledged plant in Pune. We are moving ahead with the 'Make in India' initiative. Our philosophy is well-matched with Make in India's vocal for local ideally.

Our 'IndoClean' is indigenously manufacturing cost-effective products to meet the domestic market demand. Martin Engineering is leveraging its state-of-the-art manufacturing footprint in India to produce this product.

What are your views on making India as a global construction equipment manufacturing hub?

As per the latest survey conducted by 'The Economist, India is now one of the 10 best countries in the world on the 'ease of doing business' parameter. India has achieved this because of the growth in infrastructure, good domestic demand and a young and energetic work force. This is, however, only the tip of the iceberg. There is much more to come to catapult India to a \$ 5 Trillion economy. These factors clubbed with the cost-effective manufacturing capabilities in India, India will become the most growing and most sought-after hub.

Tell us on your export market in this conveyor belt and other product sector and important initiatives to cater to the requirement of International market?

We are a global leader in conveyor products such as belt cleaners and other solutions, including innovative remote monitoring systems. Wherever there's a need for bulk material handling, Martin Engineering is present. Our technicians and engineers have been solving bulk material handling problems worldwide for over 75 years. All over the world, we are present in many applications, such as quarry aggregates. In all the other sectors, too, our deliverables are focused on cost efficiency and carbon footprint reduction.

In terms of the problems that most core business industries like cement, steel, power, and port face while transporting bulk materials and the solutions provided by Martin Engineering, the challenges lie in two areas:

In processing plants and mines, there

are conveyor belts that help move the bulk material and these conveyor belts need a lot of maintenance. If the conveyor belt stops, the entire mine will stop. Our products improve the efficiency of the conveyors to a great extent. This is one part of our offerings.

Martin's air cannons are the most influencing product in the cement industry. Cement plants have kilns and preheaters. A lot of material blockages happen in them. Our air cannons blast and push this material out. It helps in bringing down plant maintenance considerably. You don't have to shut down the plant to deal with the blockages. This process is becoming more and more significant today as cement companies use alternative fuels. So, more blasting is required.

Give us an understanding of your company's performance in the last 3 years?

We have grown the business more than doubled in the last 3 years. The business has now become zero debt and also profitable. We have put in systems and processes viz robust forecasting and people development to utilize the growth opportunities given by the growing Indian economy.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

At Martin Engineering, we are always looking at long-term partnership with our customers as they will definitely require solutions that reduce costs and help them make their processes more modern and competitive.

We always introduce innovative products for catering bulk material handling needs which ensure an increase in safety and cost, and energy efficiency. Our state-of-the-art manufacturing footprint in India has expansion capacity. We are also spreading out by adding more team members and with the help of our dealer network across the country. We are trying to be as close to our customers as possible as we are expanding our dealer network too. All these would surely help our customers gain a competitive edge in an overall view to further ease a business-friendly climate. ■

Recently introduced initiative like the Production Linked Incentive (PLI) scheme has been instrumental in attracting investments into the 14 core business sectors.



The 'Make in India' initiative has aided the construction equipment sector in improving its technological progress and global competitiveness.

DHEERAJ PANDA

Chief Operating Officer (Sales, Marketing & Customer Support),
SANY India & South Asia

How do you see the government's 'Make in India' programme and mission motivating the industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

We, at SANY India, believe that the Indian governments 'Make in India' initiative is a visionary strategy that will provide enormous prospects for the country's manufacturing sector while also increasing its self-sufficiency. This effort supports localization and the consumption of Indian-made goods, which will eventually result in the development of a distinct manufacturing ecosystem. And as a leading manufacturer of heavy construction equipment, we stand committed to the government's goal and aim to develop India as a major manufacturing hub to push the government's "Make in India" initiative to new heights by manufacturing Indian products for the global market.

The 'Make in India' initiative has aided the construction equipment sector in improving its technological progress and global competitiveness. This programme has fostered the development of new and innovative products, as well as the use of modern manufacturing processes, resulting in higher quality.

On our part, we have planned to increase our focus on working towards the localization rate from 40% to 75% in the next 3 to 5 years, which will not only help with cost control but will also ensure that we are able to serve our customers despite global supply chain disruptions and make products that are better suited for the Indian market. Our focus is on product

development and technology which is in line with evolving industry trends and future forecasts, has helped to improve the sector's competitiveness.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

We are optimistic on our company's expansion in the coming years, which is in line with the government's strong commitment and stable market sentiments. We have already seen a tremendous growth rate of around 35% in the last three years, and we expect this trend to continue as we as a team focus is working on localization and provide best after sales service with the government's emphasis on infrastructure development, further anticipating a boom in demand for our products and services.

Also, the government's focus on the expansion of the manufacturing sector, combined with the increased infrastructural sector, leading to core demand for product like our construction equipment that will provide a considerable boost to our industry. As a result, we predict that our growth trajectory will continue to soar in the future.

What are your views on making India as a global construction equipment manufacturing hub?

We believe that India has a vast potential to become a hub for Global Construction Equipment manufacturing. The reason behind this is that our government has demonstrated a growth-oriented vision with the National Infrastructure Pipeline, The PM Gati Shakti Plan, and The National Monetisation

Having qualified operators on infrastructure sites considerably improves the quality of work, benefiting the sector in a variety of ways.

Pipeline that has led to stellar growth in the Construction Equipment Industry so far. Apart from infrastructure, industrial development such as the construction of new factories and the expansion of capacity in steel, power, cement, fertilizers, oil refineries, and other sectors have also had a positive impact on the growth of the industry. These factors combined has pushed the Indian Construction Equipment industry to achieve highest ever sales of 1 lac plus units of Construction Equipment Sales in the country in FY22-23 despite unfavorable events like the third wave of covid and Russia Ukraine War at the beginning of 2022 that led to Supply chain Disruptions and a rise in Input costs of Construction Equipment across the globe.

This is a very strong indicator of the fact that the industry in the country is well on its way to becoming the global hub for construction equipment manufacturing.

Tell us on your export market and important initiatives to cater to the requirement of International market?

At SANY India, we have been steadily increasing our export business and catering to the needs of overseas customers. The company has gained a strong foothold in the South Asian market by selling its products to nations like Nepal, Bhutan, Bangladesh, Sri Lanka, and the Maldives.

Besides, we have begun exporting to the US and are looking into potential opportunities in the African market. The business is concentrating on localization to manufacture products that are future-focused and more suited to the needs of Indian customers. This approach has helped the company to increase its competitiveness in both global and Indian markets, as well as gain the trust of our customers.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

The construction equipment market faces a significant challenge due to the scarcity of skilled operators. Construction equipment cannot perform optimally, without trained operators, resulting in inefficiencies, project delays, and safety risks.



Having qualified operators on infrastructure sites considerably improves the quality of work, benefiting the sector in a variety of ways. Skilled operators can efficiently run equipment, saving project timelines and costs. They can also swiftly identify and rectify equipment issues, minimizing downtime. Moreover, these operators can guarantee that construction work follows all safety protocols, lowering the likelihood of accidents and injuries. Overall, investing in training programmes to educate skilled operators is critical to the sector's performance.

As an organization, SANY India not only offers training to the customer operators but also to their service team during the commissioning of products. Recently, we have also partnered with National Academy of Construction in Andhra Pradesh (NAC-AP) in order to train and provide Infrastructure Equipment Skill Council certificates for Excavator Operation.

E manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

SANY India is devoted to the government's vision of clean fuel and green mobility, with machines that are not only cost-effective but also comply with emission norms. We understand that E-manufacturers are under pressure to meet environmental standards, and we feel that our emphasis on localization is the key to accomplishing this goal. We can reduce costs and increase efficiency while lowering our carbon impact by using local good material and skilled labour.

In addition to localization, SANY India is focused on developing products that meet emission standards. ■

SANY believes that India has a vast potential to become a hub for Global Construction Equipment manufacturing.

Committed to **INDIA'S GROWTH** story



Hyundai CE India is an embodiment of the 'Make in India' program and has remained committed to India's growth story. We have efficiently and effectively contributed to the building of world-class infrastructure in the country. Aligning our strategies with those of Government of India, our key initiatives encompass the core philosophy of 'Bringing World's Best to India, and Providing India's Best to the World'.

Hyundai CE India today has state-of-the-art manufacturing facility in Chakan, Pune. We manufacture a wide range of world-class excavators for India and also for the global markets. All Global HCE factories operate on same platform on the principles of 'Zero-defect' and 'One Global Quality'. Our philosophy of excellent workmanship ensures at par performance with global products and assures the customers with 'Big Savings and High Profitability'.

With a plan to achieve 20% of the company's revenue through exports, Hyundai CE India has been successful in consistently exporting over 600 units of excavators year-on-year to over 30 countries. Hyundai CE India is currently No. 1 in exports of crawler excavators,

with growing demand for its excavators in SAARC, the Middle East, Africa and ASEAN countries.

The key strengths of HCEI lies in quick order to delivery cycle, competitive logistics cost, global quality practices and skill development. HCEI has a strong focus on creating a progressive ecosystem for infrastructure development and skill development of its stakeholders through manpower deputation for on-site training, virtual trainings using real-time software technologies and extensive on-job training at its world-class training facility in Pune. HCEI's training center is affiliated with IESC (Infrastructure Equipment Skill Council), the apex body for spearheading the skilling of workforce in the infrastructure equipment sector.

In its journey of successful operations in India and globally, HCEI has grown to become a full-range construction equipment partner, offering indigenous, innovative and versatile solutions of One-Global Quality. This has helped us gain a strong position for ourselves in the global arena. To maintain our position in the market, we will be investing more and more in automation, defect free products, SMART factory project and in diversifying our product portfolio. ■



SHARWAN AGNIHOTRI

Head, Corporate Sales & Export
Hyundai Construction Equipment
India



CRANE SAFE Technologies



We have successfully installed
Indigenously Manufactured
Cranesafe Complete Crane
Control System for any make
and model of Mobile Cranes.

1. Provides complete Crane control for
Crawler Crane, Telescopic cranes,
2. It consists of combination of Input
and output cords.
3. Variable Pump control, spool valve
control,
4. Tele-logic for Boom lock unlock,
5. Gripper control,
6. Speed setting for Individual operation
is Provided.



Boom Lock Manifold



Customize Hydraulic Valve Block



LOCK/UNLOCK
MOTOR PUMP
ASSEMBLY

CRANESAFE Technologies is recognized all over India for its Indigenous Mobile Crane Safety Systems (Safe Load Indicator/ Load Moment Indicator), manufactured as per the safety Load Charts.

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As a leading construction equipment brand, CASE Construction Equipment has been producing cutting-edge products in India for over 32 years.

SATENDRA TIWARI

Head of Manufacturing, Pitthampur, CASE Construction Equipment - India

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

The 'Make in India' programme by the Government of India has been a significant boost for the construction equipment sector in the country. It has encouraged companies to manufacture their products in India, leading to increased domestic production of construction machinery and equipment. This has not only created job opportunities but has also contributed to the growth of the sector.

This has also helped construction equipment OEMs to invest in manufacturing operations, manufacturers to upgrade their production processes and improve the quality of their products. This in turn has helped India-made

equipment to become more competitive in the global market by producing high-quality equipment that meets international standards.

CASE CE is aligned with the 'Make in India' programme, as we have been manufacturing in India for over three decades. Furthermore, as part of our business strategy, we partner with local vendors to source most of the elements from within the country itself which has helped us to consistently manufacture in India, for the world.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

The Government's sustained focus and investments towards infrastructure development has provided growth opportunities in the market, with the construction of new infrastructure as well as the rehabilitation and modernization of existing infrastructure. Additionally, the Budget 2023-24 has provided a boost for infrastructure development by increasing capital expenditure, with a total of Rs 10 lakh crore allocated for the FY24. This increase in capital investment outlay by 33 percent is expected to drive rail, road, defense, housing, water, and metro projects, leading to improvements in transportation and logistics, positively impacting economic growth and development. This will also result in job creation and a rise in demand for Excavators, Dozers, and Backhoes, further boosting their sales.

Furthermore, the Budget has proposed the creation of an Infrastructure Development



Fund to enable large-scale infrastructure financing in India. The Fund is expected to have a positive impact on the construction equipment industry by enhancing financing availability for infrastructure projects, leading to an increased demand for construction equipment and machinery. These initiatives are expected to create a favorable environment for construction equipment companies like ours to grow and expand our operations in India in the coming years. As a company that is well-prepared to leverage growth opportunities in the construction equipment industry, we are confident that we can play a pivotal role in contributing to the government's vision of making India a global construction equipment manufacturing hub.

What are your views on making India as a global construction equipment manufacturing hub?

We already envision India as a global manufacturing hub for construction equipment. As a leading construction equipment brand, CASE Construction Equipment has been producing cutting-edge products in India for over 32 years. Our state-of-the-art manufacturing plant at Pithampur is one of the company's largest manufacturing hub, producing for India as well as over 75 countries in South East Asia, Middle East, Africa, and Latin America.

We recognize India as the best-cost source country, and our Vibratory Compactors and Loader Backhoes are over 90% localized, while other products are over 75% localized. We believe that with the Government's focus on encouraging manufacturing and sourcing locally, India can become a preferred global manufacturing hub for construction equipment.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

Skilled manpower is crucial for the construction equipment industry in India and globally. It is concerning that over 50% of workers in the industry lack basic education, in addition to construction skills. India is poised to become the third-largest construction market by 2025, emphasizing the need for a workforce that understands job requirements.

The lack of skilled workers has been a persistent issue, causing delays in project

completion and hindering progress and profitability. With the increasing adoption of innovative technology, it is imperative for OEMs to upgrade the workforce's skills to avoid project deferrals and achieve optimal productivity from the machines by operating them correctly.

CASE Construction addresses this issue by providing training and skill development initiatives such as a training center for engineers and a Skill Development Center named Hunar, which trains 240 professionals each year. These initiatives enhance the pool of skilled operators, improve productivity, ensure safety, reduce operating costs, and drive sustainable growth in the market.



CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

The construction equipment (CE) manufacturers are facing increasing pressure to produce machines that are not only cost-effective but also comply with emission norms. This is driven by the need to address environmental concerns and meet regulatory requirements related to emissions in the construction industry. Complying with emission norms is not only a regulatory requirement but also a market demand, as environmentally-friendly construction practices are becoming more important to customers and stakeholders. CE manufacturers are recognizing the need to align their products with sustainability goals and market trends, and are investing in innovation to develop cost-effective solutions that also meet emission norms. ■



We are optimistic about our growth in the coming years with the government's strong commitment to the 'Make in India' programme.

PARESH PATEL

Managing Director, Alltech Industries India

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

The government's 'Make in India' programme has been a great initiative to motivate the industry to participate in the growth of the manufacturing sector in the country. As a manufacturer of road construction machinery, we have witnessed increased support from the government in terms of policy reforms, ease of doing business, and incentives for local manufacturing. This has enabled us to improve our technological status and competitiveness in the global market. With the support of the government's initiatives, we have been able to introduce new and advanced technologies in our products, which have helped us to meet the demands of our customers in India and abroad.



Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

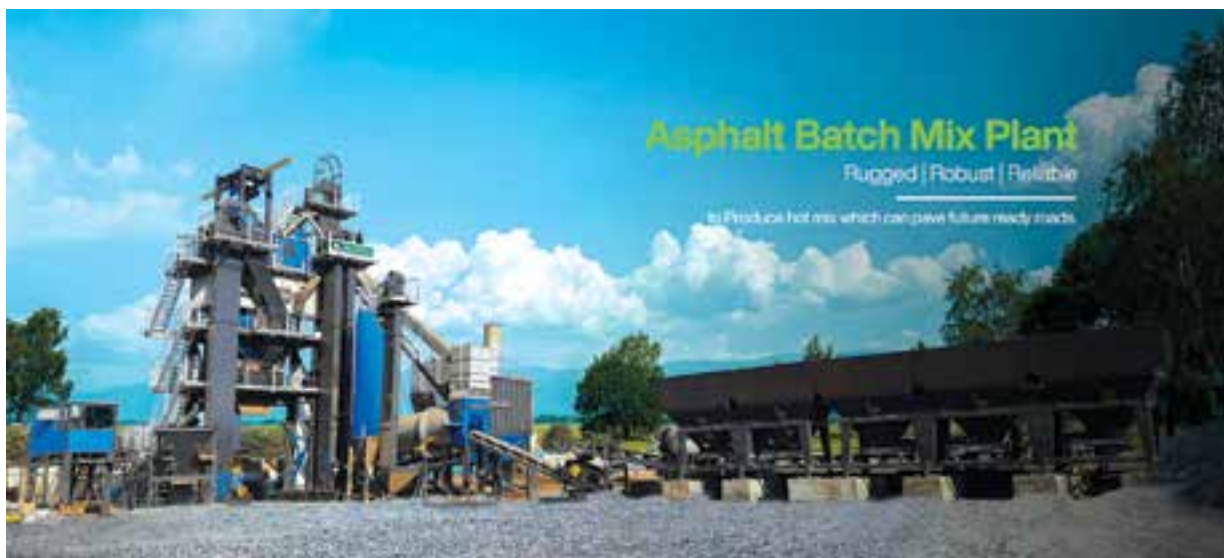
We are optimistic about our growth in the coming years, as the government's strong commitment to the 'Make in India' programme and the stable sentiments in the market create a favorable environment for us. We have been investing in R&D, product innovation, and new technology, which we believe will help us to maintain our competitiveness in the market and improve our market share.

What are your views on making India as a global construction equipment manufacturing hub?

India has the potential to become a global construction equipment manufacturing hub, owing to its skilled workforce, low labor costs, and a favorable business environment. The government's 'Make in India' programme has been a great enabler in promoting the growth of the manufacturing sector in the country. As a manufacturer of road construction machinery, we see a lot of potential in the country, and we are committed to playing our part in making India a global hub for construction equipment manufacturing.

Tell us on your export market and important initiatives to cater to the requirement of International market?

We have been exporting our road construction machinery to various countries, including Africa, the Middle East, and Southeast Asia. We have implemented various initiatives to cater



to the requirements of the international market, such as customizing our products to suit the local needs, providing after-sales support, and investing in marketing and brand building activities.

Give us an understanding of your company's performance in the last 3 years?

Over the past three years, we have witnessed a steady growth in our business, both in the domestic and international markets. We have launched several new products and expanded our customer base, which has helped us to increase our market share.

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

Our future strategies are centered around investing in R&D and product innovation to stay ahead of the competition. We are closely monitoring technological disruptions in the sector and are committed to integrating new technologies into our products. We are also focused on expanding our footprint in the international market, by establishing new partnerships and increasing our marketing efforts.

How is the scarcity of skilled operators affecting the prospects of the construction equipment market?

The scarcity of skilled operators is a challenge that affects the prospects of the construction equipment market.

To overcome this challenge, we have been investing in training programs for operators and technicians, which has helped us to improve the quality of our after-sales services.

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

Compliance with emission norms is a crucial factor in the construction equipment market. We believe that manufacturers should focus on developing products that are not only cost-effective but also comply with the emission norms. We have been investing in research and development to develop eco-friendly products that comply with the emission norms, and we believe that this will help us to maintain our competitiveness in the market.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

Some of the challenges that we face include infrastructure bottlenecks, complex regulatory environment, and shortage of skilled manpower. We suggest that the government should focus on addressing these issues by implementing policy reforms, streamlining regulatory procedures, and investing in skill development programs. A business-friendly climate will help us to improve our competitiveness and contribute to the growth of the manufacturing sector in the country. ■

India has the potential to become a global construction equipment manufacturing hub, owing to its skilled workforce, low labor costs, and a favorable business environment.



For over 76 years, Tata Motors has been at the forefront of building the nation.

RAJESH KAUL

Vice President, Sales & Marketing, Commercial Vehicle Business, Tata Motors

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector to improve its technological status and competitiveness in the global market?

The Government's 'Make in India' initiative can help foster a favourable environment for the development of advanced manufacturing facilities, adoption of cutting-edge technologies and increased access to skilled labour. At Tata Motors, we strongly believe that the 'Make in India' initiative has played a crucial role in motivating the industry to participate in the country's economic growth. The Government's efforts to simplify business processes and provide a supportive environment for manufacturing have helped us to improve our efficiency, productivity and competitiveness.

For over 76 years, Tata Motors has been at the forefront of building the nation, enabling growth in the e-commerce,

FMCG, FMCD, construction, mining, steel and cement, logistics, construction, infrastructure and mining sector, among others. We have five state-of-the-art commercial vehicle manufacturing facilities present in Dharwad, Jamshedpur, Lucknow, Pantnagar and Pune, which created substantial employment opportunities in the country. Tata Motors has the widest product portfolio which is developed with superior technology and boosts performance while ensuring utmost safety, which are further strengthened by innovative value-added services through the vehicle lifecycle.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

As the industry enters the second phase of the BS6 chapter, Tata Motors has gone beyond the regulatory compliance of BS6 Phase II, to further improve its product performance on attributes like TCO, comfort, convenience and connectivity. Our commercial vehicle range of BS6 Phase II now delivers even better performance, enabled by smarter technologies and enhanced features. Our portfolio of BS6 phase II vehicles comes with significantly improved fuel economy, performance & drivability, enhanced driver comfort & visibility enhanced service intervals and fluid replacement frequency by as much as 25-100%. With the 4G-enabled connectivity and firmware over the air (FOTA) capability, we have brought seamless upgrade capability, taking connectivity to the next level.

The CV industry is transforming at an



unprecedented pace. The future of mobility is being shaped by ACES (Autonomous, Connected, Electric, Shared) megatrends as well as sustainability and digitalisation. Globally, the industry is witnessing greater penetration of alternate fuels, digital and connected features. In India, connected features are increasingly becoming important as they provide increased efficiency and convenience to customers. Tata Motors continues to offer the latest technology roadmap to address key emerging trends and integrate the most relevant and suitable tech elements into our product and service offerings. We have embarked on our sustainability journey under three pillars: viz. net-zero GHG emission by 2045, circularity and preserving biodiversity.

Under the first pillar, we have charted a clear roadmap towards clean and commercially viable mobility solutions. We left a mark at Auto Expo 2023, by showcasing 14 vehicles and concepts, covering all zero-emission propulsion technologies across the portfolio, including Hydrogen ICE, Fuel-Cell-electric, Battery electric and natural gas fuel types. We have also adopted Science Based Targets (SBTi) framework for GHG emissions reduction and are making rapid progress towards renewable energy. Our efforts have been noted, with significant improvement in our ratings by two globally recognised sustainability rating agencies.

On the second pillar of circularity, we have inaugurated the first registered vehicle scrappage facility, branded as Re.Wi.Re, at Jaipur with many more to follow through the franchisee model.

Give us an understanding of your company's performance in the last 3 years?

The Indian CV industry saw a strong rebound in the last two years after a tough period in FY20 and FY21 that saw industry volumes drop to half of FY19 peak. In FY22 over FY21, Tata Motors' CV business grew by 33% with the CV industry growing by 27%. This was largely on the back of the superior product performance of the BS6 range, a slew of new launches and unique value-added services.

Tata Motors' domestic CV business demonstrated impressive resilience and robust growth during the fiscal year 2022-23, with VAHAN registration volumes reaching a noteworthy 3,54,655 units

- marking an impressive increase of approximately 30% compared to the previous fiscal. With ~36% growth, FY23 was a promising year of growth after 26% growth of FY22, indicating an upcycle. The exceptional growth was driven by both medium and heavy commercial vehicles (M&HCVs) and passenger transport vehicles. Strong fundamentals, coupled with increased infrastructure projects, road construction, mining activities and healthy replacement demand, were pivotal factors contributing to this growth. The demand for small commercial vehicles (SCVs) deployed for last-mile distribution remained strong, supported by sustained consumer spending. The buses segment experienced a significant rebound in FY23 over FY22, primarily due to the resumption of schools, offices, tours and travel, resulting in a surge in the demand for commuting. Replacement demand from schools and state transport undertakings remained strong, with most of this demand pending for the past 3-4 years.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

In the face of technological disruptions, the commercial vehicle industry needs to adopt future agile, innovative and forward-thinking strategies. The CV industry is undergoing a rapid transformation driven by several megatrends such as ACES, digitisation and sustainability. Globally, the sector is seeing an increasing uptake of connected, digital and alternative fuel features. In India, connected features are gaining prominence since they provide the customers and the entire value chain with greater efficiency and convenience. To address important new trends and cutting-edge technology in the products and service offerings, Tata Motors continuously updates its technological roadmap as the economy transitions to a more connected and digital future.

We deeply value our customers' needs and behaviours and continue to reach them in better and more seamless ways via digital mediums. With more than 380K connected vehicles, 'Fleet Edge' has now matured into digital technology platform which offers unique convenience and peace of mind to customers, while providing an opportunity to improve their business. ■

For over 76 years, Tata Motors has been at the forefront of building the nation, enabling growth in the e-commerce, FMCG, FMCD, construction, mining, steel and cement, logistics, construction, infrastructure and mining sector, among others.



India has a potential to become a global hub for material handling equipment.

NEVILLE MEVAWALA

Head of Sales & Marketing, Godrej Material Handling, Godrej & Boyce

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the material handling equipment sector to improve its technological status and competitiveness in the global market?

The Indian government's "Make in India" initiative, intends to support domestic manufacturing and attract foreign investment to turn India into a powerhouse for global manufacturing.

The increase in manufacturing leads to increase in lifting, shifting and stacking of the goods which in turn increases demand of material handling equipment like These new manufacturing setups look for high productivity, safety and comfort for the operators which demands better technological advancements by offering global technology at local price to be competitive to increasing global competition in the material handling industry.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

As India's manufacturing industry is continuously transforming, it is witnessing significant industrial development and a conscious adoption of green manufacturing processes by corporate India. By FY24, Godrej Material Handling hopes to hold a 28% market share for electric forklifts in India thanks to a strengthened portfolio of environmentally friendly products.

We intend to substantially increase investment in IoT-based technologies

and data in order to improve customer experience, expand globally, and gain market share. We have planned to double our investments in technology at multiple stages of operations including manufacturing, sales, and sustainability across its value chain. Due to technology innovation, Godrej Material Handling has seen a 10% rise in user experience efficiency after the adoption of Salesforce CRM. The business is expanding its capacity by 4x as it believes demand growth from the industry.

What are your views on making India as a global material handling equipment manufacturing hub?

India has a potential to become a global hub for material handling equipment; but it needs an overall ecosystem in terms of technology upgradation, scale, skill, local manufacturing of key aggregates and investments towards scale to compete with China.

The industry would need incentives from the Government like PLIs in other sectors to become cost efficient to facilitate to make India lessens its overall logistics cost which is higher than any developed economies.

India is among top 5 economies of the world but when it comes to usage of material handling equipment (powered lift trucks), we are not even among top 15 countries of the world. There is huge potential for domestic demand which will provide scale to be efficient to go global.

Tell us something on your export market and important initiatives to cater to the requirement of International market?

The stringent emission norms have made diesel powered forklifts more expensive.

With launch of CEV-5 with effective from 01-April'2024 will further impact the costs adversely.



Our focus in exports is on specific markets of Middle East, Africa and SAARC countries. We witnessed 50% growth due to launch of electric range of lift trucks and we expect to grow aggressively in these markets with objective to become 3x in next 3 years.

Give us an understanding of your company's performance in the last 3 years?

We have seen a sharp increase in our revenue in last 3 years of which major revenue has come from the newly launched electric forklift trucks and Reach trucks. We are the market leaders in terms of revenue and have significant lead over the second largest player in the industry. We have aggressive plan for next 3 years and are confident to maintaining or exceeding the lead.

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

We will continue to invest in new technologies and launch new products which are more efficient, productive, and are safe to operate. We don't see any major disruption in our industry. We will further strengthen our reach through our channel partners and will continue to provide after sale solutions which can be customised to meet customer needs.

How is the scarcity of skilled operators affecting the prospects of the material handling equipment market?

There is a challenge in getting skilled, trained operators for warehouse equipment which includes Articulated forklifts and Reach trucks. The other challenge is to get skilled operators outside city limits as most of the expansions are happening far from city limits.

Having said that there are various

training institutes have come up which are providing required skills and safety knowledge to operate equipment safely.

We as business have tied with couple of training institutes where we provide training and employment through our won Rental fleet.

MHE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

The emission norms have become stringent and will move to CEV-5 from CEV-3 in less than 5 years. The stringent emission norms have made diesel powered forklifts more expensive. With launch of CEV-5 with effective from 01-April'2024 will further impact the costs adversely.

The increase in fuel costs and maintenance costs is leading to double digit increase in electric forklifts whereas diesel powered engines are on decline. The other factor is that corporate customers due to their pledge towards clean and greener environment are shifting towards electric forklift.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

The biggest challenge in the growth of material handling industry is non-palletisation and the type of lorries being used. It is imperative to use standard size pallet trucks across the supply chain which will not only reduce logistics cost but will also facilitate faster and safe handling. The side open lorries will facilitate growth of MHEs.

The recent suggestions made in the National Logistics policy should be implemented fast which will benefit the material handling industry and the overall economy by reducing overall cost of logistics. ■

India is among top 5 economies of the world but when it comes to usage of material handling equipment (powered lift trucks), we are not even among top 15 countries of the world.



The Make in India programme is very important for the economic growth of India as it aims at utilizing the existing Indian talent base.

SAFAR MOHAMMAD KHAN

General Manager- Sales and Marketing (HDD), Apollo Techno Industries

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

'Make in India' is a major national programme of the Government of India designed to facilitate investment, the primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector. It is being led by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India. The Make in India programme is very important for the economic growth of India as it aims at utilizing the existing Indian talent base, creating additional employment opportunities and empowering secondary and tertiary sector. The programme also aims at improving India's rank on the Ease of Doing Business index by eliminating the unnecessary laws and regulations, making bureaucratic processes easier,

making the government more transparent, responsive and accountable. foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. Government has made excellent structure and facilities which motivate everyone to participate into this. come and manufacture in India, go and sell in any country of the world. Various incentives schemes, financial structure, skill development programme, advisory have been launched and that is all on portal and government agencies.

The Indian construction equipment market was estimated at almost 5.6 billion U.S. dollars in 2021. The market is expected to grow by a compound annual growth rate of about eight percent between 2022 and 2027, reaching the size of nearly 9.4 billion U.S. dollars in 2027., It seems progressive as per the data.FDI inflow has been observed higher continuously year by year. In 2014-15, it was 45.1 \$bn then 2015-16 it was 55.\$bn then 2021-22 it was 83.5 \$bn which shows a good FDI inflows after made in India launch which was done in 2014.it is expected to have 100 \$bn in coming 2 years. PLI has been implemented in 14 sectors including the CE industry and off course it has made a good competitive advantage for the strategic growth sector. Indian industry especially MSME has taken a good boost. National Single window systems (NSWS) has opened a quicker platform to minimize the down time. This makes the improvement of ease of business. Safety systems and other innovative technological up gradations have been followed by us in equipment sector here in India that causes high exports ration also. We have



got 10% high export than last year and it is expected 25% will be in the upcoming financial year (2023-24)

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

It has been certain uncontrolled type of challenges observed but we have got many Govt. policy benefits. PLI has given good drive to manufacturers. National single window systems (NSWS) will be more productive as it is well reviewed and implemented by government officials. GATI SHAKTI will improve more systematic infrastructure in near future. FDI inflows will be more and would be around 100 \$bn in 2023-24 so we are seeking growth rate about 20-30% higher than last financial year.

What are your views on making India as a global construction equipment manufacturing hub?

India's role of participation in global trade is still low that is because of competitiveness. We have observed weak global demand for our equipments. Although, FDI, PLI and other schemes have been well executed in India where all manufacturers are benefitted. We are hoping positively for the good growth rate in near future. We will get momentum on good global trade. Exchange rate is very low but thinking that will be controlled in near future. NSWS will boost the favorable manufacturing environment here in India. We have planned to manufacture HD, Gen-2, RD series of Apollo HDD Rigs here at our Mehsana plant. Some Chinese companies have started to set up manufacturing unit in Chennai. FDI inflows are raising high year by year. So, for sure, India is going to become a manufacturer hub in near future.

Tell us on your export market in the trenchless technologies sector and important initiatives to cater to the requirement of International market?

We are getting good market share in Middle East, exported many numbers in Russia, exploring the Africa market, Setting up all the infrastructure in United States. We have segmented the rigs according to



the world geography. We are launching HD series, RD series, Generation 2, according to the requirement covering the International market. Our projection is to make 30 % market growth in the International market (FY 2023-24).

Give us an understanding of your company's performance in the last 3 years?

We have got 27% growth in 2022-23 if we compare with the last 2021-22 and would be exponentially rising year by year. We had bad performance in business growth in 2020-21 due to covid 19. Since, we have developed many series in HDD machines like HD Series, Generation 2, RD series with more models in near future. Technically, we are upgrading all our equipments in the form of pulling force, thrust force, torque even. Motor arrangements are moreover will be upgraded in HD Series which will ensure the higher specification in machine. More developments are there with us so the projection of business would be positively high. Our target is to make 30% growth in this 2023-24 financial year. ■



Infrastructure development is the foundation for India's GDP growth and economic prosperity.

VIRENDRA D. MHAISKAR

Chairman & Managing Director, IRB Infrastructure Developers

What were your key performance highlights during the past year?

The company has seen key performance improvements in FY 23. To brief up some of them are, toll revenue growth across all assets for around 40% on Y-o-Y for entire FY23; commencement of construction activity on the prestigious Ganga Expressway BOT in UP and Chittoor Thachur HAM project in Tamil Nadu. As far as new orders are concerned, Company bagged Rs.2,132 Crores Samakhiali Santalpur BOT Project in Gujarat. Company also successfully completed re-financing of three BOT assets under its listed private InvIT. During the year, Company also split its equity shares from Rs.10 per share to Re.1 per share; thus, bringing in more liquidity in the market for the interest of small share investors. During the year, Company published its Sustainability Report for FY22 and became a member of India Global Compact UN in July 2022.

What is your future outlook for infrastructure companies for the year 2023?

The roadmap to India's Infrastructure companies is futuristic. Infrastructure development is the foundation for India's GDP growth and economic prosperity. According to the IBEF survey, Infrastructure is poised to grow by 8.2% till the year 2027. The launch of a quadrilateral economic forum of the US, India, Israel & UAE has further accelerated infrastructure growth in the coming years. With the pandemic restrictions and effects being eased, the infrastructure work for most companies has come to its initial trajectory and the work has been moving faster. Technology has continuously been upgraded which means it is going to make the infra work not only

faster but also more efficient. The future of Infrastructure also looks at more green and clean initiatives going forward. With the correct capital investment and government policy support, we believe infrastructure companies have a progressive future in 2023.

Give us an insight on how technology has formed the backbone of the company's excellence in project delivery?

Technology has become an essential tool for companies to achieve excellence in project delivery. With the advent of new technologies, businesses have been able to automate their processes, improve their communication channels, and streamline their operations, resulting in more efficient project delivery. In this sense, technology has formed the backbone of the company's excellence in project delivery.

One of the key advantages of technology in project delivery is its ability to increase collaboration and communication between team members. With the use of project management software, teams can easily share information, track progress, and make real-time updates, resulting in better coordination and faster decision-making. This, in turn, allows for a more agile and responsive approach to project delivery, improving the speed and quality of the final product.

Another way technology has helped companies excel in project delivery is through automation. Automated processes allow for greater efficiency and accuracy, reducing the risk of human error and saving time and resources. From automated testing to data analysis, technology has made it possible to automate many of the repetitive and time-

Initiatives for safety, training, and skilling of the workforce are crucial to ensure a productive and secure working environment.

consuming tasks that were previously done manually, freeing up valuable time and resources for more creative and innovative work.

IRB manoeuvres in-house capabilities, with a pool of expert and techno-savvy workforce, to carry out EPC and O & M of its Assets, evolved methodology, high construction quality requiring low maintenance. IRB owns a range of advanced equipment and a highly skilled workforce for efficient operations. Advanced Technology deployment and the implementation of SAP across functions have resulted in a smooth and organised manner of operations. More than 95% of the toll collections are now coming through RFID which is known as FASTag that brings in more transparency and keeps curb on leakages. The company also has access to the best global technology and practices through its association and partnership with its on-board global partners. Evolving with technology surely makes it facile to establish a benchmark with global standards by being timely preventive and predicting precise analysis.

What are your initiatives for safety, training and skilling of your workforce?

Initiatives for safety, training, and skilling of the workforce are crucial to ensure a productive and secure working environment. IRB prioritizes the safety and wellbeing of their employees by implementing adequate safety measures, providing regular training sessions to keep employees up-to-date with the latest practices and technologies, and offering opportunities for upskilling and reskilling. Investing in training and skilling programs not only benefits the employees but also increases the overall productivity and efficiency of the organization. Furthermore, it helps to future-proof the workforce by enabling employees to adapt to new technologies and emerging trends in the

industry. By prioritizing safety, training, and skilling, organizations can create a culture of continuous learning and development that benefits everyone involved.

Workplace safety and training the workforce are vital to enable the management to ensure a healthy workspace environment. Skill based training is on the rise and evolving rapidly.

IRB Infra, being the leading and largest integrated infrastructure player in the highways sector has Safety of All, i.e., its users, employees and all other stakeholders, as its top priority objective and hence Company has in place dedicated human resource with domain knowledge and expertise to look after the Safety function. Consistent brain storming; training; mock-drills, etc. have been in place to ensure Safety for all.

What are the challenges India faces in infrastructure building? How could those challenges be addressed?

Infrastructure as a vitally important sector has its own challenges and setbacks. The prominent challenge that is faced is regulatory risks, including policy changes that sometimes are time consuming. Easing regulatory risks could further resolve delays in projects. Another paramount challenge that comes to the infra sector is environmental risks that come with a great deal of safety policies, environmental regulators, etc. Infrastructure space should think a step ahead and in coming years ensure scrupulously well-planned resource allocations for operations with high sustainability measures.

What are the major big infra projects that are under implementation by your company?

IRB Infrastructure Developers Ltd. is India's leading integrated and first multi-national infrastructure development in the highway sector. At present, Company is operating and maintaining 23 highways projects under BOT, TOT and HAM business models in 10 Indian States with around 16,000 Lane Kms in operations.

At present, Company is executing Ganga Expressway, 130 Kms Greenfield Expressway BOT in Uttar Pradesh, which is the largest in Company's portfolio alongside Palsit Dankuni BOT project in West Bengal, Chittoor Thachur HAM project in Tamil Nadu and Samakhiali Santalpur BOT project of 90.0 Kms in Gujarat, which was recently bagged. ■

One of the key advantages of technology in project delivery is its ability to increase collaboration and communication between team members.





Pumping System: Vital Water Infrastructure.

ANIL SETHI

Chairman, Pump Academy

How do you see the government's 'Make in India' programme and its mission motivating construction and infrastructure industry to participate in it? How is this helping the construction and infrastructure sector to improve its technological status and competitiveness in the global market?

The Hon'ble Prime Minister of India launched 'Make in India' programme in September 2014 that envisage transforming India into a global manufacturing hub with an aim to increasing the share of manufacturing in India's GDP from 16% to 25% by 2022. The idea behind the initiative was to facilitate investment, foster innovation, enhance skill development, protect intellectual property & build world standard manufacturing infrastructure. Under the scheme, government intends to develop industrial corridors and smart cities to provide infrastructure based on state-of-the-art technology with modern high-speed communication and integrated logistic arrangements. It has also taken up to upgrade and strengthen the existing infrastructure in industrial clusters to support manufacturing facilities. Innovation and research activities are supported through fast paced registration system and accordingly infrastructure of Intellectual Property Rights registration set-up has been upgraded.

The construction and infrastructure industry is one of the key sectors that have been identified as a priority area under this initiative. The 'Make in India' programme enabled creating conducive environment for investment, develop modern infrastructure, and open up new sectors for foreign investment. It helped



the construction and infrastructure sector to improve its technological status and competitiveness in the global market by providing incentives for companies to invest in research and development, promoting innovation, and encouraging the use of advanced technologies. The programme has also helped to create jobs and boost economic growth in the country.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years in the water infrastructure sector?

Among all the natural resources necessary for propelling life on earth, water is the most important resource ensuring survival of human and economy. The water infrastructure in India is huge, but most of them are legacy units built decades ago on conventional methods. The Govt. of India is committed towards making clean water provision to every households in the country and launched a number of initiatives including much ambitious Jal Jeevan Mission with a planned spending

Pump Academy Private Limited has introduced a pioneering solution to optimize pumping station operations with the patented IoT enabled innovative system called iPUMPNET.

of 6.47 trillion rupees. Some other major water projects underway in India across various states and cities are National River Conservation Plan, the National Rural Drinking Water Programme, and Atal Bhujal Yojana etc.

Pump Academy Private Limited is very hopeful of strong growth in Indian water market given the high quality technological solutions we are providing for making water pumping system smart and responsive in line with the technological needs for this vital water infrastructure. We are increasing our footprints with water utilities and making significant contributions to solve the most pressing challenges of our time, water scarcity by optimizing the pumping system and curbing significant water losses

What kind of projects is your company executing presently in India?

Pump Academy Private Limited has introduced a pioneering solution to optimize pumping station operations with the patented IoT enabled innovative system called iPUMPNET. This advanced system aims to improve the operations of pumping stations while enhancing energy efficiency thus making the pumps smart and responsive. It is currently executing projects for water utilities in India including a large project in Bengaluru to streamline pump station operations with real-time monitoring through an intuitive dashboard interface accessible via internet and mobile applications, along with other facilities.

How helpful is the innovative solution for water utilities that your company has been offering?

iPUMPNET is transforming existing pumping stations into more efficient infrastructure that could be used in various sectors such as water supply, wastewater treatment, power generation, irrigation, oil and gas, paper and pulp and other industries. It can improve pumping station operational efficiency upto 35%, reduce energy cost upto 40%, extend the life of pumping systems upto 50%, reduce the life cycle cost (LCC) of pumping stations upto 40% and practically eliminates unscheduled breakdowns and maintenance requirements among several other significant benefits.

It streamlines workflows and improves overall efficiency of pumping stations; provide access to legacy data, helps in



functional reporting while providing control through centralized monitoring system thus helping authorities with deep insights and remote evaluation. It converts the dynamic performance of machines into running parameters by linking electrical, mechanical, and hydraulic factors. It also gathers real-time pump health data and issue alerts to predict and detect potential risks and pump failure. It is estimated that almost 5 GW of energy could be saved if iPUMPNET is implemented across all water pumping stations in India.

How is the scarcity of skilled workers affecting the prospects of the construction / infrastructure market?

The shortage of skilled workforce is a major challenge facing the construction and infrastructure sector in India. According to a report by the National Skill Development Corporation (NSDC), the construction sector in India is facing considerable shortage of skilled workers across various trades such as masonry, plumbing, mechanical and electrical works. This shortage of skilled workers can lead to delays in project completion, increased costs, and compromise with quality of work. Many large projects are delayed beyond the stipulated periods and according to the Ministry of Statistics and Programme Implementation, which monitors infrastructure projects worth Rs. 150 crore and above, 1449 projects are delayed by 1-60 months period. It has also reported that delay in 354 infrastructure projects shows cost overruns of more than Rs. 4.55 lakh crore from its original project cost. Among other factors for the delay, some of them could be attributed to the lack of skilled workforces as well. ■

The 'Make in India' programme enabled creating conducive environment for investment, develop modern infrastructure, and open up new sectors for foreign investment.



The construction equipment sector should come up with more advanced equipment at affordable cost leveraging "Make in India" policy.

NAGESH VEETURI

Executive Director – Civil, KEC International

How do you see the government's 'Make in India' programme and its mission motivating construction industry to participate in it? How is this helping the construction and infrastructure sector to improve its technological status and competitiveness in the global market?

"Make in India" promotes collaboration / knowledge sharing between domestic and foreign companies, facilitating the transfer of advanced construction technologies and practices to Indian firms for bringing competitiveness in Indian construction firms at global level.

The program is encouraging investments in R&D, innovation in the construction sector to develop sustainable practices. Embracing digital technologies & automation, such as BIM, robotics, and IOT devices, which improves skill sets of workforces, construction efficiencies & project quality coupled with reduction in costs. The focus on infrastructure projects like Metros, Roads, Railways, Ports & Smart cities provides opportunities for the construction sector to implement advanced technologies and construction methods.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the construction sector?

Technological disruptions evolve rapidly. It is crucial for construction companies to stay updated / adaptable on industry trends.

Companies should prioritize digital transformation by adopting technologies



such as Building Information Modelling (BIM), cloud computing, robotics, drones, 3D printing, augmented reality (AR), and virtual reality (VR). This enables real-time data analysis to improve project efficiency under safe working environment.

With the growing emphasis on sustainable practices, promotion of eco-friendly materials, energy-efficient designs and renewable energy solutions not only aligns with environmental goals but also contributes in reduction of harmful emissions.

How is the scarcity of skilled workers affecting the prospects of the construction market?

The construction market often experiences fluctuations in demand vis-a-vis availability of skilled workmen. The scarcity of skilled resources can compromise the quality of workmanship, leading to subpar construction outcomes limiting the industry's ability to accomplish the overall vision of developing infrastructure projects to boost the economy.

Addressing the scarcity of skilled workers requires collaborative efforts between the construction industry, educational institutions, and the respective authorities by increasing the focus on vocational training programs and initiatives to attract and retain skilled workers. ■

The construction market often experiences fluctuations in demand vis-a-vis availability of skilled workmen.



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Construction and Real estate industry is completely aligned with the Government of India's Make in India initiative.

NIRANJANA HIRANANDANI

Managing Director, Hiranandani Group & National Vice Chairman, NAREDCO

How do you look at the 'rental housing' segment and what are the initiatives that are needed to give a boost to this sector?

It is expected that over 40% of India's population will reside in urban areas by 2030 as per the media report. A growing population, rapid urbanization, migration to cities, and booming job opportunities will drive rental housing demand. In key property markets, surplus housing stock is lacking to meet the rental demand. The career mobile workforce needs rental housing as they cannot afford to buy a home in each of their locations of employment. Hence, affordable rental housing will augment the growth of the real estate sector.

By rationalizing taxes and providing fiscal incentives, developers will be encouraged to create surplus stock to meet the growing demand for rental housing. Formalizing Rental Housing Policy state wise is the primary initiative to augur the growth of rental housing.

What are your group's expansion plans for this year?

Hiranandani Group has recently launched 1 mn sqft of residential space in Hiranandani Fortune City township located in Panvel. As far as project launch pipelines are concerned, they are robust across projects in Powai, Chennai, and Panvel, which are subject to approval. The company is also evaluating a foray into the redevelopment project segment in the Mumbai market.

How do you look at the consumer sentiments in the real estate market post-budget 2023?

Consumer sentiment was buoyant amidst covid pandemic outbreak as the inherent need to buy an ownership home grew multifold. The global inflationary turmoil, rippling effect of geo-political havoc, increase in home loan interest rate and withdrawal of fiscal stimulus has dented the sentiment and demand in affordable housing segment. The mid and luxury homebuyers may opt for a longer gestation period before booking converts into an actual sale. In FY 2023, the pause in repo rate, impetus to affordable housing under PMAY scheme and bullish infrastructure outlay will see a snowball effect of the demand for housing. The industry has witnessed the growth of millennials into the first-time homebuyer segment opting for 1, and 2BHK. The demand for spacious homes in the range of 3 BHK and above has been highly preferred by C-Suite's professionals, & HNIs who are capitalizing on the rise in disposable income, steady jobs, and accrued savings. Homebuyers from abroad have jumped on the home buying bandwagon benefitting from currency depreciation and an emotional need to secure shelter at home. Thus, the cumulatively discerning homebuyers' segment has a very healthy and optimistic outlook.

What are the present challenges and suggestions to overcome those challenges in the real estate market?

Industry faces certain prolonged challenges like lack of digital record of land titles, hurdles in land acquisition process, delayed approvals, GST without input tax credit, skilled labour shortage since pandemic led migration, and cost-effective construction technology. ■

Homebuyers from abroad have jumped on the home buying bandwagon benefitting from currency depreciation and an emotional need to secure shelter at home.

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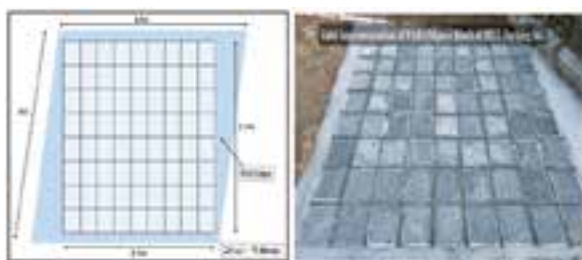
WHY IS THERE A NEED FOR LOW-IMPACT DEVELOPMENT ROADWAY INFRASTRUCTURE?

Due to rapid urbanization and change in the ecosystem, the development of sustainable transportation infrastructure necessitates an imperative transition from energy-intensive construction methods to low-impact development (LID) framework. The impermeable nature of the urban fabric built with traditional materials such as cement concrete is causing negative impacts on the environment during flash flooding and urban heat islands (UHI) ascribed to its characteristic of serving as heat sinks. On the other hand, permeable surfaces help mitigate surface runoff and behave as one of the best stormwater management strategies in the urban conglomerates. One such example of a permeable surface is pervious concrete (PC), which stands out as an eco-friendly alternative to the traditional concrete in the pursuit of creating LID setup because of its ability to reduce stormwater runoff, improve groundwater quality, and help transition the development of infrastructure towards a more sustainable pathway. Since PC is made up of coarse aggregates, cement, water, and very limited fine aggregates, the material network is ingrained with interconnected pore structure. Thus, stormwater is captured inside the PC roadway system through the interconnectedness and conveyed to the underlying granular sub-base / base course layers, which function as reservoirs capable of holding the infiltrated water and

resulting in remarkable runoff reduction. Furthermore, PC material has exhibited as an example of a cool pavement product that is capable of alleviating UHI phenomenon by means of storing less energy than typical concretes, specifically, under wet conditions (generally called evaporative cooling effect). Although PC may not be suitable for high-volume road applications due to low strength, it has proven to be an excellent choice in the construction of parking lots, low-medium volume roads, footpaths, and medians. Notably, the construction of PC pavement requires skilled labor, high quality control, and proper compaction techniques, which restrict its implementation and use in emerging economies that depends on cheap labor.

IITT PARAMPAVE IN REAL-TIME

Strengthening the efforts towards establishing sustainable construction practices, researchers at the Indian Institute of Technology Tirupati (IITT) developed a novel roadway product: Pervious All Road-class All-weather Multilayered Pavement (PARAMpave) block, which is stronger than a typical PC, thus, addressing the low-strength property of conventional PC while also outperforming the longer PC slabs against bending and fracture. As a first-of-its-kind real-time study, PARAMpave system was implemented in the IITT parking lot (Figure 1). PARAMpave is a paver block having square geometry of 300 mm edge and 90 mm thickness, comprising two layers: a structural bottom layer 60 mm thick made of high-strength concrete such as M40 grade overlaid with a 30-mm functional PC surface wearing course of pervious concrete. The underlying layer was provided with two 25-mm diameter drainage conduits along the diagonal axis to facilitate the infiltration of water through the system.



Customized high-quality wooden molds comprising a wooden collar for creating a central groove for PC and pipe for the creation of conduits (Figure 2 (a)) in the structural layer were developed exclusively for PARAMpave blocks. The process of making PARAMpave block involved two stages: i) Preparation of the structural base layer with M40 grade traditional concrete that provided adequate strength and resistance against edge distortion, and ii) a 30-mm overlay upon the prepared PC structural base layer. A fully automated first-generation steam curing equipment that reduced curing time to three hours without compromising structural properties was employed, thus increasing the productivity rate of PARAMpave blocks by manifold (Figure 2 (b)). Immediately afterwards, the structural base layer was overlaid with the special PC layer ready for curing, and later placed in the field as a regular parking lot with dimensions mentioned earlier (Figures 2 (c) and 2 (d)). The preparation of subgrade and base course layers involved a similar approach used for conventional interlocking concrete block pavements. Fine-grained sand was used to fill the gap between the PARAMpave block and the base course layer to maintain the top surface level and speed up the infiltration rate. A customized tool was used for hand compaction (Figure 2 (e)) to ensure a firm base mainly to carry loads from the PARAMpave blocks. A central 0.045 cubic meter capacity concrete drum mixer was used to produce PARAMpave blocks, which ensured firm and intact paving operation. Finally, the level of the surface was examined, thus allowing the parking lot for immediate use.

IMPLEMENTATION PLAN FOR GREEN INFRASTRUCTURE THROUGH PARAMPAVE

Albeit the conventional interlocking block pavements and asphalt surfaces are prominently used in low-volume road construction, the need for high amounts of sand during production, high initial cost, and significant emissions render them unsuitable in all conditions. In contrast, PARAMpave products can become a sustainable class of paver blocks, as they are permeable requiring fewer materials compared to cement concrete paver blocks of similar dimensions. On a scientific note, the implemented PARAMpave test section will behave as a real-time mini-laboratory



capable of performing various experiments such as field permeability, thermophysical analysis, understanding clogging phenomenon, durability, and drawing correlations between field and laboratory results. For instance, PARAMpave blocks when tested for thermophysical behavior, the blocks demonstrated evaporative cooling effects and displayed 5-10 oC differential with conventional concrete and also functioning as cool pavements throughout the day.

Overall, the multidimensional PARAMpave system is expected to address several challenges associated with the design and construction of conventional pervious concrete slabs and has the potential to help reduce substantive amount of virgin resources and promote eco-friendly green roadway technologies. In conclusions, it would be worthwhile to adopt and try the emerging innovative construction strategies / systems such as PARAMpave blocks, which possess remarkable workability, high durability, extraordinary groundwater recharge capacity, impressive ease in placement, and impetus to become one of the best stormwater management strategies should the whole process be supported by industry to create the LID product and help flourish large-scale field implementation in the built environment.

With inputs from:

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CONSTRUCTION EQUIPMENT

sales grew 26% to cross 1 lakh mark in FY2022-23



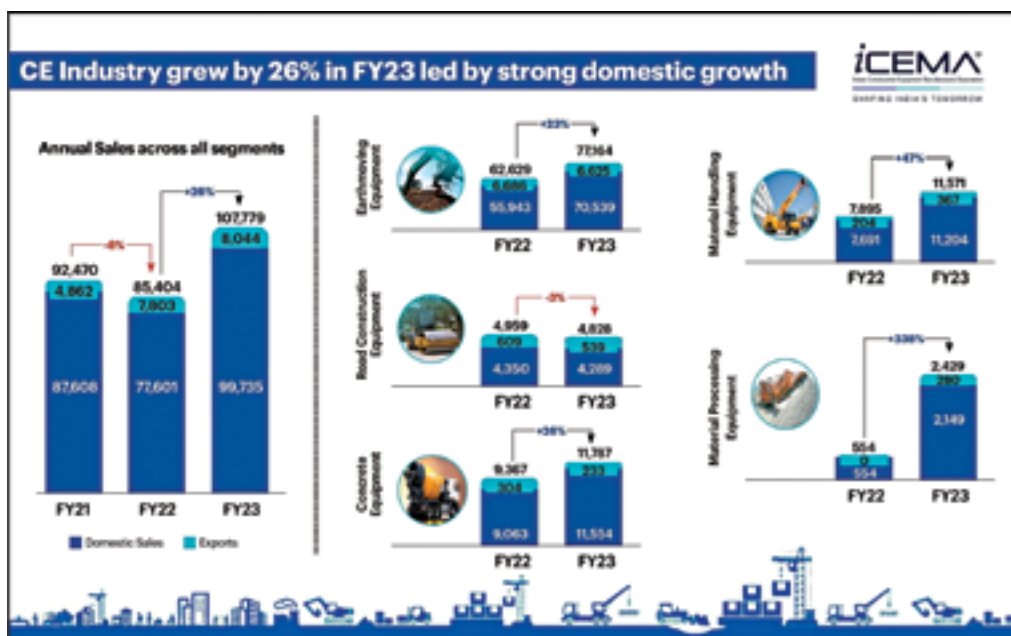
YOY 28.5% GROWTH IN DOMESTIC SALES, 3% GROWTH IN EXPORTS

The Indian Construction Equipment industry recorded an excellent 26% growth YoY with sales crossing the one lakh unit mark in FY2022-23. CE sales in Q4 of FY23 (Jan-Mar 2023) increased by 23% over Q4-FY22 and by 22% over Q3-FY23. On a month-on-month basis, sales in March 2023 increased by 17% over February 2023.

The significant growth in FY23 was driven by all four sub-segments of CE industry, except Road Construction Equipment, which recorded a slight de-growth of 3%. A total of 77,164 units of Earthmoving equipment were sold in FY23 – a 23% jump in sales as compared to 62,629 units sold in FY22. The sales of Backhoe Loaders and Crawler Excavators, accounting for over 90% of total sales of earthmoving equipment, increased by 28% and 17% respectively during the year. Similarly, concrete equipment sales went up by 26% to 11,787 units in FY23 on the back of an equivalent increase in sales of concrete mixers which contributed around

60% of sales in this segment. Material Handling Equipment segment recorded an impressive 47% growth, driven by a 25% surge in sales volume of pick and carry cranes, accounting for more than 80% of the total sales in this category. A significant increase in tele-handler sales was also witnessed with 713 units sold in FY23, compared to 342 units in FY22. The Material Processing Equipment segment too consolidated its contribution to total sales with manifold growth in screeners, jaw crushers, impact crushers and cone crushers.

“The growth comes on the back of the enhanced pace of construction and mining activity during the year which resulted in a significant increase in demand for all types of construction equipment,” said Dimitrov Krishnan, President, Indian Construction Equipment Manufacturers’ Association (ICEMA) and Managing Director Volvo CE India. It is estimated that road and highway construction was about 30 km/day during FY23, which created demand for machines like excavators, motor graders, crushers & screeners, etc.



"The support from the Ministry of Road Construction & Highways (MoRTH) has been instrumental in driving the demand for construction equipment as over 40% of CE demand originates from this segment. We are really grateful to Minister Nitin Gadkari Ji for his visionary outlook for the road sector of India and we hope that this sector will continue to be a strong demand driver for the CE industry in future as well," said Krishnan. He further urged the Government to ensure a steady and high pace of highway construction be maintained throughout the coming years to create a sustained demand for construction equipment. He also added that, a focus on debottlenecking the issues to accelerate the pace of execution of the existing infrastructure projects would enable the industry plan better to cater to the emerging demand for the equipment.

Besides road and highway sector, a steep increase in railway construction in FY23 clocking 14km/day of track laying owing to commissioning of new lines, doubling and gauge conversion, etc enhanced focus of the state governments towards traditional infrastructure development – roads, irrigation as well as rural / urban development and the steady revival of the real estate industry were the other factors that contributed toward the growth of the industry and resulted in higher demand for construction equipment during the year. Additionally, a 15% increase in coal production in FY23 led to higher sales of mining equipment

like high-capacity excavators, motor graders and dozers.

"FY2022-23 was a year that saw volumes peak to the best-ever performance, with the industry sales volume exceeding the pre-pandemic level by 10%," commented V. G. Sakthikumar, Convener, ICEMA Industry Analysis and Insights Panel and Managing Director, Schwing Stetter India. "Infrastructure projects including high-speed trains, metro-rail and national highway construction contributed to the growth of CE industry in Q1 and Q2 and the growth in subsequent quarters was backed on petrol and refinery, steel plant and port development projects," said Sakthikumar.

Sakthikumar mentioned that, with the Government's continued focus on infrastructure development and a significant increase in the capital expenditure outlay announced in the Union Budget 2023-24, demand for construction equipment is expected to remain robust in the near term with growth expected to be around 15-20% in FY24.

The ICEMA Panel on Industry Analysis and Insights provides robust and credible market intelligence by collating, generating, and analysing industry data. The value-added quarterly CE Industry Report is among the several industry reports collated based on data shared by its member companies which represent about 95% of the OEMs operating in the Indian Construction Equipment industry. ■

The significant growth in FY23 was driven by all four sub-segments of CE industry, except Road Construction Equipment, which recorded a slight degrowth of 3%.



Projects awarded and the rate of execution are the primary drivers for the sale of compaction equipment.

VIVEK HAJELA

Vice President & Head, L&T Construction Equipment Business

How do you view the current road & highway construction scenario?

India's road and highway sector is now the second largest in the world, and our Union Minister for Road Transport & Highways, Mr Nitin Gadkari, has the vision to improve it further. Many new road alignments are proposed, bypassing major metros to cut travel time. The long-term goal is to reduce logistics costs. Logistics costs will decrease when the roads connecting ports, major railway hubs, and industrial centres are integrated. The road sector will continue to be a significant driver of infrastructure growth.

The revised target announced by the minister for the highway sector is 60 km per day for the near future. Road connectivity improves the momentum of overall economic activity in regions getting connected, and this infrastructure development has enabled the Indian economy to grow faster.

How large is the compaction equipment market in India, and how big do you expect it to grow?

The compaction equipment market is around 4,000 machines annually. It is expected to grow between 10 and 15% annually. The market growth will depend on the speed of execution of the road projects. The road sector is a major employment generator and many state governments award contracts in the road sector. With the execution of projects gathering pace, the growth of the compaction market is bound to accelerate.

The government has provided special importance to roads and highways in the Union Budget. Has

it started reflecting on the sale of compaction equipment?

Projects awarded and the rate of execution are the primary drivers for the sale of compaction equipment. In recent months, project execution has slowed in many parts of the country due to erratic monsoons. The sale of compaction equipment will follow awards of new jobs, albeit with a lag. The pace of construction will pick up, which will be directly reflected by higher sales.

What are changing customer preferences in the compaction equipment market?

Customers prefer to procure compaction equipment from manufacturers with a well-established network and after-sales support. The machines require site support, and manufacturers who have earned customers' loyalty over the years are preferred. In addition, some customers look for machines with higher local content. Finally, customers are willing to pay a premium for machines with a reputation for trouble-free operation.

L&T holds a significant advantage in the realm of road machinery. As a part of the Atmanirbhar Bharat Initiative, L&T has launched a new range of CEV-IV emission-compliant machinery, including the L&T 1190 Soil Compactor, L&T 990HFi Tandem Compactor, and L&T 2490 HD Pneumatic Tyred Roller, all with high local content.

We've also focused on enhancing after-sales support by developing capabilities and investing in infrastructure. Our nationwide network consists of zonal and territory offices, 30 distributors, and six strategically placed service stations for major repairs. Additionally, we have a central warehouse in Nagpur for efficient logistics.

At L&T Construction & Mining Machinery, our goal is to reach customers within 3-4 hours, as we believe that exceptional service leads to success.



At L&T Construction & Mining Machinery, our goal is to reach customers within 3-4 hours, as we believe that exceptional service leads to success. In our 76-year history of partnering with India for nation-building, we have always considered top-notch after-sales service a key customer differentiator.

We are also implementing tracking capabilities in our machines for continuous performance monitoring, timely services, and increased uptime. Our EquipCare toll-free facility allows customers to report service requirements 24/7 and receive a deadline for service completion. Customers can also provide feedback, which helps us consistently improve response times with technology as a driving force. We are dedicated to continually enhancing our service delivery and adding more value to the after-sales process.

How does your company ensure that your machine is a brand vis-a-vis your competitors in the segment?

L&T offers a whole range of vibratory compactors. The L&T brand enjoys the trust of customers, with L&T serving customers in the Indian construction and mining equipment industry for over 75 years. Over the years, L&T has built the brand name by delivering the best-in-class after-sales support. Initiatives like EquipCare, which tracks the entire service cycle, help deliver a good service experience.

What are the latest technologies in your compaction machine going with the recent trends in the road construction market?

We have the option of fitting the machine with L&T DigiEye, which will relay data remotely on a machine's location and other crucial information. We also have the option to provide Intelligent Compaction Systems on both our Soil (L&T 1190) and Tandem (L&T 990HFi) Compactors. In addition, a Compaction Meter displays the compaction that has been achieved. These technologies will pick up in the near future.

What is your presence in the aftermarket vertical for compaction equipment?

L&T re-entered the compaction market in the year 2016. At present, a population base of 3,500 machines are operating in the field. L&T has experience in refurbishing machines and a well-established used equipment business team that identifies market opportunities. L&T is well poised to enter this market as and when opportunities arise.

With some OEMs entering the rental business, rental companies are feeling the heat. How do you view this concern of the rental companies?

OEMs entering the rental market have done so based on their understanding of the market. Komatsu and L&T, however, operate in the new equipment segment and have no plans of entering this sector. ■

As a part of the Atmanirbhar Bharat Initiative, L&T has launched a new range of CEV-IV emission compliant machinery, including the L&T 1190 Soil Compactor, L&T 990HFi Tandem Compactor, and L&T 2490 HD Pneumatic Tyred Roller, all with high local content.

'THE FUTURE IN ROADBUILDING'



Inspiring live machine demonstrations, technology pavilions, technical seminars, more than 22 machines on display together during Technology Days at the Wirtgen Group, Pune - India manufacturing facility.

The Wirtgen Group hosted over 1200 customers, dealers and business partners- over two days at the mega event – Technology Days at their Pune - India manufacturing facility last month.

The event focused on the theme -'The Future in Roadbuilding' - Smart, Safe, Sustainable - wherein innovative road technologies, including the mobile equipment from Wirtgen, Vögele And Hamm for earth and asphalt construction as well as mineral technologies with Kleemann crushing and screening plants were showcased.

Inspiring live machine demonstrations, technology pavilions, technical seminars, more than 22 machines on display together with an evening event further made the Technology Days an informative and exceptional experience.

In addition to the individual machine exhibits, there were three technology theatres to showcase innovative technologies, technical seminars by the Industry experts and the operations centre where the Wirtgen Group presented digital



solutions for its product brands.

This high level of innovation and performance of the Wirtgen Group machines was further affirmed by an exciting live demonstration of the machines in action demonstrating technologies like Milling, Recycling, paving, compacting, Crushing & Screening solutions as well as digital connectivity. ■

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INDIA CONSTRUCTION INDUSTRY: CURRENT STATUS & TREND ANALYSIS

The Indian construction industry is expected to receive a significant boost in 2023 and account for 13% of India's GDP. This will primarily be supported by a sharp increase in capital expenditure as part of the FY 23/24 Budget. In its latest budget, the government of India has increased its total expenditure by 7.5%, from an estimated expenditure of US\$ 522 billion in the last year to US\$ 561 billion in the current fiscal year.

BRIEF OVERVIEW OF THE INDIA CONSTRUCTION EQUIPMENT MARKET

The global construction equipment market is estimated at US\$ 192 billion in 2021 and is expected to grow at a strong CAGR of more than 5% during the forecast period, driven by growing sales in China, India, and Latin American economies. Urbanization and road construction activities are undoubtedly playing a major

role in the overall picture of the Indian construction equipment market. Moreover, volatility in the real estate and construction equipment market has resulted in demand-supply gaps that hamper the growth of the sector and its trends.

The global construction equipment market is facing regulatory pressure for introducing electric and hybrid construction vehicles over conventional ones. Even though the cost of construction equipment and the heavy loans taken for the acquisition of the same still haunts most of the players in the construction market, renting and leasing of such equipment are slowly catching the eye of the market.

CONSTRUCTION SECTOR TRENDS IN INDIA IN 2023

Emerging trends that have a direct impact on India's construction industry include a rise in the need for green construction to

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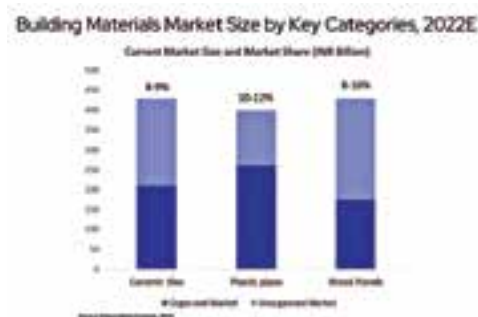
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reduce carbon footprint, B2B e-commerce platforms, bridge seismic devices to improve structure life, building information systems for efficient building management, and the use of cutting-edge technologies. With 10 million new homes required to be built every year to keep pace with housing demand in India, significant opportunities exist with regard to establishing new techniques in climate-responsive construction.

- Inclusion of Robots in Construction Projects and Fields
- Usage of Construction Apps to Maintain Productivity
- Prevalence of Modular Design in the Construction Field – the market is worth more than US\$ 100 billion in 2023
- Consideration of Rented Construction Equipment
- Green Buildings and Sustainable Construction Practices
- Deployment of Building Information Systems (BIS)

BUILDING MATERIALS MARKET IN INDIA

The demand for construction materials to register a growth of nearly 8% during the upcoming years. In 2023, the building material market in India is estimated to touch US\$ 240 Billion in terms of market size. Importantly, the building materials sector registered a growth of 10% in 2022. Building material segments - tiles, plastic pipes, read-mixed concrete, uPVC, wood panels – will grow considerably during 2023-2026, given various demand triggers including India's urbanization drive, rebound in the real estate market, healthy outlook for hospitality and health care sectors, and rising discretionary spends.



Last year was the rebound for the building material industry. The thrust on infrastructure development coupled desire to own real-estate assets helped the India construction industry to drive the demand for construction materials. The building material market in India sprung back and

touched pre-covid levels in the first quarter of 2023.

As we move toward 2024, the construction industry is showing no signs of slowing down rather it is heading toward significant growth. The growth of building material demand is very vital for the overall economy as it contributes nearly 9% to India's GDP employing over 50 million people.

MAJOR DRIVERS AND TRENDS

Increased Government Support to Augment Road Construction: Road infrastructure in the form of a network of national highways, state highways, district roads, rural roads, and urban roads acts as a major mode of transportation and connectivity for the country's diverse population of consumers and businesses.

- There has been an increase in the construction of National Highways (NHs) and roads over time, with 10,457 km of roads constructed in FY22 as compared to 6,061 km in FY16.
- In FY23 (until October 2022), 4,060 km of NHs and roads were constructed, which was around 91% of the achievement in the corresponding period of the previous financial year.
- Total budgetary support for investment in the sector has been increasing rapidly in the last four years and stood at around INR 1.4 lakh crore during FY23.

Digital Transformation in India's Construction Industry and B2B E-commerce Sector:

In the coming years 2023-2026, India's construction industry is expected to register a strong growth of 6.0% CAGR. Increased competition, growing demand from the real estate sector, and labor shortages have led to the need for digital transformation in construction. The construction industry is increasingly adopting a variety of new technologies, including virtual design and visualization. Virtual Reality (VR-based) home tours, cloud-based software, big data algorithms, and smart contracts make the real estate process more tech-savvy and lead to a seamless experience. According to the survey in 2021, 70% of construction companies in India are prioritizing digital transformation

FDI in the Construction Development Sector (townships, housing, built-up infrastructure, and construction development projects) and construction

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with manufacturing facilities in India
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part manufacturers, Oil Companies,
Tyre/Lubricant manufacturers,
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(Annual Turnover of \geq INR 100 Cr.)

AFFILIATE MEMBERS

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Attachments/Accessories
manufacturers, Academia/R&D
Institutions/Consulting firms &
Affiliate associations
(Annual Turnover < INR 100 Cr.)

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(infrastructure) activities stood at US\$ 26.3 billion and US\$ 29.2 billion, respectively, between April 2000 and December 2022.

Cement production (weight: 5.37%) increased by 4.6 % in January 2023 over January 2022. Its cumulative index increased by 10.0 % from April to January 2022-23 over the corresponding period of the previous year.

TIPS FOR SUSTAINABLE AND RIGHT MATERIAL

- Procurement at the Design Stage
- Examine Materials Beyond their Buying Price
- Establishing Contracts with Suppliers of Building Materials
- Adoption of Technology
- Use of Market Intelligence

KEY DEVELOPMENTS IN INDIA CONSTRUCTION MARKET

- In April 2023, Mahindra Lifespace secured Malad West, a suburban Mumbai Society redevelopment deal worth INR 850 Crores.
- In April 2023, Birla Estates acquired a prime land parcel in South Mumbai Malabar hill.
- In April 2023, Alliance Group intended to spend INR 216 billion to build 36 million square feet of residential projects in Southern Market, Bengaluru.
- In April 2023, Real estate developer M3M India is likely to invest INR 7,600 crore in about 10 under-construction projects in NCR, comprising 20 million square feet of space.
- In April 2023, Leading cement maker UltraTech's consolidated sales rose by 12.4% to 105.7 million tons (MT) in FY2022-23,
- In February 2023, the government of India approved a plan to develop affordable rental housing complexes for urban migrants.
- In February 2023, the Indian government announced a budget of INR 2.83 trillion for infrastructure development in the financial year 2022-23.
- In January 2023, L&T Construction secured a contract worth INR 7.97 billion for the construction of a hospital in Mumbai.
- In December 2022, Tata Projects won a contract worth INR 2,689 crore for the construction of a high-speed railway line in Maharashtra.



UJJWAL PARWAL
Director and Founder
RationalStat

- In December 2022, the Ministry of Road Transport and Highways announced a plan to construct 65,000 km of national highways by 2025.
- In November 2022, Reliance Infrastructure won a contract worth INR 2,942 crore for the construction of an elevated road in Mumbai.
- In November 2022, the government of India approved the construction of a new airport in Rajkot, Gujarat, at a cost of INR 1,400 crore.
- In October 2022, the National Highways Authority of India (NHAI) awarded a contract worth INR 2,903 crore for the construction of a highway in Rajasthan.
- In October 2022, the Indian Railways announced a plan to electrify all its broad gauge routes by 2024.
- In September 2022, Shapoorji Pallonji won a contract worth INR 1,727 crore for the construction of a residential complex in Mumbai.
- In September 2022, the Indian government announced a plan to develop 100 airports across the country by 2024.
- In August 2022, the Mumbai Metropolitan Region Development Authority (MMRDA) awarded a contract worth INR 1,101 crore for the construction of a metro line.
- In August 2022, Larsen & Toubro (L&T) won a contract worth INR 1,700 crore for the construction of a water supply project in Karnataka.
- In July 2022, the Indian government approved a plan to develop a new port in Vadhavan, Maharashtra, at a cost of INR 65,544 crore.
- In July 2022, the National Buildings Construction Corporation (NBCC) won a contract worth INR 1,476 crore for the construction of a residential complex in Mumbai.
- In June 2022, the Indian government approved the construction of a new airport in Haryana's Hisar district, at a cost of INR 1,405 crore.
- In June 2022, the National Highways Authority of India (NHAI) awarded a contract worth INR 1,178 crore for the construction of a highway in Uttar Pradesh.
- In May 2022, Reliance Infrastructure won a contract worth INR 2,798 crore for the construction of a metro line in Mumbai. ■



MAKING **INDIA** Atmanirbhar!



The construction equipment's components, accessories and spares market is all set for a renewed growth in future in the light of 'Make in India' Programme and mission motivating construction equipment and component industry to participate in it.

SHIGEKI IWAMA TAKES OVER AS CEO OF HONDA INDIA POWER PRODUCTS LTD.

Honda India Power Products Limited (HIPP), India's leading and best-in-class power product manufacturer, and market leader in the Power Products category for the past 36 years, has announced the appointment



of Shigeki Iwama as its new President, effective from April 1st, 2023. Shigeki Iwama will succeed and uphold Takahiro Ueda's legacy to steer Honda India Power Products in its next phase of growth.

Shigeki Iwama has had an impressive career trajectory during his long-standing journey of close to 20 years with Honda Motor Company, specializing in the power products business. Shigeki

Iwama recently held the position of President at Honda Motor Europe's Central Europe branch (Austria), from 2020 to 2023. During his tenure, he led the entire Central Europe branch, overseeing Sales and Marketing operations in the Power products, Car, Motorcycle, and Spare parts business.

In addition to his role at Honda Motor Europe's Central Europe branch, Shigeki Iwama has an extensive background and commendable expertise in the power products industry. He previously served as Department Manager at Honda Motor Japan and as General Manager of the Power Products Department at Honda South America.

In these positions, he oversaw various aspects of Honda Motor Company, including sales, product planning, strategic growth, and power product domains. His exceptional leadership skills, impressive track record of delivery, and in-depth know-how of the power products industry make Mr. Shigeki Iwama the perfect heady brew as the President at HIPP. Expressing his avidity on this new role, Shigeki Iwama stated, "In terms of demand for power products, India stands at 4th rank in the world demonstrating a huge opportunity driven by a resolute focus on agriculture, construction mechanization, a steady infrastructure boost and impetus to the power & EV sector."

TRELLEBORG INVESTS IN NEW FACILITY FOR SEALING SOLUTIONS IN INDIA

Trelleborg Group has decided to invest in a completely new production facility for sealing solutions in India. It will replace existing facilities that will soon reach their full capacity. The Indian market is showing continued strong growth and the investment is part of Trelleborg's strategy to strengthen positions in attractive and profitable industries and geographic areas.

"India is one of the world's largest markets. We have had a presence in India for over 40 years, the sales

trend has been very strong over the past ten years, and we now generate annual sales of about SEK 600 M in the country. Our high-performing seals are sold to a range of industries including aerospace and healthcare & medical, as well as renewable energy and several industrial niches. The new production facility for seals will increase production capacity by more than 60 percent compared with our current facilities," says Peter Nilsson, President and CEO of Trelleborg Group.

ALLISON TRANSMISSION PARTNERS WITH SANY TO EXPAND PRESENCE IN GLOBAL WIDE BODY MINING DUMP TRUCK MARKET

Allison Transmission is pleased to announce it has expanded its partnership with SANY, a global heavy equipment manufacturer for the mining and construction markets, by signing a Letter of Intent to supply the Allison 4000 Series™ transmission for SANY's SKT105 96-ton wide body mining dump



(WBMD) truck for the India market. SANY is the first OEM to manufacture WBMD trucks outside of China. Allison's

recent growth in the WBMD application represents an opportunity of \$100 million in annual revenue.

"Allison's partnership with SANY has reached a new milestone with this expansion into a new geographic market for our purpose-built transmission for mining applications," said Kartik Ramanan, Executive Director, Global Off-Highway, Customer Support and Service Engineering.

APC 3100 MOBILE: FAST AND VIGOROUS

B&R has added a full-scale PC for mobile machinery to its portfolio. The powerful PC for mobile machinery is equipped with an Intel Core i processor and offers IP69K protection for deployment in harsh environments. Its high performance makes it optimally suited for smart machines that communicate with each other faster. Automation PC 3100 mobile product can withstand in harsh weather and



is Windows 10 IoT Enterprise 2019 enabled with Multilingual - MPC3100 Kaby Lake (UEFI boot). Option boards for the APC mobile add interfaces for connecting external I/Os like CAN or POWERLINK. Expansion options can also be used to connect external displays. Automation Runtime embedded turns the APC mobile into a high-performance real-time capable controller. B&R Hypervisor makes it possible to run multiple operating systems in parallel on the same controller.

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KOHLER EXPANDS KD SERIES

Kohler is expanding its KD Series line of industrial diesel generators with two new units designed for 60 Hz markets. The KD700 and KD750 add to the smaller end of the KD range, which now covers 20 power nodes from 700 to 4000 kW. The new machines are EPA Tier 2 certified for stationary emergency service and target mission critical applications such as airports, healthcare facilities, water treatment plants and mid-sized data centers.

"Expanding our line of KD engines is part of our overall strategy," said Justin Loritz, product manager – Large Diesel at Kohler. "And this project allows us to expand the range of these engines while offering a competitive product and driving a significant reduction in product footprint and fuel consumption."

Both generator sets are powered by a



Kohler-branded KD18L06 diesel engine with bore and stroke dimensions of 148 x 174mm for an overall displacement of 17.96 L. The inline six-cylinder engine is turbocharged and charge-air cooled and delivers a maximum output of 1053 bhp at 1800 rpm for the KD700 and 1100 bhp at 1800 rpm for the KD750.

"The design and engineering specification of this engine is driven by the Kohler team and these engines will be built exclusively into Kohler generator applications," Loritz said.

DEMAND FOR BATTERY PACK TECH INCREASES

Advanced battery systems for non-road mobile machinery applications company Xerotech plans to hire over 100 new employees to meet the growing demand for its configurable battery pack technology.

The company, based in Ireland, produces high-performance battery solutions for a wide range of applications, from mining and construction equipment to marine and aviation vehicles.



Irish Taoiseach, the head of the Irish government, Leo Varadkar, commented that, "Xerotech is one of the most innovative and interesting Irish companies I have engaged with. Batteries are going to be a big part of our post-fossil fuels future and it's extra-ordinary how advanced these technologies now are. It's great that it's happening in the West of Ireland."

The new roles include various technical and support roles, including engineering, production, sales and marketing, research and development, quality assurance, machine build and design, supply chain, and testing. The company is looking to fill all positions before the end of next year.

"We are excited to be expanding our team as we continue to develop new and innovative solutions for our customers," said Dr. Barry Flannery, CEO of Xerotech. "Our battery systems are helping to drive the transition to a cleaner, more sustainable future, and we are looking for talented and passionate individuals to join us in this mission."

KUBOTA OPENS NEW DISTRIBUTION CENTRE

Kubota, alongside its partner Broekman Logistics, has opened a new 62,000 m² distribution centre in Weert, the Netherlands. Officially opened by a delegation from Kubota and Broekman Logistics on April 14, the warehouse features an optimised layout of logistics and assembly operations, which the company's say will shorten lead times and facilitate future growth for Kubota.

The storage, final assembly and outbound logistics aspects of the facility will be managed by Broekman Logistics, who will also handle the Complete Knocked Down (CKD) of production parts from Weert to Kubota's production plant in Zweibrücken (D).

Toshitaka Matsuo, president of Kubota Baumaschinen, said, "The

move to the new distribution centre in Weert is a big step forward for Kubota and symbolises our partnership with Broekman Logistics.

"This expansion represents a significant investment of business activities and will not only help us further improve our current range of services, but also increase the satisfaction of dealers, distributors and ultimately, end customers."

The opening of the warehouse is the latest collaboration between Kubota and Broekman Logistics, which initially started in 2006. Since then the respective companies have shared centres in both Born and Sittard, before the decision was made in 2019 to develop the new location in Weert.

NEW TWO-BRAID HOSES FROM DANFOSS

Danfoss Power Solutions has launched new Aeroquip and Weatherhead hoses for engine, fuel and hydraulic applications in mobile equipment. Designed to exceed SAE 100R5 performance levels, the Aeroquip by Danfoss FC250H and Weatherhead

by Danfoss H250H hoses are two-braid hoses designed to be lighter and more flexible than typical three-braid 100R5 hoses, enabling easier hose routing and reducing application weight.

The FC250H and H250H hoses have working pressures to 2050 psi (141 bar)

and are tested to 300,000 impulse cycles, surpassing SAE 100R5 performance levels. Danfoss said the hoses weigh 20% less than conventional three-braid hoses, decreasing the overall vehicle weight and delivering fuel consumption savings over the life of the machine.

EARTH MOVING EQUIPMENT



Backhoe Loader



Wheel Loader



Hydraulic Excavator

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Wheeled Crusher



Tracked Crusher



Static Crusher



Screeners



Compactor



Motor Grader



Hot Mix Plant



Wheeled Paver

MATERIAL HANDLING EQUIPMENT

Tower Crane



Aerial Lift Platform



Telehandler



Skid Steer Loader



Hydraulic Mobile Crane

MINING EQUIPMENT



Crawler Dozer



Dump Truck



Boring Equipment



Compressor

REAL ESTATE EQUIPMENT



Batching Plant



Transit Mixer



Self Loading Mixer



Concrete Pump

ABOUT IESC

The Infrastructure Equipment Skill Council (IESC) is a 'Not for Profit' sustainable organization promoted by the Indian Construction Equipment Manufacturers Association (ICEMA) and supported by the Confederation of Indian Industry (CII) and funded by National Skill Development Corporation (NSDC) under the Ministry of Skill Development and Entrepreneurship, Govt of India to spearhead the skilling of workforce in the Infrastructure Equipment Sector with primary focus on training and certification of Operators and Mechanics.

The council is governed by 19-member Governing Body from various segments of the Industry along with the representative from Department of Heavy Industries, Academia and National Skill Development Corporation.



MISSION

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CONTACT

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Avalahalli Extension. Phone : 080 26754480
Girinagar, Bengaluru 560026
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MAKING INDIA Atmanirbhar!

The construction equipment's components, accessories and spares market is all set for a renewed growth in future in the light of 'Make in India' Programme.

Equipment Times looks at the 'Make in India' programme and mission motivating construction equipment and component industry to participate in it, views on making India as a global construction equipment and component manufacturing hub, future strategies at a time when technological disruptions are rapidly defining businesses in the sector, challenges in the sector.

The Indian manufacturing industry generated 16-17 percent of India's GDP pre-pandemic and is projected to be one of the fastest growing sectors. The machine tool industry was literally the nuts and bolts of the manufacturing industry in India. Today, technology has stimulated innovation with digital transformation a key aspect in gaining an edge in this highly competitive market.

In the sphere of manufacturing, India has traditionally been focused on domestic production and consumption. Challenges included a price conscious market, underdeveloped infrastructure and supply chains, and a leaning towards labor intensive processes owing to the availability of low-cost labor and technology being expensive.

Both the Government of India and Indian companies recognize the need to move forward to the next and latest phase of industry. The National Manufacturing Policy of the Government of India aims to increase the share of manufacturing in GDP to 25 percent by 2025.

The "Make in India" policy of the Government of India is expected to increase the demand and consumption for machinery and equipment by the local manufacturing industry.

To be implemented from 2022, the Production-linked incentive (PLI) scheme was launched by the Government of India to develop 13 sectors on par with global manufacturing standards. The gap in demand and supply has spurred the requirement for increased capacities and the Indian manufacturing sector is expected to offer several opportunities for investment and

trade. There is also a gradual shift in the focus of Indian industry to more automated and process driven manufacturing. Companies previously dependent on labor intensive practices are now looking towards increased automation to minimize uncertainties and maximize productivity.

The components, accessories and spares market is all set for a renewed growth in future in the light of increased construction activities. A look at some of the key products, their importance in the equipment functions and the market trends...

Infrastructure sector including construction, mining and material handling segments continues to grow in India for the past few years with a host of positive measures from the government resulting in creation of more infrastructure projects.

DIESEL ENGINES

Diesel engines are the major source of power for various machines which are utilised in construction, agricultural, automobile and industrial verticals.

Emission is the most important factor considered when we talk about diesel engines. Major manufacturers have taken adequate steps to design engines according to the set emission norms and continue to update according to the revision in the norms from time to time. Engine design evolved drastically due to change in emission standards, fuel efficiency demand, heavy load cycles and more compact design requirements of application from customers.

LUBRICANTS

Lubricants play a vital role in increasing equipment productivity and reducing total cost of ownership by reducing downtime and increasing efficiency. High performance lubricants are required to meet the demands of machines working in extreme conditions. Lubricants play the role of blood in machinery, by working on aspects like long drain interval oils, reducing downtime and increasing equipment life. This in turn has a positive impact on productivity, equipment availability, spares and consumables cost, manpower cost etc.

LEADERS SPEAK...

Sanjay Koul, Managing Director, Timken, said, "Devised to transform India into a global design and manufacturing hub, 'Make in India' has become a timely response to a critical



SANJAY KOUL
Managing Director,
Timken

situation. By 2013, the much-hyped emerging markets bubble had burst, and India's growth rate had fallen to its lowest level in a decade. 'Make in India' has proven to be a powerful, galvanizing call to action for Indian citizens and business leaders, as well as an invitation to potential partners and investors all around the world. In this regard, 'Make in India' represents a comprehensive and unprecedented overhaul of outdated processes and policies."

Hemant Mohindra, Managing Director, Rossi Gearmotors (India), said, "Government initiative is extremely important in pushing the



HEMANT MOHINDRA
Managing Director,
Rossi Gearmotors (India)

growth and India is reaping the reward of this government's strong commitment to business growth. Rossi India expects a growth of 35% in the year 2023. The main reason for this is our strong product line up and also our technical strength. We are entering into new markets like Power, that are contributing to Industrial growth in a big way and our products are very suitable for these markets."



HIMANSHU SHARMA
Marketing and Corporate
Communication
B&R Automation

Himanshu Sharma – Head – Marketing and Corporate Communications, B&R Automation, said, "B&R has been a pioneer of automation products and solutions globally. In India, we have successfully completed 25 years of supporting our business partners and maintaining a sustainable approach toward business growth with innovative products and solutions for Indian manufacturers."



SUDEESH K.
Managing Director
India & Vice President
OE, Rest of Asia,
Mann+Hummel Filter

Sudeesh K., Managing Director India & Vice President OE, Rest of Asia, Mann+Hummel, said, "The Indian government's 'Make in India' program is aimed at promoting the manufacturing industry in India and encouraging foreign companies to invest in the country. The program is designed to make India a global manufacturing hub, by providing various incentives and support to companies that choose to manufacture their products in India."



AMIT DEOKULE
Director- Sales &
Marketing, Nord
Drivesystems

Amit Deokule, Director- Sales & Marketing, Nord Drivesystems, said, "Make in India is a major national programme of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector."

**MANISH BHATNAGAR**

Managing Director,
SKF India

Manish Bhatnagar, Managing Director, SKF India, said, "India's construction equipment industry has been experiencing steady growth over the past few years, driven by a surge in infrastructure development projects, urbanization, and government initiatives. Specifically, the 'Make-in-India' initiative has led to an increased pace of digitalization, and adoption of new technologies as well as modern manufacturing processes. Furthermore, the initiative has encouraged the industry to increase R&D investments and create a robust supply chain by development of ancillary industries."

**SANJAY AGARWAL**

Director, Filtrec Bharat
Manufacturing

Sanjay Agarwal, Director, Filtrec Bharat Manufacturing, said, "The Make in India program can motivate the industry to participate through a favorable policy environment, investment opportunities, enhanced competitiveness, localization and self-sufficiency, skill development, and global exposure. These factors can incentivize the industry to actively engage in the program and contribute to the growth and development of domestic manufacturing. Overall, the Make in India program can help the construction equipment sector and its allied industries improve their technological status and competitiveness in the global market through technology transfer, R&D incentives, skill development, infrastructural development, export promotion, and localization of manufacturing."

Rohet Sareen, Head, Product and Business Development, Cognecto, said, "The

**ROHET SAREEN**

Head, Product and
Business Development,
Cognecto

construction equipment sector is one of the key areas where the 'Make in India' programme has been successful. The government has taken several initiatives to promote the manufacture of construction equipment and allied industries in India. This has led to an increase in the participation of domestic and international players in the construction equipment sector. It has given the industry confidence in trying to enter the manufacturing field rather than blindly importing components."

**VASIM PRADHAN**

Head Sales - India &
International Business,
Ashar Locker (India)

Vasim Pradhan, Head Sales - India & International Business, Ashar Locker (India), said, "We at Ashar Locker have always believed in "Made in India & Made for the world". Our major export markets are Australia, New Zealand, UAE, Oman, Africa & South East Asia and we have been supplying to all our markets from India over the past two decades. The 'Make in India' program is a great initiative by the government to promote local manufacturing and make India a factory for the world. Today India is looked upon as an alternative to China for manufacturing and we are witnessing a global shift towards India for their manufacturing needs."

**RAJIV PODDAR**

Joint Managing Director,
Balkrishna Industries

Rajiv Poddar, Joint Managing Director, Balkrishna Industries, said, "The Indian economy is driven by the construction/infrastructure sector. This sector is a key driver of India's overall economic development. The government has a strong focus on it and encourages policies that will ensure the creation of world-class infrastructure within a time frame. The Indian CE industry, being the 3rd largest market in the world, has shown remarkable progress over the years and poise to become the 2nd largest CE market in the world." ■

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'Make in India' has turned the Indian market into a global playground for manufacturers and service providers from across the world.

SANJAY KOUL

Managing Director, Timken

How do you see the government's 'Make in India' program & mission motivating industry to participate in it? How is this helping the construction equipment and its allied sector to improve its technological status and competitiveness in the global market?

The Indian government has taken several measures to strengthen the 'Make in India' initiative including liberalizing guidelines and regulations to reduce unnecessary compliance burdens, bringing down costs, enhancing the ease of doing business in India and making amendments to existing laws.

Devised to transform India into a global design and manufacturing hub, 'Make in India' has become a timely response to a critical situation. By 2013, the much-hyped emerging markets bubble had burst, and India's growth rate had fallen to its lowest level in a decade. 'Make in India' has proven to be a powerful, galvanizing call to action for Indian citizens and business leaders, as well as an invitation to potential partners and investors all around the world. In this regard, 'Make in India' represents a comprehensive and unprecedented overhaul of outdated processes and policies.

A major focus area for the 'Make in India' campaign is infrastructure development. Construction of roads, highways, bridges and other such projects has reached an all-time high, resulting in a steep rise in demand for construction equipment. This poses a great opportunity for equipment manufacturers as well as the allied industries. Ease of doing business also creates opportunities for global players to enter the Indian market and introduce technologies not previously

available in the country. 'Make in India' has turned the Indian market into a global playground for manufacturers and service providers from across the world.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

The government intends to solidify its 'Make in India' foundation to energize manufacturing and increase its contribution to the country's GDP. Generally, the bearing market is healthy, with rising commodity prices. The demand from core industrial sectors like infrastructure, steel, power and mining is expected to stay robust over the next few years. Moreover, the growing interest of companies in further exploring the rural markets is aiding the growth of the automotive sector. The rising logistics and passenger transportation industries are driving up demand for commercial vehicles. Current trends, including the electrification of vehicles, particularly three-wheelers and small passenger automobiles, are expected to fuel future market growth. Based on the present sentiments in the market, Timken India is expected to grow even stronger than it has in recent years.

What are your views on making India as a global construction equipment manufacturing hub?

The Indian construction equipment (CE) industry boasts a large presence of global original equipment manufacturers (OEMs) alongside domestic players, which has led to an enhanced focus on R&D and innovation in the sector. The state-of-the-art manufacturing technologies being used by CE OEMs in

Set up in 2008, the Timken plant in Chennai is a world-class facility that manufactures and exports large-bore bearings and advanced products such as matched bearing assemblies.



India are on par with the rest of the world. Furthermore, it is important to note that domestically manufactured equipment is being exported to major markets across the globe, including the European Union, United Kingdom and United States. This implies that Indian construction equipment meets global quality standards and is well-accepted in advanced markets worldwide. This is a clear indication that India has the potential to become a global hub for exports of construction equipment.

It is also essential to develop a robust supply-chain ecosystem to eliminate supply-chain disruptions, increase localization levels and ensure world-class quality standards at an optimal cost of procurement and operation.

The Indian CE Industry has taken several initiatives to indigenize its products. Almost 90% of CE products by volume are more than 50% indigenized already. However, the industry remains challenged by its high dependence on the import of precision components, hydraulics, undercarriages and electricals/electronics. Approximately 25-40% of components (by value) are imported from component manufacturers based in Korea and Japan. Investment in vital technologies, therefore, needs to be incentivized under the government's Atmanirbhar Bharat (self-reliant India) initiative through efforts such as the Production Linked Incentive (PLI) to help the CE Industry realize its vision for 2030 and make India a manufacturing and export hub for CE.

Tell us on your export market in the bearings sector & important initiatives to cater to the requirement of international market?

In 2020-21, our export share was

24%, and it increased to 29% in 2021-22. As a technology leader in anti-friction bearings, Timken continues to enhance its capabilities and expertise in material science, surface engineering and tribology, helping us address emerging technical trends. Timken has a global pool of engineering experts who work closely with customers to develop bearings and industrial motion products to solve their most challenging applications. Timken is known for providing the most technologically advanced and highest-quality products to provide its customer maximum up-time.

Set up in 2008, the Timken plant in Chennai is a world-class facility that manufactures and exports large-bore bearings and advanced products such as matched bearing assemblies. It is focused on engineering products for demanding applications in global and emerging markets.

CE manufacturers are now under pressure to manufacture machines which are not only cost effective, but also comply with the emission norms. What are your views on it?

The new emission standards in the construction industry will lift exports to more developed markets such as Europe and North America from India when they are implemented. Theoretically, we can do exports today, but matching the production from domestic to export in more mature markets will create an additional opportunity and reduce costs by making processes more efficient. India is poised to become one of the key export hubs due to reforms in emission and safety standards for equipment manufactured in India. ■

The government intends to solidify its 'Make in India' foundation to energize manufacturing and increase its contribution to the country's GDP.



The 'Make In India' program has led to the creation of a more conducive business environment in India,

HEMANT MOHINDRA

Managing Director, Rossi Gearmotors (India)

How do you see the government's 'Make in India' program and mission motivating industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

The Make in India program is an initiative launched by the Indian government in 2014 with the aim of promoting manufacturing and investment in India. The program seeks to transform India into a global manufacturing hub by facilitating investment, fostering innovation, and enhancing the skills of the Indian workforce. Since its launch, there is estimated USD 180 billion in foreign direct investment (FDI), with a significant portion of the FDI directed towards the manufacturing sector.

The program has also led to the creation of a more conducive business environment in India, with the government implementing a series of reforms to simplify regulations, reduce bureaucratic red tape, and improve infrastructure. The introduction of the Goods and Services Tax (GST) and the establishment of the National Investment and Infrastructure Fund (NIIF) are examples of these reforms.

With FDI, comes growth, competitiveness and technological improvements in the markets, which has

helped the construction industry along with overall industrial growth.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

Government initiative is extremely important in pushing the growth and India is reaping the reward of this government's strong commitment to business growth.

Rossi India expects a growth of 35% in the year 2023. The main reason for this is our strong product line up and also our technical strength. We are entering into new markets like Power, that are contributing to Industrial growth in a big way and our products are very suitable for these markets. We are very confident of our growth and therefore, we have been investing in the company since last 4 years. We are taking steps to increase the plant capacity with a lot of focus on Environment, Health and Safety. In short, its Productivity with Responsibility. With these initiatives, we expect to grow at minimum 18-20% CAGR till 2028

What are your views on making India as a global construction equipment manufacturing hub?

India has the potential to become a global construction equipment manufacturing hub. The country has a growing manufacturing sector, a large pool of skilled and semi-skilled labour, and a favourable investment climate. Additionally, the Indian government has launched several initiatives such as the Make in India campaign to promote domestic manufacturing and attract foreign investment.

To further develop India as a global CE manufacturing hub, the government and industry need to work together to address key challenges such as improving infrastructure, reducing the cost of finance, and increasing the availability of skilled manpower.



Several leading global construction equipment manufacturers have already established manufacturing facilities in India and focus is even more on India after the pandemic. Apart from many global players, India has also seen the emergence of several domestic manufacturers that have gained a significant market share in India and are now expanding globally.

To further develop India as a global construction equipment manufacturing hub, the government and industry need to work together to address key challenges such as improving infrastructure, reducing the cost of finance, and increasing the availability of skilled manpower. Additionally, there is a need to focus on research and development to produce innovative and technologically advanced equipment that can compete with global counterparts.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

We are in new India where the customers pay for quality. Whole world has become one business park due to better technology transfer, upskilling of global workforce, ease of communication etc. In fact the Technological disruptions are good for the industry as it helps in improving the machines and offerings. The way to embrace these disruptions are by embracing digitalization, investments in trainings, going for modular construction, prioritize offering sustainable solutions and collaborate with new age technology companies. Another way is to launch new products that suit the changing industry needs and this is what exactly Rossi has been doing to stay relevant in business

Manufacturers are now under pressure to manufacture machines and components which are not only cost effective, but also comply with the emission norms. What are your views on it?

Being cost effective is good but too much focus on cost that puts lot of pressure on the businesses and most of the companies have understood this.

Apart from cost there are many more factors that drive the business today. Some of them are:

- Socially Responsible Business practices



like higher efficiency products to reduce carbon footprint, ensuring ethical supply chains, and investing in their employees' well-being

- Technology Advancements
- Better access to information
- Globalization for opening up new markets for businesses to expand their operations and reach more customers
- Encourage Entrepreneurship creates more diverse and dynamic business landscape, and it has enabled more people to pursue their passions and create meaningful work for themselves and others.

Overall, these trends are contributing to a more sustainable, innovative, and socially responsible business environment, which is creating new opportunities for businesses to grow and succeed.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

The main challenge that we currently have is the insufficient capacity but that will be resolved in a couple of months. Another challenge is to cater to volume market which is mainly light duty. Rossi is known globally about its presence in medium and heavy duty markets but now, with the launch of new product series and upgrading the existing products, we are trying to penetrate into this market. We are confident about our success in light duty market also in a couple of years through localization. However, the focus will still be on value creation for customers and not solely on cost.v

The country has a growing manufacturing sector, a large pool of skilled and semi-skilled labour, and a favourable investment climate.



Indian equipment manufacturers are evolving each year with implementing new strategies and wiring the market gap, their vision is focused.

HIMANSHU SHARMA

Head – Marketing and Corporate Communications, B&R Automation

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

The macroeconomic growth of the country comes majorly from the business sectors related to manufacturing and urbanisation activities which provide high yield. Make in India program laid down by the government of India is to boost the confidence of investors and manufacturers to build and invest in India.

Our country has a large population and a large market that is consumer-driven, and the expectancy of modern construction solutions, especially in developing areas, is on the rise. When there is a huge market with well-established logistics uprooting for rapid growth, 'Make in India' program can benefit the equipment manufacturers largely. The more are demands for modern techniques and solution, the manufacturers imply more of innovative solution to achieve remarkable results and at the same time benefitting the consumer demands. Thus, with manufacturing contributing the major to country's growth, the initiatives by the government will make the manufacturers become 'Self-reliant' and help create entrepreneurship spirit among Indian manufacturers to adopt to new technologies and produce sustainable products in the country for the global market.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

B&R has been a pioneer of automation products and solutions globally. In India, we have successfully completed 25 years of supporting our business partners and maintaining a sustainable approach toward business growth with innovative products and solutions for Indian manufacturers. We put all our knowledge and creativity into developing products like X90 for the construction industry that become trendsetting innovations and provide value to our customers. At B&R, this means offering our Indian customers a complete automation solution that provides maximum flexibility, high performance, and value for money. In years to come, meeting our customer's needs as per market demands and sustainable approach towards everything we do as a company will be our prime focus. B&R believes in uplifting and providing the perfect solution to the needs of the customers, and we will continue to provide innovative products that will help create an impact in the construction market.

What are your views on making India as a global construction equipment manufacturing hub?

Indian equipment manufacturers are evolving each year with implementing new strategies and wiring the market gap, their vision is focused. Construction equipment industry is the most dynamic and competitive industry. Our country can become a global construction equipment hub with Government support

B&R is a member of the ABB Group and has production facilities at the global center for machine and factory automation based in Eggelsberg (Upper Austria).

and the distribution of various schemes for implementing technology. Here, technology is the prime catalyst to enhance the construction market. B&R being a technology leader in the market to help the construction industry become globally competitive and has introduced a new mobile automation PC. It is a combination of performance and robust form factor to handle the increasing demands of modern construction equipment applications. Higher efficiency goals in construction applications mean more data to be collected and managed from multiple machines. The Automation PC mobile 3100 is the newest addition to the B&R family of products, which is designed for just those demands.

Tell us about B&R Automation in terms of manufacturing facilities, capacity, products manufactured, end-user industries served etc.

B&R is a member of the ABB Group and has production facilities at the global center for machine and factory automation based in Eggelsberg (Upper Austria). Now that the global supply chain is coming back on track, B&R wants to meet the high customer demand for automation solutions as quickly as possible. The production is now already being significantly expanded at our manufacturing base to meet the existing global demands. In India, we are present with sales offices at 7 prominent cities and Warehouse in Chakan-Pune. We have also expanded our warehousing to 4000 sq-mt with world class facilities and enhanced our training facility for our customers with a view that innovations around machine and factory automation will play an essential role in unlocking the potential of future industrial processes in all industry sectors like construction, food and beverage,

pharma, packaging, automobile, and agriculture.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

The market in last 2-3 years has witnessed some of the challenges that was never thought of, yet it has been running and resulting in exponential growth. All of these was possible because each one of us stood by each other striving hard to ease all uncertainties. One should always look ahead setting our sights on future



and invest our knowledge and expertise in developing products that provides value to the industry. This inspiration and vision will further ease every concern. At B&R, this means offering our customers a complete range of automation products and technology solution that provides maximum flexibility and economic efficiency to keep our customers ahead in the game. From customized products to large-scale series production and trendsetting innovations, meeting our customers' needs is our focus. ■

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SUDEESH K.

Managing Director India & Vice President OE, Rest of Asia, MANN + HUMMEL

How do you see the government's 'Make in India' program and mission motivating industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

The Indian government's 'Make in India' program is aimed at promoting the manufacturing industry in India and encouraging foreign companies to invest in the country. The program is designed to make India a global manufacturing hub, by providing various incentives and support to companies that choose to manufacture their products in India. The program has certainly motivated the industry to participate in it, and there has been a significant increase in foreign investment in India's manufacturing sector in recent years. This has resulted in the development of new and innovative products, which have helped to improve the competitiveness of Indian construction equipment companies in the global market.

The significance of this cannot be overstated for our strategy, as the rise in demand for innovative products and technical specifications has bolstered Mann + Hummel's market penetration being the leader in the worldwide filtration industry, regardless of whether they are for traditional or any new energy drives in various sectors and markets.

What are your views on making India as a global construction equipment manufacturing hub?

The availability of skilled labor, cost-competitive manufacturing, and a large domestic market are some of

the key advantages that India has in the construction equipment manufacturing industry. Our OE customers and end users rely on our expertise and experience in the field of filtration technology for many decades. By securing the best protection possible of their engines and machinery we take care of one of their major concerns.

Growing demand for genuine and high-quality parts mainly driven by the enhanced awareness about obvious advantages in the power and delivery performance of the engines or vehicles by active maintenance of filters and other accessories. Strong dust holding capacity and filtering efficiency provide maximum protection to the vehicle from harmful contaminants are key driving factors. Genuine OES filters maximize vehicle performance and increase flow of clean air into the engine, resulting in high power and reduction in fuel consumption of the vehicle. These are exceptionally important considering the extreme operation conditions and cost of ownership concerns from Indian subcontinent. We are experiencing a steady growth in market during recent years against counterfeit parts.

Our technologically advanced products are equipped with copy protection measures to safeguard against low-quality imitations ensuring protection and extended life of engines and machines. Additionally, we offer OES parts that can be accessed globally, allowing us to serve various OEMs across different regions.

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

We have been setting standards for 80 years and this is what we will

Growing demand for genuine and highquality parts mainly driven by the enhanced awareness about obvious advantages in the power and delivery performance of the engines or vehicles by active maintenance of filters and other accessories.



continue to do. For example, with our new WAVELOCK bayonet lock. Spin-on oil filters from MANN+HUMMEL have been proven for years and offer optimum protection. However, the filter change of conventional spin-on filters is power-

consuming and only possible with a strap wrench or a comparable special tool. The bayonet lock developed by MANN+HUMMEL for the mounting of spin-on filters sets new standards for easy servicing and reduction of service costs. Patented bayonet connection as interface between spin-on filter and filter head enables copy protection and prevents the use of inferior filters with increased operational reliability due to radial seals to the environment and between the dirty and clean sides of the filter.

Another example to mention here, is the MANN+HUMMEL self-cleaning air filter ENTARON XR with Impulse Cleaning Technology. This technology targeting the agriculture and construction machines with extreme dust load and continuous or high period of use like underground mining, mining dump trucks, tractors and military applications. The ENTARON XR removes the need for machine operators to carry out this elaborate and



time-consuming work. This is because the MANN+HUMMEL air cleaner cleans itself. Unplanned or preventive manual cleaning is no longer necessary, and users are not exposed to harmful dust particles. Machine operators benefit from this while the owners of agricultural and construction machinery also take advantage from lower

maintenance costs, the extended service life of the filter, and the longer operating life of the innovative air cleaner.

What are your investments made in the Indian market in terms of manufacturing facility, distribution network and other aspects?

MANN+HUMMEL offers a full product portfolio for our local and global customer base. Being able to fulfill all our customer's needs and demands has been and will be one of the key drivers for continuous success. MANN+HUMMEL has the strategic approach to fulfil demands for regional/local markets. We are leveraging the benefits of centralized manufacturing hubs as well as local investments to be competitive in this market. Significant amount of localisation for various portfolio products being done already in various segments and many more are in focus for example, the construction segment, farming, industrial, on-road and off-road segments etc. Expansion projects for manufacturing plants and warehouse facilities also in pipeline alongside the growth curve expected in India.

We see different trends that are in demand at the same time and are becoming increasingly important:

- Increasing filtration efficiencies and longer service intervals to increase protection and reduce downtime: We serve that demand by for example using new synthetic and glass fiber filter media
- Reliable water separation to protect fuel injection systems; our innovative 3 stage separation technology is the best solution
- Easy and clean service solutions; by our Wavelock with patented bayonet locking mechanism
- Digitalization: e.g. constant filter monitoring for demand driven service
- Module technology: functional integration from simple spin-on filters to liquid filter modules
- Filtration solutions for new energy drive trains like BEV, FCV and H2 ICEs

Sametime as a global filtration expert we do have a solution for all of these new demands and many more customization possible for local requirements thanks to our established world class R&D Centre in Bangalore alongside our state-of-the-art production facilities in Tumkur (Karnataka) and Bawal (Haryana) ■

The availability of skilled labor, cost-competitive manufacturing, and a large domestic market are some of the key advantages that India has in the construction equipment manufacturing industry.



The primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector.

AMIT DEOKULE

Director- Sales & Marketing, Nord Drivesystems

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment and its allied sector to improve its technological status and competitiveness in the global market?

Make in India is a major national programme of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

In continuation for the market growth, we also see a double-digit growth in Indian market. We at NORD are focusing on new sector developments and also with our new Maxxdrive assembly started in India, it giving us opportunity to enter new applications and sectors.

Tell us on your export market in the gear motors sector and important initiatives to cater to the requirement of international market?

From India subsidiary, we handle Bangladesh, Nepal, Srilanka & Bhutan countries via our channel partners. Bangladesh is good market as far as direct



purchase plus via OEMs is concerned whereas Nepal is more from India based OEMs for us. However, we offer good technical & after sales support in these countries if required by customers as our partners are trained accordingly.

Give us an understanding of your company's performance in the last 3 years?

Post pandemic, we are growing continuously in double digits as far as sales nos. are concerned. We have also geared ourselves up to support increasing demand from Indian market. In NORD taking investments further in products, people as well as in capacities we are prepared to support our customers for on time support & deliveries

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

There are different challenges in different sectors & requirements. Important is we understand market demands & customer requirements more and prepare ourselves to fulfil the same. Campaigns like Make in India are also helping the Indian economy to grow. ■



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This year marks the 100th anniversary milestone for SKF in India.

MANISH BHATNAGAR

Managing Director, SKF India

How do you see the government's 'Make in India' program and mission motivating industry to participate in it? How is this helping the construction equipment and its allied sector to improve its technological status and competitiveness in the global market?

Since its launch, the 'Make-in-India' initiative has been instrumental in creating a strong impact in the form of improved business environment and economic growth. To provide greater momentum to the initiative, the Indian Government has taken several steps to create an enabling environment including policy reforms, inviting FDIs and encouraging participation from domestic industry. Several sectors such as Defence, Railways, and Aerospace, have hugely benefitted from the initiative leading to increased industrial development as well as exports.

India's construction equipment industry has been experiencing steady growth over the past few years, driven by a surge in infrastructure development projects, urbanization, and government initiatives. Specifically, the 'Make-in-India' initiative has led to an increased pace of digitalization, and adoption of new technologies as well as modern manufacturing processes. Furthermore, the initiative has encouraged the industry to increase R&D investments

and create a robust supply chain by development of ancillary industries. Despite some challenges such as high import duties, the construction equipment industry in India is poised for growth and has the potential to become quite competitive with its global peers.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

We are proud to share that this year marks the 100th anniversary milestone for SKF in India. Since inception, we have played a decisive role in shaping industries and societies with our products and solutions. By leveraging our domestic manufacturing footprint, product, and industry knowledge along with high-performing and diversified talent pool, we have been able to meet the evolving needs of our customers and grow our share of business. We take great pride in the long-term value we have created for our stakeholders over the past years by focusing on quality, innovation, and leadership while also investing in our communities and providing opportunities for growth.

Looking ahead, we are confident about our growth prospects. We remain committed towards accelerating our intelligent and clean growth strategy. By focusing on high-growth segments, localized solutions, and customer-centric innovation, we will continue to create significant value for our customers. In addition, our focus on new product development, digitalization of the full value chain, e-commerce, expansion of the distributor network and leveraging highly skilled talent base, coupled with government's supportive policies positions



us well to capture emerging opportunities in the country in the years to come.

What are your views on making India as a global construction equipment manufacturing hub?

In the recent past, the CE industry have taken several technology upgradations to boost productivity. By developing strong R&D base and customer-led innovation, companies have been able to improve product quality and manufacturing processes and reduce the time to market. As a result, the country has been able to grow its exports and position as a global hub for manufacturing. By further ramping up manufacturing and technological capabilities, accelerating the adoption of industry 4.0, upskilling the workforce, investing in advanced technologies, and building local supplier network, the domestic CE industry can drive future competitiveness. However, there are also challenges such as lack of infrastructure that need to be addressed to realize this potential.

Give us an understanding of your company's performance in the last 3 years?

We have faced numerous headwinds in the past three years, including supply chains bottlenecks, and concerns related to inflation and economic uncertainty. However, we have been able to navigate these challenges successfully due to robust cash flow momentum and capital discipline, timely pricing actions, and operational efficiencies. The government initiatives and favourable policies have played an equally important role.

Over the last three years, our revenue and Profit Before Tax (PBT) have consistently improved. In Q3FY23, our revenue increased 11% and PBT increased by 46% year-over-year. We continue to execute our strategic priorities and combined with our portfolio management capabilities, we are confident of our financial position and our ability to meet the evolving needs of the Indian market.

What are your strategies at a time when technological disruptions are rapidly defining businesses in the sector?

We are focused on the careful execution of our strategic framework of intelligent and clean growth. Sustainable growth has

become mainstream and as more businesses commit to net-zero, they will need solutions that can decarbonize their business. We are leveraging our existing engineering and technology capabilities, and vast product portfolio to deliver clean solutions to our customers. We are helping them reduce friction, machine downtime, maintenance costs, and carbon emissions. While our bearings help customers achieve sustainable and reliable rotations, our solutions like Rotating Equipment Performance and maintenance products help them augment their equipment maintenance strategy. Our condition monitoring solutions use the latest connected technologies to collect data from a wide variety of plant assets, transform that data into actionable insights, and help customers make informed decisions regarding their equipment and business.



We are leveraging technology to improve our own manufacturing processes and transition to factories of the future that are lean, green, and digital. By digitalizing our full value chain and using technologies like AI/ML, vision inspection, and traceability, we are improving the quality of our products and solutions and increasing the efficiency of our supply chain. These technologies are also helping us detect failure early and improve processes. We are eliminating waste in our entire supply chain by implementing the SKF production system, which not only creates a safe workplace, but also helps improve quality, material flow, and productivity. By adopting renewable energy to power our factories and reducing dependence on natural resources, we are ensuring that our factories have limited environmental impact.

We will continue to invest in emerging technologies and innovate to improve our processes and create solutions that meet the evolving needs of our customers. We are confident that with the careful execution of our strategy, we will create a different SKF, which is a technical partner of choice among customers, and a leader in development of sustainable solutions. ■

India's construction equipment industry has been experiencing steady growth over the past few years, driven by a surge in infrastructure development projects, urbanization, and government initiatives.



Make in India program can help the construction equipment sector and its allied industries improve their technological status.

SANJAY AGARWAL

Director, Filtrec Bharat Manufacturing

How do you see the government's 'Make in India' program and mission motivating the industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

The Make in India program can motivate the industry to participate through a favorable policy environment, investment opportunities, enhanced competitiveness, localization and self-sufficiency, skill development, and global exposure. These factors can incentivize the industry to actively engage in the program and contribute to the growth and development of domestic manufacturing. Overall, the Make in India program can help the construction equipment sector and its allied industries improve their technological status and competitiveness in the global market through technology transfer, R&D incentives, skill development, infrastructural development, export promotion, and localization of manufacturing. These initiatives can contribute to the growth and advancement of the industry, making it more competitive in the global arena.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

We update our products regularly to keep up with changing market demands. Our research and development teams are always working on products that can be manufactured locally and that were previously imported at excessive rates and are now readily available in Indian marketplaces at reasonable pricing and with shorter delivery times.

What are your views on making India a global construction equipment manufacturing hub?

According to my view, the challenges that need to be addressed to make India a global construction equipment manufacturing hub, include infrastructure gaps, regulatory complexities, skill development, and technology upgradation. Continued efforts from the government, industry stakeholders, and other relevant actors will be required to overcome these challenges and capitalize on the potential to establish India as a global manufacturing hub for construction equipment.

Tell us about your export market in the filters sector and important initiatives to cater to the requirement of the International market?

Exporting hydraulic filters to international markets requires careful planning, compliance with international standards (PED, AD2000, EN13445, ASME & ISO standards), customization,



Filtrec Bharat will adapt to the change in the business landscape driven by technological disruptions to become a World Class Manufacturing Company.



innovation, efficient supply chain management, market intelligence, strategic partnerships, and excellent after-sales service. By taking these initiatives, we (Filtrec Bharat Manufacturing Pvt. Ltd.) cater to the requirements of the international market and establish a strong presence in the global filters sector.

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

Filtrec Bharat will adapt to the change in the business landscape driven by technological disruptions to become a World Class Manufacturing Company. Embracing digitalization, automizing the current supply chain management processes, investing in research and development, focusing on customization, enhancing sustainability, fostering partnerships, upskilling the workforce, and maintaining a strong focus on quality and reliability are our strategies to succeed in the future.

Manufacturers are now under pressure to manufacture machines and components which are not only cost-effective but also comply with the emission norms. What are your views on it?

Manufacturers need to prioritize environmental sustainability, invest in innovation and technology, comply with regulations, and consider market demand and health and safety aspects to ensure a

competitive edge and sustainable growth in the long run.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

As the demand for picking up due to several Government initiatives and growing public spending, we see a challenge in augmenting the Components. Supplies and quality level for all filter companies, here we decided to come up with our own Filtration Component Company for servicing all sorts of Filtration components requirements across Hydraulic, Diesel, and oil. This will give us control over consistent quality and enable us to support the sudden surge in market demand.

Here are a few suggestions to further ease a business-friendly climate:

Streamline Regulatory Processes, Enhance Access to Finance, and Foster Innovation and R&D. Implementing these suggestions can help create a more business-friendly environment in India, attracting investments, promoting entrepreneurship, and fostering economic growth. It would require collaborative efforts from the government, industry stakeholders, and other relevant actors to implement these measures effectively and continuously monitor and improve the business climate in the country. ■

Manufacturers need to prioritize environmental sustainability, invest in innovation and technology, comply with regulations, and consider market demand and health and safety aspects to ensure a competitive edge and sustainable growth in the long run.



The government's initiatives to promote domestic manufacturing have helped in reducing the cost of production.

ROHET SAREEN

Head, Product and Business Development, Cognecto

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

The construction equipment sector is one of the key areas where the 'Make in India' programme has been successful. The government has taken several initiatives to promote the manufacture of construction equipment and allied industries in India. This has led to an increase in the participation of domestic and international players in the construction equipment sector.

It has given the industry confidence in trying to enter the manufacturing field rather than blindly importing components. The start up's and college graduates are using manufacturing sector to differentiate their start up's and they also confident about their end product. We see a lot of entrepreneurs entering into the space and the technical pool of India is finally being leveraged in the core engineering sector other than software

The government's initiatives to promote domestic manufacturing have also helped in reducing the cost of production as the local players are now innovating to develop the product. This has helped the industry to offer its products at a competitive price in the global market.

Give us an understanding of your company's performance in the last 3 years?

2020-2023 : Growth of 10x in terms of revenue from Product development



to dealing with top Infrastructure players globally. Have developed from AI SaaS to AI IoT SaaS Product player with common platform sharing best practices across industries

Market Opportunities

- Global Telematics @ \$37.5B ('27) CAGR 20%
- Cognecto in top 25 Globally - ARC Report*
- Global customer base (PAN India, Australia, Africa, Greece)
- Tier 1 Lighthouse customers
- Cross Fleet Experience with Top OEMs
- Remote Global deployment
- Designed to scale, handling 5MM data points/day

What is your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

- Wearables, Drone, Driver Certification, ERP Integrations, ESG Reporting, Video Analytics
- Build AI Template for Route Optimization and Asset Allocation
- Develop Integration to SAP, CMS Systems, IBM Maximo, Service Max
- Increase penetration of non sensor based SaaS such as Repair / Maintenance / Fuel refilling
- Provide analytics on Assets usage and

Customers may have existing systems and processes that need to be integrated with the IoT solutions provided by Mining SaaS IoT organizations.



breakdown trends

- Integrate with Workshops / OEMs for ordering spare parts

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

Challenges faced by by AI IoT organizations like Cognecto :

Resistance to Change: Many Customers in the mining industry have been using traditional solutions such as pen / paper / Excel. Move to real time data may be unsettling to some of

the customer and therefore commitment by top management to Digitization is paramount.

Lack of Awareness: Some customers may not be aware of the benefits of using IoT solutions in the mining industry. Structured Pilots can help in raising aware about potential of IoT SaaS solutions such as Production , Maintenance, Analytics and Safety parameters. The key is to have clarity of output expected from the Pilot and and post successful implementation of project.

Concerns about Reliability: Customers in the mining industry require high levels of reliability, and any downtime or system failure can have a significant impact on operations. The hardware should be resistant extreme weather conditions and low latency.

Integration Challenges: Customers may have existing systems and processes that need to be integrated with the IoT solutions provided by Mining SaaS IoT organizations. Integration can be challenging and time-consuming, and customers may be hesitant to invest in new solutions that require significant changes to their existing infrastructure.

Cost Concerns: Customers may be concerned about the cost of implementing and maintaining IoT solutions. The investment should be jointly evaluated and funded by both IT as well as operations team. ■

The government's initiatives to promote domestic manufacturing have also helped in reducing the cost of production as the local players are now innovating to develop the product.

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India's infrastructure is well positioned to help the country achieve its goal of becoming a \$5 trillion economy.

VASIM PRADHAN

Head Sales - India & International Business, Ashar Locker (India)

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment and its component sector to improve its technological status and competitiveness in the global market?

We at Ashar Locker have always believed in "Made in India & Made for the world". Our major export markets are Australia, New Zealand, UAE, Oman, Africa & South East Asia and we have been supplying to all our markets from India over the past two decades.

The 'Make in India' program is a great initiative by the government to promote local manufacturing and make India a factory for the world. Today India is looked upon as an alternative to China for manufacturing and we are witnessing a global shift towards India for their manufacturing needs. The construction equipment is also benefitting from this program, as it is providing the necessary impetus to enhance their technological status and competitiveness in the global market. By promoting local manufacturing, the program is enabling companies to create a more cost-effective and reliable supply chain. This, in turn, is helping to improve the quality of products and services, leading to better competitiveness and growth opportunities in the global market.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's growth in the coming years?

India's infrastructure is well positioned to help the country achieve its goal of



becoming a \$5 trillion economy. We are very optimistic about the growth potential of our company in the coming years, given the government's strong commitment to the construction equipment and component sector. We are investing in cutting-edge technologies and expanding our production capacity to cater to the growing demand for our products. With a focus on quality and innovation, we are confident that our company will continue to grow and succeed in the future. Over the past decade we have penetrated into major markets like India, Middle East, Africa & Southeast Asia. Because of our Global footprint our customers enjoy faster service & supplies from Ashar Locker in case of any emergency or breakdowns making us their preferred choice for screening media solutions. Our prime focus in 2023 would be expanding our business across different market areas globally since we have been doing a lot of background work over the past couple of years for the same. Now is the execution time and we are confident that we will be able to implement our plans in 2023.

What are your views on making India as a global construction equipment and component manufacturing hub?

Our company has a significant presence in the export markets, and we are constantly exploring new opportunities to cater to the requirements of the growing international demands.

I believe that India has the potential to become a global hub for construction equipment and component manufacturing. With a young and skillful workforce, competitive manufacturing costs, and a growing demand for infrastructure development, India can provide a favourable environment for companies to set up their operations. Additionally, initiatives like the 'Make in India' program and the government's focus on infrastructure development are helping to create a conducive environment for the growth of the industry.

Tell us on your export market for your range of products and important initiatives to cater to the requirement of International market?

Our company has a significant presence in the export markets, and we are constantly exploring new opportunities to cater to the requirements of the growing international demands. We have a robust distribution network and a strong focus on customer service, which helps us to cater to the needs of our clients in the global markets. We also invest in R&D to ensure that our products meet international quality standards and are tailored to the specific needs of our clients. Over the past decade we have penetrated into major markets like India, Middle East, Africa & Southeast Asia. This year we will be expanding our Global reach and penetrate markets which have huge potential for our products.

Give us an understanding of your company's performance in the last 3 years?

Last few years have been challenging for all of us due to the pandemic as we incurred huge losses in all our markets. The increase in steel prices further added to our problems as we had to renegotiate all our rate contracts and convince the customers to justify the price hike. However, despite of all the odds our company has experienced steady growth, driven by our focus on innovation, quality, and customer satisfaction. We have expanded our product portfolio, invested in cutting-edge technologies, and enhanced our production capacity to meet the growing demand for our products. Our financial performance has also been strong, with consistent revenue growth and profitability.



What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

As a company, we recognize the importance of technological disruptions and are constantly looking for ways to leverage them to improve our operations and services. Our future strategies are focused on innovation, product development, and enhancing our digital capabilities to improve our customer experience. We believe that by staying at the forefront of technological advancements, we can drive growth and success in the long run.

What are the challenges that you face and what are your suggestions to further ease a business-friendly climate?

The construction equipment sector faces several challenges, including a lack of skilled labour, high regulatory barriers, and a highly competitive global market. Raw material prices also remain a major threat to our growth as we have witnessed huge fluctuations in steel prices in India over the past few years. The Govt had to step in to control the prices by adding export duties on steel in the past. To further ease a business-friendly climate, I believe that the government needs to focus on creating a body to keep the commodity prices under check at the same time providing a more conducive environment for companies to operate, including reforms to simplify the regulatory landscape and ease the burden of compliance. Additionally, there needs to be a focus on skill development to address the shortage of skilled labor in the industry. Finally, the government should continue to promote initiatives that encourage local manufacturing, which will help to create a more reliable and cost-effective supply chain for the industry. ■

With a young and skillful workforce, competitive manufacturing costs, and a growing demand for infrastructure development, India can provide a favourable environment for companies to set up their operations.



We believe that our products are game-changers for the dynamically changing construction industry.

RAJIV PODDAR

Joint Managing Director, Balkrishna Industries

How do you see the government's 'Make in India' programme and mission motivating industry to participate in it? How is this helping the construction equipment sector and its allied industries to improve its technological status and competitiveness in the global market?

The Indian government has been undertaking various infrastructural projects to help the development of the country and to boost the economy. These infrastructure projects form the cornerstone of our economy and will play a major role in supporting and advancing India's goal of being a \$5 trillion economy by 2025. Initiatives under the 'Gati Shakti' program as a crucial step towards improving infrastructure connectivity. These projects are an incredible opportunity for the construction/ infrastructure industry to grow and expand. At the same time, there is pressure on the construction industry to build technologically advanced equipment and reduce carbon emissions.

BKT operates into a segment predominantly known as the 'large varieties - low volume segment', which is not only capital-intensive but also labour-intensive. At BKT, we are fully geared to take advantage of the peculiarities of this segment and have developed a large base of SKUs to meet diverse needs and applications not only for India but for global market. We believe that our products are game-changers for the dynamically changing construction industry.

Foreseeing the government's strong commitment and stable sentiments in the market, how do you evaluate your company's

growth in the coming years?

The OTR tire market is not stagnant but growing and we see no signs of it slowing down. The pipeline of construction and infrastructural projects by Govt. which are not just in metros but also in tier two and tier three cities, will propel the future growth of the Indian tire market.

Additionally, sectors like agriculture, mining, and infrastructure significantly impact the demand for tires in sync with the equipment production volume.

What are your views on making India as a global construction equipment manufacturing hub?

The Indian economy is driven by the construction/infrastructure sector. This sector is a key driver of India's overall economic development. The government has a strong focus on it and encourages policies that will ensure the creation of world-class infrastructure within a time frame. The Indian CE industry, being the 3rd largest market in the world, has shown remarkable progress over the years and poise to become the 2nd largest CE market in the world. In fact, the recent export figures (FY22) for construction equipment have increased significantly. Additionally, the government's 'Make in India' program is a positive step towards achieving this goal. India's favorable governmental policies, growing infrastructure investment, ample human resources, and mass-scale domestic markets have attributed to OEMs moving their production base here.

From a tire manufacturer's point of view, advancements toward the growth of construction equipment manufacturing will have a positive impact on component manufacturers. More so, I believe the

BKT is a leading player in the OTR tire industry and has a strong presence in the global market with an aim to achieve a 10% market.

demand for construction, farming, and mining equipment is expected to propel the Indian OTR tire market.

Tell us on your export market in the OTR tires sector & important initiatives to cater to the requirement of international market?

BKT is a leading player in the OTR tire industry and has a strong presence in the global market with an aim to achieve a 10% market. BKT's exports account for 83% of our sales out of which 54% is Europe, 17% is the US and the rest of the world is 12%. The remaining 17% is domestic sales. We are continuously working towards being the preferred choice of our customers and we further aim at maintaining leadership in product quality, delivery reliability, and technical expertise.

Our company has been catering to the needs of international markets with a wide range of high-quality OTR tires for various applications. We have been expanding our global footprint through strategic partnerships and investments in manufacturing facilities. With an aim to be a 'one-stop-shop' all OTR tire segment, we focus on developing innovative products to meet the changing demands of the market.

Give us an understanding of your company's performance in the last 3 years?

We are a leading manufacturer of off-highway tires, supplying a wide range of products for agricultural, industrial, mining, earthmoving, construction, material handling, ports, ATV vehicles, and others. BKT has been experiencing significant growth in recent years, with revenue increasing consistently.

Our financial statements, in the last three years, demonstrate the outcome of our long-term strategy to capitalise on our increasing scale while, at the same time, maintaining business agility. BKT's revenue has grown multifold. We have achieved this growth through a combination of factors, including the expansion of our product portfolio, manufacturing capacity, increasing our market share, and expanding our global presence. We have also invested heavily in research and development to create innovative and sustainable tire solutions, which have helped us stay ahead of the competition.

What are your future strategies at a time when technological disruptions are rapidly defining businesses in the sector?

We understand the importance of staying ahead in the evolving technological landscape of the sector, and we are investing heavily in research and development to bring innovative solutions to our customers. Our goal is to provide them with the best-in-class products that are not only efficient and reliable but also eco-friendly.

We are continuously marching ahead to explore incremental opportunities in the form of developing 'Ultra Large Earthmovers & Mining Radial Tires' markets and also taking advantage of the shift from Bias to Radial Tires, which is growing continuously. In order to take advantage of this opportunity, we have set up an All-steel OTR Radial tire plant in addition to Ultra Large tire size and have further added such capacities at our Bhuj plant.

Manufacturers are now under pressure to manufacture machines and components which are not only cost-effective but also comply with the emission norms. What are the initiative undertaken by BKT?

BKT makes a constant effort to incorporate social and environmental concerns while developing products by removing SOHS (the substance of high concern) from the compound. All products manufactured are designed to protect the environment/social concern. In fact, we have obtained REACH SVHC (Substance of very high concern) compliance certificate for all the products manufactured.

As a responsible organisation, BKT has been constantly taking measures for the conservation and optimal utilisation of energy in all areas of operations at the plant/manufacturing and effective usage of resources. Within the Company, there are continuous efforts towards improving operational efficiencies, minimising consumption of natural resources, mitigate climate change and reducing water, energy & CO2 emissions. In fact, BKT is the first tire company to adhere to reach compliance environmental requirements of the European union. ■

The Indian economy is driven by the construction/ infrastructure sector. This sector is a key driver of India's overall economic development.

M&M BEGINS WORKS OF RS 1,000-CRORE NEW EV PLANT IN TELANGANA.

Mahindra Last Mile Mobility (LMM), a part of Mahindra & Mahindra (M&M), has commenced work on its upcoming manufacturing unit at its existing plant in Zaheerabad, Telangana.

The company, as per the MoU entered into with the Government of Telangana in February, plans to invest Rs. 1,000 crore in the upcoming plant. With this new facility, it aims to build a state-of-the-art battery assembly line, produce power packs and manufacture electronic as well as drivetrain components for electric three- and four-wheelers. The facility will also create employment for 800 to 1,000 employees in the region.

"EVs are a focus area for the Government of Telangana and we are committed to developing the right infrastructure and ecosystem for promotion and adoption of EVs. The new facility would help in proliferation of EVs not just in Telangana but across India," said KT Rama Rao, Minister for Municipal Administration and Urban Development, Industries and Commerce, after the ground-breaking ceremony of the plant.

SMART WORLD TO INVEST RS 3,000 CR FOR THREE HOUSING PROJECTS IN GURUGRAM

Smart World Developers will invest nearly Rs 3,000 crore in developing about eight million sq. ft. of residential space across three projects in Gurugram. The first phase of the three projects will be launched in 2023.

The real estate company intends to launch projects in Sector 113, Sector 66 and Sector 79 of Gurugram, even as it is evaluating such projects in Mumbai, Bengaluru and Pune. In Sector 113, the land has a total development potential of 4.5 million sq. ft., of which the company will develop about three million sq. ft. in the first phase. The proposed project in Sector 66 project will be a luxury high-rise building, and around 2.5 to three million sq. ft. space will be launched in the first half of 2023. The company also plans to develop 8.5 million sq. ft. in Sector 79 in multiple phases.

Recently, Smart World Developers launched a premium high-street retail project, in Sector 61 in Gurugram, spread over 1,00,000 sq. ft., with expected revenue of Rs 250 crore from this project. 'Smartworld Orchard Street' is spread across three floors, with units ranging from 500-12,000 sq. ft.

The developer which is expecting to close 2022 with a revenue of Rs 4,000 crore, is targeting to clock double of this topline in 2023. Further, it is expecting to close 2022 with a revenue of Rs 4,000 crore, is targeting to clock double of this topline in 2023.

WELSPUN ONE, GRT GROUP INK RS. 700 CR DEAL FOR TAMIL NADU PROJECT.

Welspun One Logistics Parks (WOLP), an integrated fund and development warehousing platform in a joint venture with GRT Group, will develop two grade-A warehousing projects in Tamil Nadu with an investment of Rs. 700 cr. The projects are being developed by Welspun as part of the memorandum of understanding with the Tamil Nadu government to invest around Rs. 2,500 cr in the state over a period of 5 years, the company said in a statement.

The first project is being developed through a 50:50 joint venture between GRT Group and WOLP, it also marks the final investment of WOLP Fund 1 which had a target size of Rs. 500 cr. The second project is being developed by WOLP for GRT Group under a "development management" agreement, the company said. South-based GRT Group has businesses across verticals such as jewellery, hospitality, warehousing, renewable power, education, NBFC, among others.

L&T & MEIL DECLARED L1 BIDDERS FOR THANE-BORIVALI TUNNEL PROJECT

Larsen & Toubro (L&T) and Megha Engineering & Infrastructures (MEIL) have emerged as the lowest bidders (L1) for a package each, of the 11.84 km Thane-Borivali twin tunnel project in Mumbai.

The road project by Mumbai Metropolitan Region Development Authority (MMRDA) will feature 2x10.8 km of road tunnels under Sanjay Gandhi National Park (SGNP), and a combined one km of approach roads at both ends. Package II involves the design and construction of 6.09-km-long Thane side twin tube road tunnel. Under Package-I, the scope includes design and construction of 5.75 km-long twin tube road tunnel, Borivali side.

The tunnels with three lanes each will be built using four mega tunnel boring machines (TBMs) at a maximum depth of 23 mtrs. below the surface, and connect Magathane's Ekta Nagar in Borivali and Tikuji-ni-Wadi at Manpada in Thane.

MORTH FLOATS TENDER FOR TWO-LANING OF SARWAN-CHAKAI STRETCH

The Ministry of Road Transport & Highways (MoRTH) has floated a tender for improvement to two-lane with paved shoulder of Sarwan-Chakai up to NH-333C on EPC mode in Bihar.

The two-laning with paved shoulder of Sarwan-Chakai will be from km 0.000 to km 15.972, covering a total length of 15.972 km of NH 333C.

The estimated cost is Rs 101.11 crore, along with a completion period of 18 months.

The end date for bid submission is 5 June, 2023.

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BKT targets a turnover of **US \$ 2 billion** and total annual production of **600,000 MT** by 2026

Balkrishna Industries Ltd. (BKT), the Indian multinational group and a global player in the Off-Highway tire market has announced its plan to become a 'one-stop-shop' for the OTR tire market. With a well-designed and significant enhancement planned at the Bhuj plant, BKT aims at annual tire production of 600,000 metric tons (MT) and envisages the achievement of US \$2 billion in turnover in three years.

BKT, the 'Made in India' flag bearer, reported sales of \$1 billion in the financial year 2022, with 335000 MT of production capacity.

Speaking about the business expansion plan, Rajiv Poddar, Joint Managing Director, Balkrishna Industries Limited said, "BKT's strategic vision includes an allocation plan for future capital expenditures, which will allow the company to expand its manufacturing capacity. By doubling our annual production in the next three years, we aim to revolutionize our business strategy and stay ahead of the curve. With a relentless focus on hard work and innovation, our company is all set to achieve a turnover of US \$2 billion by 2026."

Poddar, further added, "India being one of the fastest growing economies in the world and a rapidly expanding OTR sector provides a huge opportunity for BKT. To cater to this demand, we have developed a bouquet of products, which are designed to meet the specific needs of Indian customers, offering durability, reliability, and performance. The next three years, we will continue on the determined path with foresight and commitment, by listening closely to the market needs, and counting on our R&D's courage and passion"

The BKT's flagship manufacturing unit at the Bhuj was established in 2012 and by 2022, the plant spread across a total area of 640 acres. The well-designed Bhuj plant comprises state-of-the-art technology and world-class infrastructure that is the game changer for BKT. The extensive manufacturing unit includes manufacturing /production plants, warehouse facilities, raw material storage facilities, carbon black plants, solar panels, a greenhouse, administrative offices, employee living quarters, two R&D centers, and testing tracks.

The advanced facility is equipped with the latest and best machinery, automated production processes overseen by trained personnel, and strict quality control protocols that ensure every tire produced meets the highest standards of quality and performance. In terms of production, the plant ended the year 2022 with its best result ever production of 500 metric tons daily i.e. 182500 metric tons per annum.

BKT's Bhuj plant produces a comprehensive range of off-highway tires, including radial, solid, and bias tires for use in various industries such as agriculture, construction, mining, and industrial applications with over 3,200 SKU products. BKT's notable sub-brands are the Commander series, the Agrimax series for the agriculture sector; the XL Grip series, the Rock Grip series, BK 6060 series, the Loader Plus series, the Airomax series, the Port King series, the Steer Grip series for the Industrial, Construction sector; the Earthmax series for Earthmover segment and Mineforce for the mining sector. The plant has a warehousing and storage capacity of 7500 tons of tires. ■

BKT's Bhuj plant produces a comprehensive range of off-highway tires, including radial, solid, and bias tires for use in various industries such as agriculture, construction, mining, and industrial applications with over 3,200 SKU products.

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