

L&T Construction & Mining Machinery, Larsen & Toubro

Given Excon's overarching theme, "Building India's Tomorrow – Technology, Globalization, Sustainability, Inclusiveness", kindly share your strategies and initiatives in the following areas:

Innovating and introducing products that can compete in global markets

Towards the end of 2022, India overtook the UK and France, becoming the third largest in Asia-Pacific and fifth globally. Given the pace of government reforms and the ongoing development, S&P Global Market Intelligence predicts India's GDP will reach \$7.3 trillion by 2030. This growth positions India as a key market for various industries in the next decade, especially with its focus on infrastructure development. Rapid infrastructure development demands swift project execution, fuelling the need for advanced, eco-friendly construction and mining technologies that ensure quality and speed.

Komatsu and L&T Construction & Mining Machinery prioritise delivering top-notch products using the latest technologies. Over time, by understanding customer needs, we've developed a diverse product range. We consistently roll out advanced models, such as electric hydraulic excavators, biodiesel-fuelled equipment, and standard ones. These machines adhere to global standards, emphasising safety and operator comfort. At Bauma Conexpo, held early this year, we displayed a 30-ton Hybrid Hydraulic Excavator with reduced fuel consumption. At EXCON 2023, we'll present a 20-ton Hybrid model, new attachments for industries like car scrapping, and robust Hydraulic Excavators in 8-ton and 13-ton classes.

L&T will display its indigenous ROAD MACHINERY, VIBRATORY COMPACTORS,



Komatsu PC81

WHEEL LOADERS, SKID STEER LOADERS, AND PNEUMATIC TYRED ROLLERS. These machines are compatible with the soon-to-be-implemented CEV-5 engine emission norms. Produced under the "Atmanirbhar Bharat" initiative, these high-quality machines promise an outstanding user experience.

Adopting technologies and sustainability in equipment

L&T has always espoused and introduced Sustainable Technologies. In collaboration with Komatsu, we've planned to showcase products that are at the frontiers of cutting-edge technologies. Komatsu recently launched a new generation of excavators, embodying our shared dedication to innovation and eco-friendly operations. These machines come with specialised engines, advanced hydraulics, and the upgraded KOMTRAX system. They feature the ecot3 engine technology, which ensures efficient fuel consumption and maximum productivity. Their engines are optimised to maximise power output, ensuring every drop of fuel is used productively.

Komatsu's focus on efficiency is further evident in their hydraulic systems. The unique HydraMind hydraulic system balances hydraulic and engine power, increasing fuel efficiency.

The latest KOMTRAX version offers web-based monitoring of Komatsu equipment, ensuring optimal control and providing real-time insights into machine health and performance. This aids in identifying training needs for operators and technicians.

Komatsu's technological prowess shines through in the precise engineering of hydraulic components and hydraulic filters. Designed and manufactured specifically for each machine, these components ensure best-in-class performance with unmatched reliability and durability. A superior hydraulic system coupled with a specially designed Hydraulic filter with nano fibre technology allows for an industry-leading oil change interval of 5,000 hours and a filter change interval of 2500 hours, further reducing maintenance costs.

Addressing specific operational challenges, Komatsu has developed



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customised undercarriages. These include a robust and rugged design with an Abrasive Impact-Resistant (AIR) Bushing tailored for tough underfoot conditions in applications such as stone quarry, granite, and marble. These innovations enhance durability and cost-efficiency.

The upcoming exhibition will spotlight smart construction and feature virtual and augmented reality simulators, giving customers a tangible feel of our advanced machines in real-world conditions.

You are making your products safer and more reliable to build end-user trust.

We at L&T Construction & Mining Machinery have a rich legacy of making available essential equipment for nation-building. Always leading in innovative and safe engineering design, we've established global partnerships and ensure our products meet international Quality, Safety, and Reliability benchmarks.

Our network of 30 dealers, 115 touchpoints, and 27 territory offices of L&T's Domestic Marketing Network is strategically located to reach most project sites within two hours to cater to more than 35,000 construction equipment in the field.

A first in the industry, the comprehensive machine care programmes – Suraksha 10,000 and Viswas enable continuous machine health monitoring and extended powertrain warranty, supported by a team of trained and experienced engineers equipped with digitally enabled service platforms to deliver proactive, on-time service to Customers across the country increase machine uptime and offers true peace of mind.

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With the implementation of Swift Service 360, we have immensely improved after-sales support in India through a digital platform that streamlines service delivery, improves response times, and offers consistent quality nationwide.

Given the increasing demand for advanced equipment and machinery, how do you intend to enhance your equipment's productivity, efficiency, and sustainability at construction sites? Please consider the following aspects in your response:

Training and upskilling of equipment operators.

At L&T, one of India's premier engineering conglomerates, we offer training programs, deliver knowledge, and oversee the training process. Our dealer network liaises with customers, operators, and mechanics while the IESC certifies candidates after they clear tests under independent assessors.

In FY23, 1,229 candidates joined our training, with dealers coordinating 570 of these for equipment operators and mechanics. Our training and certification approach ensures industry standardisation and champions inclusivity and diversity by training women in machine operations, commissioning, and maintenance. We use the latest technology, including the latest simulators, virtual reality and hands-on machine training, to ensure trainees receive the best in the industry. This effort creates a formally recognised workforce, essential for meeting the supply-demand gap for skilled personnel.

Optimizing equipment utilisation

Given that India is the fastest-growing major economy, our customers are constantly looking for machines that offer higher productivity with maximum uptime so that machine utilisation is very high. So that customers get maximum value from their investment, we make sure machines offer Quality, Reliability, and Durability through a strong after-market support network that helps customers derive the maximum from every piece of equipment. An extensive network of Dealers throughout the country supports this network. Our Machine Care Programmes ensure that equipment are in good health to deliver. In fact, the utilisation of Komatsu machines in India is an average of 3,000 hours, while it is 1,800 hours for other countries.

We consistently optimise our equipment as part of our commitment to deliver



Komatsu PC136

value. This longstanding commitment drives our exceptional customer service and additional offerings. We present a suite of services that boost customer productivity.

Komatsu's KOMTRAX system leverages GPS and GPRS technologies for real-time monitoring of machine performance and health, delivering instantaneous insights into machinery efficiency and maintenance requirements. L&T engineers harness these insights and energy-saving reports to focus on enhancing machine productivity and efficiency. They ensure machines are used optimally through targeted operator training, significantly reducing fuel consumption and improving operational effectiveness. One of the key features of Komtrax is that it detects abnormalities and cautions customers in time, thereby aiding preventative maintenance, leading to cost reduction and increased uptime.

The Komatsu Oil Wear Analysis Programme (KOWA), backed by Komatsu's extensive experience and in-depth knowledge of design and component lifespan, facilitates continuous monitoring of internal components of equipment. This strategic approach enables timely maintenance proactive repair action, reducing maintenance costs considerably while ensuring high operational uptime.

We monitor the key parameters of each machine to provide a clear health report. Based on this analysis, our L&T team

suggests operational and maintenance steps to ensure optimal performance. Our after-sales support routinely includes Machine Care Programmes and Undercarriage Inspections.

Undertaking remanufacturing and refurbishment in line with circular economy principles.

We have developed the expertise to repair and remanufacture to Komatsu's standards major machine components. This has enabled us to offer a "Recon Exchange" scheme designed to increase machine uptime for Customers. With this program, customers can directly purchase major remanufactured components, eliminating the need to wait for repairs on their existing components at almost half the price and a warranty on key components. Our workshops maintain an inventory of key components, including engines, hydraulics, and powertrains.

Additionally, we provide a unique service where we purchase machines from our existing customers. After acquiring these machines, we refurbish them using genuine parts, adhering strictly to Komatsu's standards. Every refurbished machine comes with a warranty of either six months or 1,000 hours, depending on which comes first. These machines are then made available to our customers at a reduced cost, backed by the assurance of both Komatsu and L&T.

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