

SOUTH EAST ASIA | REGION REPORT



A Top-Mech 100t gantry crane at work in the precast industry.

# AUTOMATION IS THE KEY

**Paola De Pascali finds that users in South East Asia are increasingly asking for smart features to enhance productivity and sustainability.**

Automation and smart features are driving the overhead lifting sector in South East Asia. 2016 was an exciting year of innovation and exploration in industrial automation, though the trend toward automation and greater efficiency in the manufacturing and industrial sector is not new to us, says Karl Tilkorn, regional managing director, MHE-Demag. "While our customers from various industries have started to automate their processes, advancement in precise positioning methodology as well as sensors, controls and software place us in the leadership position in engineering, manufacturing, installing and servicing both automatic and semi-automatic cranes.

"The demand for automation and process efficiency will increase and improve the overall demand for automatic or semi-automatic cranes in the region.

"Another trend observed is the increasing demand for online monitoring of crane status. In the past, crane monitoring and preventive maintenance were manually planned and conducted with high dependency on human behaviour and input. Besides the costs of monitoring, it also results in unnecessary preventive maintenance or risks of downtimes.

"Recently MHE-Demag has introduced our Demag StatusControl, which is a wireless remote access system for cranes and hoists that delivers, analyses and evaluates data in real-time. Customers

can access the remote monitoring system directly via our intuitive software tool, which they can use in the same way on their PC or tablet. The traffic light system shows what needs to be done straight away. Demag StatusControl enables our customers to precisely schedule the maintenance work and they are always kept up to date on the risk of any possible downtimes.

"Engineering innovation is another highly sought after criteria. One of the upcoming trends is delivering cranes with reduced size and deadweight for the same lifting capacity, allowing customers to reduce the costs of supporting structures and associated maintenance for cradling unnecessary dead loads around. In short, lighter and better. MHE-Demag is the only

REGION REPORT | SOUTH EAST ASIA



Enerpac PLC-controlled 200 ton synchronous lifting technology was used to control 300 compact, high-pressure 3000 hydraulic cylinders incorporated in groups into active shafts.

leader who is capable of supplying this cutting edge technology and it is delivered through our latest crane innovation, the V-type crane. Tapered diaphragm joints are specially designed to accommodate pressure and tensile forces and improve oscillation characteristics by up to 30%. On average, the Demag V-type crane is 17% lighter than conventional box-section profile cranes thanks to its evolutionary design. This reduces the forces transmitted to the existing support superstructure and gives architects greater freedom for planning new building layouts."

Tilkorn says the company has been operating in the region for more than 40 years. "Our customer base is spread across various industries, served by eleven manufacturing facilities and over 60 sales & service offices within the region," he adds. "As our core business is in overhead cranes and hoists, our main customers are primarily from industries that require raw materials or finished product lifting, such as the manufacturing and logistics sectors. MHE-Demag is also appointed for many major developments in various countries for industries such as steel handling, waste to energy plant, power plant and so on."

MHE-Demag operates within a close-knit regional network and supplies to Australia, Brunei, Cambodia, Indonesia, Laos, Myanmar, Malaysia, Papua New Guinea, the Philippines, Singapore, Taiwan, Timor-Leste, Thailand and Vietnam. Over the years MHE-Demag has supplied 26,000 industrial cranes, 20,000 dock levelers, 2,000 building maintenance units and 180 car parking systems with more than 6,000 bays to the region.

"Located in over 50 locations with a dedicated workforce of more than 1,600 well-trained staff across the region including 700 response service engineers and technicians, an attentive back-office and intelligent IT infrastructure, we also have the biggest after-sales service network in South East Asia. For instance, in Indonesia, we have just recently launched our 27th location in Bilung," Tilkorn says. "We think that the South East Asia region will grow proportionally. MHE-Demag has ventured into emerging markets such as Cambodia and Myanmar and we expect more activities in these areas in coming years."

## INVESTMENTS

"Investments in oil and gas industry will remain low and as a result of this, the supply of new cranes to the sector will be affected," Tilkorn says. "However, MHE-Demag is effectively able to continue to support the oil and gas industry in their difficult times, by refurbishing existing equipment at significantly reduced costs, whilst returning the equipment to its good

or even sometimes better, condition than when handed to us. This is owing to the extent of the engineering capacity within MHE-Demag. Energy generation and conservation are an unstoppable trend and therefore we foresee more investment will be put into the waste-to-energy sector.

"Another factor that will affect the overall lifting industry is the increase of commodity price such as steel. Companies will have to strike a balance between price competitiveness and profit margin."

Maxim Lee, heavy lifting technology manager at South East Asia Enerpac, mentions the possibility to do "mixed investments" in this region. "For example, the slump in oil and gas has seen many fewer related projects in the entire region in the last few years," Lee says. "This is expected to continue and the same applies to mining, infrastructure projects spearheaded by governments such as the high-speed rail in Singapore and Malaysia, railway lines in Thailand, metro lines in Vietnam, bridges in Myanmar will take a long time to materialise. There are still small pockets of opportunities in between."

Malaysia Marine and Heavy Engineering used an Enerpac synchronous lifting system to launch a 43,000t offshore platform. The challenge was to lift, balance, swing and smoothly launch a 43,000t floating oil production system for

SOUTH EAST ASIA | REGION REPORT



A Top-Mech 100 explosion-proof hoist for Terengganu Gas Terminal (TGST) Development Project

the Gurmut-Kokop offshore Malaysian oil field. Enerpac PLC-controlled 700 bar synchronous lifting technology was used to individually control 352 compact, high-pressure 3001 hydraulic cylinders incorporated in groups into active skids beneath the steel structure. It was able to sense and control any deflection within the required range of 20mm over a 70m span of pontoons and the main superstructure.

**SUSTAINABLE PRODUCTIVITY**

T.K.Mak, industrial equipment general manager at Konecranes APAC, explains that it is becoming increasingly important to be able to supply equipment that helps companies improve sustainability and reduce their carbon footprint.

To enhance productivity, Konecranes has a range of Smart Features to meet customer requirements. This ranges from target positioning and sway control to fully-fledged automated warehouse management and inventory system.

"In tight labour market countries like Singapore, automation is the way forward," Mak says. "Customers are increasingly aware of the benefits of Smart Features and it is quite common to find such requirements in their specifications."

Abhijeet Das, marketing and communications manager at Konecranes India adds: "In India and Bangladesh, where heavy process industry like steel, power, automobile have huge presence, the focus is more on safety and ease of maintenance. Tailor-made cranes provided for the steel industry include a redundant

hoisting system to ensure the safety of the load, which is sometimes liquid metal and quite risky if it falls. Even if one of the gearboxes or input pinion fails, the load will not fall and you can still complete the operation at 50% speed.

"In these cranes, we also provide an anti-freefall system which does not allow the load to fall in case of failure of either shaft or coupling of motor and gearbox."

The product range comprises lifting solutions for process industries, industrial cranes, and workstation lifting systems, including components such as wire rope hoists and electric chain hoists. The Konecranes range of CXT wire rope hoist cranes can be suitable in nearly any industry where lifting capacity of up to 80t is required.

"The CXT is the industry leader in medium-heavy lifting indoor cranes and is a firm favourite around the world. Over 20,000 CXT hoists are sold every year, indicating its reliability, efficiency and value," Mak says.

"We've seen an excellent take-up of our CXT UNO crane in South Asia, since its introduction in 2015. CXT UNO takes the high-quality CXT hoist and redesigns it using the latest slimline components.

"By selecting only the essential features and core components of the robust, proven technology, Konecranes has been able to create a very cost-efficient crane without compromising on quality.

"CXT UNO is a high quality, highly economical wire rope hoist suitable for a huge range of lifting tasks up to 10t in

manufacturing, materials handling and other light lifting tasks in warehouses, assembly lines and factories. CXT UNO is ideally suited to emerging markets and has a simple design, fast service response and quick spare parts delivery, which helps to minimise downtime and improve ease of maintenance.

"The other range that's experiencing success in the region is the WLS family of Workstation Lifting Cranes—in electric crane capacities up to 5t. The WLS range is designed to exactly fit the different lifting needs of diverse industries and to change with them as their needs evolve."

"The WLS family includes the CLX electric chain hoist, which offers up to 5t of lasting lifting power—50% ED rating (up to FEM 3m) with 300 starts per hour. Easy serviceability and simple maintenance access minimises downtime, says the company, with easy replacement of components with plug-in connections.

It also features the SLX electric chains hoists, for demanding use, combining CLX features with stepless hoisting speeds, with inverter plus advanced efficiency and safety technology including electronic overload device, slack chain control, and programmable limit switches.

"Another WLS family member is the extremely light and durable XA aluminium workstation crane, which is approximately 50% lighter than steel, with load capacity up to 2t and featuring smooth running on high quality joint connections," Mak says. "System profiles, with bolt connections, enable easy extensions, while anodized

For others it's an extra component, for us it's standard.

That is why our hoists' performance is exceptional. Our products include as standard the elements that are extras for others. Therefore we can offer exceptional safety, performance, reliability and durability.

You won't need to pay more for it. And your maintenance costs will be lower. That's extraordinary, but standard for us.



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