

# Manitowoc: Capacity to create



Manitowoc 16000

# All eyes to the East

The crawler crane originated in North America, with famous names like Lima, Northwest, American hoist, Lorain and Manitowoc. Until the 1980's American manufacturers were the driving force behind its development. Since then the mantle has been taken up by various countries around the world such as Germany for larger cranes and Japan for small to medium sized models. However this looks like it might be shifting again as China becomes increasingly active in this sector of the crane market.

More than any other large item of construction equipment, the crawler crane appears to be China's most accepted crane export. Figures for the first eight months of this year indicate that about 1,100 crawler cranes were sold in China, more than double the previous year. And there appears to be an optimistic medium and long-term outlook for the Chinese crawler crane industry - helped by their rising global acceptance and leading to the growth of exports which help to drive development further.

The recent Bauma China show was particularly busy with five Chinese crawler crane manufacturers launching sizeable new products. Sany had the largest crane at the show - its new 1,000 tonne SCC 10000 - along with a new 280 tonner - the SCC2800. XCMG launched a 650 tonner, FUWA (Fushun as was) had its first 500 tonne unit, Foton Lovol a 320 tonner and Zoomlion its 260 tonner with news of a 1,000 tonne model on the way.



Peter Issitt, md of Crowland Cranes seals the deal with Rob Smith of PJ Plant for the UK's first Zoomlion crawler at SED earlier this year.

Chinese crawler cranes are still new to Europe and particularly rare in the UK and Ireland, but companies such as Sany, FUWA and Zoomlion have delivered their first units and are enjoying some success - possibly with shorter delivery times and competitive pricing helping gain initial sales.

After importing and establishing the Zoomlion truck cranes, Peterborough-based UK distributor Crowland Cranes sold its first Zoomlion crawler crane, a 70 tonner to PJ Plant which has put it to work in a local quarry.



A Zoomlion Quay260 on show at Conexpo earlier this year

Sany launched its 1000 tonne capacity crane at Bauma China



The 70 tonner is at the smaller end of Zoomlion's eight model range which currently extends from 50 tonnes to 600 tonnes. With the €160 million acquisition of Italian construction equipment company CIFA in September, Zoomlion is seriously looking to grow its presence in Europe. The company says it aims to export 40 percent of its products overseas within five years and be one of the top 10 construction equipment manufacturers within 10 years. Currently its exports are growing at more than 110 percent year on year.

Sany also has its sights set on being a top 10 global manufacturer and already has a sizeable European presence but its profile in the UK and Ireland is still minimal. Its crawler cranes are available from piling specialist Watson & Hillhouse, which has sold three 50 tonne units since being appointed about a year ago. Two have been delivered to Anderson Crane Hire, the first unit - an SCC500D has been dramatically re-engineered into its latest version - the SCC500E - which was delivered in October. The other crane was delivered to BSG Civil Engineering. Development at Sany is obvious

continuing at a pace with the launch of the 1,000 tonner in November, which it says will be ready early in 2009. This follows closely on the heels of its 900 tonner launched at the beginning of this year which features a 120 metre main boom and a 192 maximum main boom/jib combination. We understand that a total of two 900 tonners have been built this year with a further two scheduled so far for 2009. The company says that it is also developing a 1,600 tonne crane which is planned for launch next year and is looking at a 3,200 tonner. Both cranes would take the company into territory currently reserved for the three majors of Terex-Demag, Liebherr and Manitowoc.



Sany's revised SCC500E

Sany moved into its new European headquarters in Cologne in May and is also investing €60 million in a



new facility in Germany. Situated between Cologne, Dusseldorf and Aachen, it will comprise a production/assembly facility, as well as a research, development and training facility. Though sales have been slow in the UK, Sany announced a 36 crawler crane deal with Dutch company P van Adrighem at Conexpo. Worth 200 million RMB (£13.2 million) the order includes 10 of its 50, 80 and 100 tonne cranes as well as five, 320 tonne and one 400 tonne unit. The cranes should all be delivered by next Autumn. Sany has also received a 20 unit order from Sarens.

*Anderson Crane hire's first Sany SCC500D*



European sales manager Zhang Gan says total crawler crane production is currently around 750 units a year, which would make it one of the leading manufacturers. It says that almost half were exported last year - just 120 machines were shipped overseas in 2007.

Foton Lovol is still not a common name or product in Europe, but as its small crawler crane product range grows this will change. However FUWA (or Fushun) has been available from Dutch based Cranebusiness since 2005. Prior to distributing Fushun, Cranebusiness had made a name for itself importing used Japanese crawler cranes from Hitachi, Kobelco and Sumitomo. However the lack of good used cranes over the past year or two has virtually killed this business.

The company now offers the full, updated range of FUWA crawler cranes as well as its telescopic boomed Logicrane range. The 25.25 was shown at this year's SED, with the first six units for the UK ordered by crawler crane sales and rental company NRC Plant. The crane has a 25 tonne maximum lift capacity and a 25 metre main boom. Also available is the Logicrane 55.38 (55 tonnes and 38 metre boom) and more recently a 15 tonne, 25 metre unit dubbed the Happy Crane.



*Heavy duty excavator-type undercarriage is becoming more popular for cranes up to 200 tonnes.*

According to Cranebusiness the FUWA built Logicranes combine the benefits of both a mobile and crawler crane, providing speedy set up, variable boom lengths, easy transport and excellent rough terrain capabilities. The cranes feature Cummins tier III engines and Rexroth hydraulics while features include a three position hydraulically extendable undercarriage, tilting and lifting function cab, an optional and detachable second winch, off-set table jib, oversized slew ring, video monitoring system, engine control display and Rayco Wylie safe load indicator system.

deal with Cranebusiness to sell the product in the UK. NRC Plant is also the UK distributor for Hitachi Sumitomo and was recently appointed distributor for Link Belt truck cranes. "The Logicrane 25.25 telescopic crawler was brought in to fill the gap between our eight tonne capacity Hitachi Zaxis160 and the Hitachi 40 tonne SCX 400T," says NRC managing director Rod Abbott. "When we added the 40 tonner to our hire fleet, it took a while to become established but is now going brilliantly and we have sold about 20 units. The Logicrane is very similar and we hope it will



*The first of six Logicrane 25.25 in the UK in NRC colours*

Cranebusiness carries out a fair bit of work on the Fuwa machines once they arrive at its facility in Moerdijk, Holland. They arrive in grey primer to allow a 'European quality' paint job as well as fitting the Wylie LMI. The company also completes a European CE approval, in addition to that of the manufacturer.

Cranebusiness has also noted a trend for crawler cranes of up to 200 tonnes to be supplied with a heavy duty excavator type undercarriage which is designed to cope better with extensive travel in poor ground conditions than a typical crane type undercarriage.

With its purchase of six Logicranes, NRC Plant entered into an exclusive

mirror the success of the 40 tonner. Of the six 25 tonners we purchased we have sold one and two have gone into the rental fleet with possible sales pending on the others. Given that the machines

were not delivered until the end of July, it is not too bad."

According to Abbott, the telescopic crawler market in the UK is very buoyant at the moment. "We can't get enough of the eight tonners, and have a further four being added to the 10 already in the fleet in the New Year."

Most work for the smaller cranes is inside buildings, so rubber track inserts are required to minimise damage. "I bet contracts such as the Olympics will have at least 20 on site at any one time," says Abbott. "They are compact machines but really good lifters."

One problem affecting everyone at the moment is the exchange rates between Sterling and the Euro which has shifted by as much as 30 percent from its high point to its current low. "We have a good enquiry level but with the purchase decision sometimes taking several months, the price of the equipment can increase quite considerably," says Abbott.

Manufacturers - particularly those that have geared up production over the last year or two to cope with increased global demand - will have the choice of helping distributors achieve the sale and shift metal, or face having to reduce production capacity. The difference between getting the sale or not may be down to the 'financial assistance' provided by the manufacturer.

A good barometer of the UK and Irish market is the rental activity for 50 to 100 tonne crawler cranes - and this remains strong at the moment, indicating that infrastructure projects are continuing despite difficulty in other sectors of the economy.

Cranes are starting to move into the Olympic sites although it is thought that its peak will not be until the end of 2009/early 2010. And there are several other massive 'crane hungry' projects due to start soon.

"Sales of Hitachi cranes have gone very well particularly the 80 tonners of which we have now sold more



*(L-R) Rod Abbott of NRC hands the keys to a 70 tonne Hitachi Sumitomo SCX700 to Pat Glynn and Eddy Carr of Kier Plant*



A BPH Hitachi Sumitomo on sheet piling work



More recently, Hassell sold one of the biggest draglines in the UK for many years - a 180 tonne, Sennebogen 6180HD Electric - to Hanson Building Products, the UK's leading manufacturer of bricks, for the Must Farm Quarry Whittlesey, supplying material to both Kings Dyke and Saxon Brick Factories.

Driven by a 450 KW electric motor the machine features a state-of-the-art hydraulic system, electric speed sensing and additional hydraulics.

With a line pull up to 2 x 30 tonne, the 6180HD combines precise control and high line speeds. Hassell's brief was to supply a machine that was capable of supplying the factories with enough material in a single day shift to cover one day and night shift production, due to planning restrictions and environmental impact.

Development from the 'majors' - Manitowoc, Terex-Demag and Liebherr - has been concentrated at the larger end of the capacity scale. At Conexpo Manitowoc unveiled plans for its 2,300 tonne capacity Model 31000 crawler crane. The highly innovative crane will offer up to 100 metres of main boom plus more than 100 metres of luffing jib. It will also feature a Variable Position Counterweight which is essentially a knuckle boom arm that



Manitowoc's 2300 tonne 31000 which is due for delivery 2010

keeps the load centred over the crane's four track units. The crane has a relatively small footprint of 17 metres by 20 metres, can be transported on 85 truck loads and takes just 10 days to assemble. Manitowoc claims that it will pick and carry its entire load chart and maintain low ground bearing pressure by constantly adjusting the counterweight. The first unit has been ordered by steel erection and heavy crane rental company Bulldog Erectors for delivery in 2010.

Fellow American Link Belt also launched a number of new machines at the show including its largest crawler crane ever, the 500 tonne HC548 which has been

One of four Kobelco 6000's working for Weldex



than 20 units," says Abbott. "We have also sold two, 275 tonne capacity SCX2800 since the summer."

It would be fair to say that all crane manufacturers have had strong demand for their products. Kobelco shipped a record 850 cranes during its latest 12 month financial period to the end of March, but says that it is cautious about future demand. However in its last half year report - to the end of September - crane sales totalled 490 units, an increase of 17 percent over the same period last year with a 30 percent increase in net income. It says that the outlook for the second half remains strong due to a large backlog of orders but warns that demand could be hit drastically by the financial crisis.

Whilst increasing production capacity to cope with the current demand, Kobelco is also taking action to promote sales in developing markets, including the Middle East, South East Asia and India and is accelerating development of new models.

Launched at Bauma last year, Kobelco's 550 tonne SL6000 has sold well in the UK with Weldex now adding four machines into its

fleet. Another new model - the CKE 1100 which was unveiled at SMOPyC in Spain - has already begun to ship - the first unit going to Seth in Portugal and the second to Q-Plant Hire in the UK. Kobelco says that other orders are in the pipeline.

Kobelco is also expanding its facilities in Sharjah to serve the Middle East market and is moving to new premises - still in Almere near Amsterdam - with new workshops and a larger parts storage and distribution centre.

German manufacturer Sennebogen, through its dealer Hassell, has also increased shipments to the UK. Following sales of four telescopic crawlers - including two, 40 tonne 643R and two 80 tonne, 683R cranes - to Weldex late last year, it then sold infrastructure services provider Morgan Est five lattice boom crawler cranes including one 650HD, two 680HD and two 6100HD, the first machines of this type in the UK. Morgan Est also ordered a further seven new cranes including two 680HD, three 650HD lattice boom crawler cranes and also two, 42 metre boom 683HD telescopic crawler cranes.

Largest dragline in the UK for many years - the 6180HD Electric





## crawler cranes C&a

designed with the latest CE rules in mind. The 548 offers a 42 to 108 metre main boom and a heavy duty 24 to 84 metre jib with a luffing jib option.

When Demag launched the CC5800 in 2005 it declared its intention to mount a large-scale offensive on

tonne capacity CC9800 which will officially be launched January/February 2009.

And just to show that it is not all one-way traffic from China, and that they are still a way off producing a very large crane, Terex announced a RMB200 million (\$28.5 million)

Link Belt's largest crawler ever - the 500 tonne HC548



the lattice boomed crane sector producing cranes tailored to the needs of the market. The narrow track chassis CC2800-1 crawler crane launched in August 2006 was the first part of that policy followed by the launch of the 3,200 tonne capacity CC8800-1 Twin last October. It is also testing its 1,600

order for its CC8800-1 Twin crawler crane from the China Nuclear Engineering & Construction Corporation (CNEC), the largest nuclear power construction company in China. Its first job will be at the Haiyang nuclear power project site located in Haiyang County, Shandong Province.

Terex CC8800-1 Twin launched last October



Liebherr is still to reveal details of its range-topping crawler crane, in or around the 2,000 tonne capacity. However it is currently working on a crawler version of its 1,200 tonne LTM 11200-9.1 All Terrain which will be an interesting addition to its range.

So all eyes are to the east for the latest crawler to see how the 1,000 tonners turn out. How long will we have to wait for the really big units? Not very if they continue development at the current pace. Watch this space.

Liebherr LR1600



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# Bridge that gap

Finnish-based heavy-lift contractor Havator had to overcome several tricky challenges during a railway bridge replacement over the River Nyköpingsån, 120km south of Stockholm, Sweden. The time allotted for such a job is typically around a month, but by using its 1,250 tonne capacity Terex Demag CC6800 lattice crane, it hoped to complete the task in less than a week.

Erecting the crane with its optional cruciform-type outriggers to create the pedestal crane version (PC) in place of its tracks meant that ground preparation could be kept to a minimum.

"All we had to do was to prepare four concrete foundations in exactly the right place for the crane's outriggers," said project manager Lars-Olof Carlsson. "For jobs where travelling under load is required, we have the crawler version as well." Havator purchased the CC6800 with 96 metres of main boom, a 108 metre luffing fly jib, Superlift attachment, outrigger option and a modular hook block system with a multitude of possible variations.

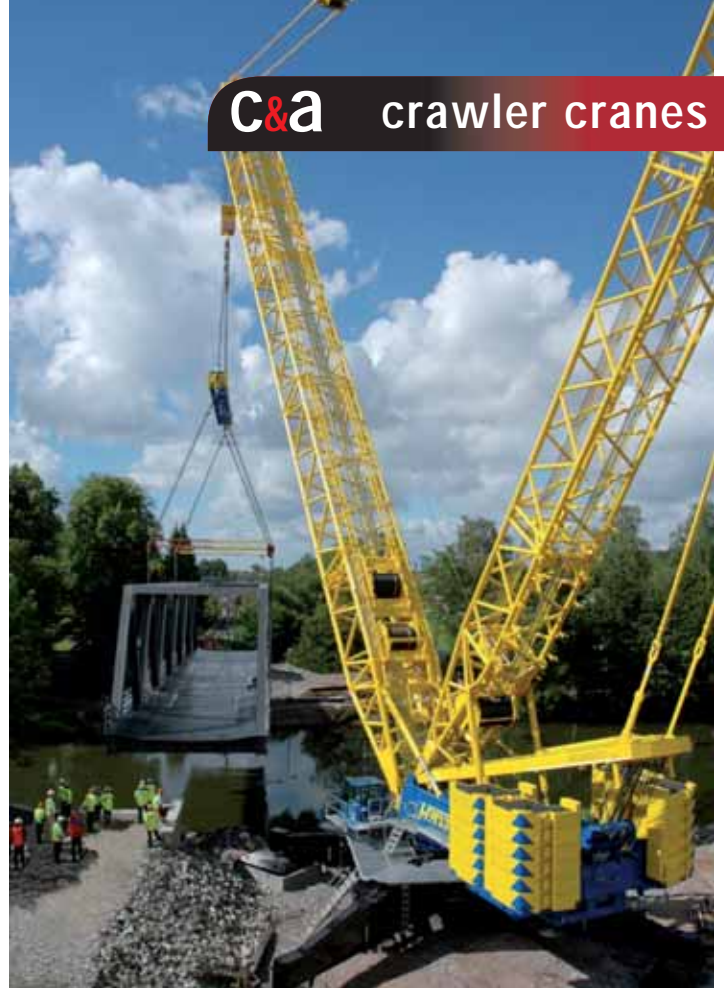
## 320 tonne bridge

Lifting out the old 200 tonne structure was a relatively easy job - a warm up for the main event of

installing the new bridge. Havator's self-propelled modular trailers (SPMT) positioned the new 320 tonne bridge close to the crane which had to be lifted off the flatbed trailers at a specific time on a contractually agreed day. Thanks to extensive preparations by the Havator team, the bridge was lifted two hours ahead of time.

The crane was configured with 60 metres of main boom and superlift/back mast working a 24 metres radius with 400 tonnes of suspended Superlift counterweight and the stabiliser base measures a relatively compact 14 metres square.

The bridge had to be set in place very precisely at a load radius of 36.5 metres and was rigged with a system of spreader bars. In this configuration and radius the crane's maximum lifting capacity is 367 tonnes.



"The operation of the new large crane is as easy and intuitive as our smaller machines such as the CC2200 and TC2800-1 and CC2800-1 and helped in that Demag uses the same IC-1 crane control system in all its crawler cranes," said operator Krister Enarsson. The 1,250 tonne CC6800 has a maximum load moment of 13,952 metre tonnes. By keeping components with a maximum transport width of three metres and a height of 3.5 metres and transport weights to between 15 to 50 tonnes it is reasonably economical to transport anywhere in the world.

Terex Demag says the crane's strengths are in the construction of petrochemical plants and power stations because of the easy assembly and very fast setup times, variable main boom superlift and jib combinations, Quadro crawler drive and hydraulic pinning for boom sections as standard. The variable Superlift with an infinitely adjustable radius from 15 to 24 metres extends the manoeuvrability of the crane on job sites and enables it to work in confined spaces.

Erkki Hanhiova, majority owner and chairman of Havator's supervisory board, says he will continue to invest in large cranes from Terex in order to further expand its position as a leading heavy lift contractor in



the region. "With the new CC 6800 we offer our clients the most powerful crawler crane in Scandinavia" he says.

Havator Group offers lifting services, special transports, installation of prefabricated elements and harbour crane services operating in Finland, Sweden, Norway, Russia and the Baltic countries. The company also has a growing fleet of aerial work platforms, including a 102 metre Wumag WT1000 truck mount. The group has annual revenues of over €100 million with more than 500 employees.