

All Company in the USA using a 1,000 US ton (907 tonne) capacity Manitowoc 21000 crawler crane in Wheatfield, Indiana, at a coal-fired electricity generating station

Extra factors

Space constraints, site safety and ground conditions are having an impact on the heavy lift sector. **LAURA HATTON** investigates

Heavy lifting is a common feature in the industrial sector where the working environment can be hazardous, especially at petrochemical and power plant construction and modernisation sites. As a result a great deal of preparation is needed to carry out a heavy lift in a safe and effective manner.

To complicate matters, throughout the industrial sector factories are being expanded, and for crane companies, this means working in smaller spaces when carrying out heavy lifts. Rick Mikut, All Erection & Crane Rental Corp Family

of Companies crawler crane manager, explains, "In the industrial sector, plants are adding on instead of building new. So now we're working in a tighter space, needing a longer reach. We're on a job now with only a few feet of clearance, and this is becoming increasingly common."

The decreasing available space on these sites is also affecting transportation, assembly and disassembly. In Japan, for example, most construction sites and roads are narrow. In addition, weight limit, height and width is strictly controlled, a spokesperson from Uchimiya explains.



Pre-planning

To overcome potential problems in these areas, companies are carrying out more pre-planning than ever before.

"Pre-planning is something that is required with these jobs," Mikut says. "This could include anything and everything from air rights to ground bearing pressures, safety procedures to new OSHA laws and regulations. Every piece is tailored to fit the customer's project."

The logistics of carrying out a heavy lift can be also complicated, as Guillaume Gagnon, Guay Cranes vice president, points out, "The first thing is to evaluate that you have truck and trailer access to the crane pad and enough space to assemble the crane. Every move needs to be well planned, especially if you have a superlift on the crane. In addition, the assist crane will need to be able to control the counterweight on the tray on every lift. The crane pad must have the good compaction to avoid any surprises during lifting." >

Guay replacing a steam surface condenser for a client in Montreal, Canada. The old condenser weighed 185.6 tonnes and was lifted using a Manitowoc 999 crawler. It was configured with 35 metres of main boom, 35 m of luffing jib and 200 tonnes of superlift counterweight. It lifted the condenser at a radius of 24 metres