

Mobile cranes roll to record levels

The year 2005 looks like being another record for harbour mobile cranes. The tables on the next page show a total of 159 cranes (including HSK variants from Gottwald) listed by Gottwald, Liebherr and Reggiane.

These tables (2-4) are not comparable since Liebherr has listed only actual deliveries in 2005, whereas Gottwald and Reggiane have listed orders-in-progress as well as 2005 deliveries, although in both cases most of the cranes have been delivered. Liebherr's marketing manager Thomas Bachmann states that following a surge in demand last autumn, the company carried into 2006 a backlog of orders for more than 20 cranes (a company record) that will not be delivered before this spring.

The top five markets for sales last year, in terms of the crane numbers, are shown in Table 1 above. Their combined figure is 81 cranes. This is just about half of all the cranes listed in tables 2-4 and that only goes to prove just how geographically broad the appeal of harbour mobile cranes is, typically with orders in ones and twos for all kinds of applications from port operators all over the world.

Between them Reggiane and Gottwald last year booked orders for 17 cranes in Italy - again the biggest market in numerical terms and where home-based Italgru is also an important player.

Key points

The biggest development from Gottwald is a new 'G' series ("Generation 5") of mobile harbour cranes, with lift capacities up to an unprecedented 200 tonnes-20m. The new cranes are the subject of a separate article on page 28, but there are some points that can be made here to emphasise the different approaches of Gottwald and Liebherr.

- Diesel-electric drive remains Gottwald's preferred solution for all medium and large cranes, so this basic dichotomy with its arch-rival remains. Gottwald's marketing manager Peter Klein says that research by the company has shown that in diesel-electric systems 84 per cent of the power supplied by the diesel engine is output as useful mechanical power at the lifting gear. In diesel-hydraulic systems, however, only 72 per cent of the supplied engine power is output at the lifting gear.

This difference in efficiency, he con-

In November last year two more remarkable Liebherr LHM 250s went into operation at RAO Norilsk Nickel's Port of Dudinka on the Yenesei River, joining the first two LHM 250s that were handed over in 2001. Temperatures in the winter here are in the range of -60 degC and in the spring, when the thick ice layer on the river melts ("otyepel"), most parts of the terminal area are flooded. The construction requires a special low temperature steel material, as standard steel would literally shatter like glass under such cold conditions, a substantial Arctic package including a special preheating arrangement for the diesel power pack and the hydraulic system, a special upgrade of the engine room and "stand still" heating, the exchange of various hydraulic components such as cylinders and valves and special operator cabins equipped with double glazing. In addition, the cranes are equipped with two extra driven axle sets so they can be moved up a steep ramp when the waters rise in spring time



tinues, means that, for a given handling rate, fuel consumption is 17 per cent higher in diesel-hydraulic systems than in diesel-electric systems and the higher fuel consumption of the diesel-hydraulic system cannot be offset by software for better control of the diesel engine.

This last point is aimed at Liebherr's new, "intelligent" fuel economy software that in tests on an LHM 400 operated by Westerlund Corporation, a key customer in Antwerp, was claimed to reduce fuel consumption by 10 litres/running hour, equivalent to a 25 per cent saving (*World-Cargo News*, May 2005, p2).

- Gottwald is staying with relatively few

axle lines. These have individually controlled wheels (for crabbing) that are fitted with large tyres, which it says "cus-

Table 1: Leading destinations for the three main suppliers of harbour mobile cranes in 2005

Country	G	L	R	Total
Italy	8	-	9	17
Iran	5	6	4	15
Spain	4	6	6	14
Belgium	10	3	-	13
UK	5	8	-	13
Russia	6	2	1	9

Notes: G - Gottwald; L - Liebherr; R - Fantuzzi-Reggiane

New "Generation 5" G HMK 7608 from Gottwald under delivery to P&O Ports in Antwerp. This has a 140-tonne hoisting gear and an 845 kW diesel generator. Maximum hoist speed is 100 m/min. See also p28



tomers have come to expect." This is another key difference with Liebherr.

Liebherr reckons that the multi-axle, multi-wheel undercarriage arrangement that it introduced on its new LHM series in 1995-6 has been a major selling point, providing all-round manoeuvrability, including crabbing, and the economy of road truck size tyres that are easy and relatively inexpensive to replace.

For example, the biggest crane, the LHM 500, normally has 20 independently

Table 2: Gottwald - 2005 reference list

Crane type	Customer	Number
G HMK 7608	P&O Ports, Antwerp, Belgium	2
G HMK 8710	Porto di Carrara, Italy	2
HMK 90 E	BNFW, Antwerp, Belgium	1
HMK 90 E	Fresh Fruit Terminal Antwerp, Belgium	2
HMK 90 E	Dover Harbour Board, UK	1
HMK 130 HG	Mina Zayed, Abu Dhabi, UAE	2
HMK 170 E	EP de Ghazaouet, Algeria	1
HMK 170 E	Gem Havenbedrijf Antwerp, Belgium	1
HMK 170 E	Sabah Ports, Kota Kinabalu, Malaysia	2
HMK 170 E	OPM Madeira Canical, Portugal	1
HMK 170 E	PSO Doha, Qatar	1
HMK 170 E	Dover Harbour Board, UK	1
HMK 170 E	MMD Shipping Services Portsmouth, UK	1
HMK 170 EG	Commercial Port of Vladivostok, Russia	2
HMK 170 EG	Vladprom, Vladivostok, Russia	1
HMK 260 E	Fresh Fruit Terminal Antwerp, Belgium	1
HMK 260 E	Porto di Carrara, Italy	1
HMK 260 E	Miri Port Authority, Malaysia	1
HMK 260 E	Novoroslesexport, Novorossiysk, Russia	1
HMK 260 E	Södertälje Hamn, Sweden	1
HMK 260 E	Thai Prosperity Terminal, Bangkok, Thailand	2
HMK 260 E	Tropical Shipping, Riviera Beach, USA	1
HMK 260 EG	Coma y Rivas, Barcelona Spain	1
HMK 260 EG	Clydeport Operations Glasgow, UK	1
HMK 300 E	CdMC Zeebrugge, Belgium	1
HMK 300 E	Gem. Havenbedrijf Antwerp, Belgium	1
HMK 300 E	Zuidnatie Antwerp, Belgium	1
HMK 300 E	Port of Varna, Bulgaria	1
HMK 300 E	Agunsa, San Antonio, Chile	1
HMK 300 E	TPA Arica, Chile	1
HMK 300 E	Aretina Guayaquil, Ecuador	1
HMK 300 E	Port of Rauma, Finland	1
HMK 300 E	Org. Limenos Pireos, Piraeus Greece	1
HMK 300 E	DP World, Cochin, India	2
HMK 300 E	Prima Nur Panurjwan, Jakarta, Indonesia	1
HMK 300 E	South Shipping Line Bd. I Khomeini, Iran	3
HMK 300 E	South Shipping Line, Khorramshar, Iran	2
HMK 300 E	Comap, Augusta, Italy	1
HMK 300 E	MCT Gioia Tauro, Italy	2
HMK 300 E	Reefer Terminal, Vado Ligure, Italy	1
HMK 300 E	Sintermar, Livorno, Italy	1
HMK 300 E	Global Enterprises, Pusan, Korea	1
HMK 300 E	ATP Altamira, Mexico	1
HMK 300 E	Grupo CICE, Veracruz, Mexico	1
HMK 300 E	LCT, Lázaro Cárdenas Mexico	1
HMK 300 E	APM Terminals, Rotterdam, Netherlands	1
HMK 300 E	CCT Moerdijk, Netherlands	1
HMK 300 E	KICT Karachi, Pakistan	2
HMK 300 E	Novorossiysk Commercial Seaport, Russia	2
HMK 300 E	Evyap Lojistik, Kirazliyalı, Turkey	1
HMK 300 E	Ort. Lim. Isletmeciligi, Antalya, Turkey	1
HMK 330 EG	Gujarat Adani Port, Mundra, India	2
HMK 330 EG	Consiflet, La Coruña, Spain	1
HMK 330 EG	Ership, Cartagena, Spain	1
HMK 330 EG	TPS Tarragona, Spain	1
HMK 330 EG	PD Ports, Teesport, UK	1
HMK 330 EG	Carolina Mar. Terminal, Wilm, NC, US	1
HSK 330 EG	Chesapeake BH, Sparrows Pt, US	1
HSK 330 EG	Pacific Coast Recycling Long Beach, US	1
HSK 330 EG	Shipyards River Terminal, Charleston, US	2
Total		76

Notes: G HMK is new series, of diesel-electric cranes (see p28); HMK = harbour mobile; HSK = rail portal-mounted; E = diesel-electric drive; H = diesel-hydraulic; G = 4-rope grab type.

Source: Gottwald Port Technology (Peter Klein)

suspended and steered axle sets, although 24 sets can be fitted if required.

The LHM 500 has been the "chart topper" up to now with a lift capacity under hook of up to 140 tonnes out to 20m and 42 tonnes-51m, although Reggiane's

MHC 250 is understood to have a maximum rating of 150 tonnes.

Italgru's biggest crane, the GS 2400P, launched in 2004, has a maximum rating of 120 tonnes. Up to now Gottwald's heaviest cranes could lift 120 tonnes but, as noted, its G HMK 8710 sets a

Table 3: Reggiane - 2005 reference list

Customer	Location	Number
Terminal Catalunya	Barcelona, Spain	1
Terminal Catalunya	Vilanova i la Geltrú, Spain	1
Rodrimar	Santos, Brazil	1
CLP Neptunia	Taranto, Italy	1
Italcave SpA	Taranto, Italy	2
CLP Crotone	Crotone, Italy	1
Helsingborgs Hamn	Helsingborg, Sweden	1
Teconvi	Itajaí, Brazil	1
SPS Salalah	Salalah, Oman	2
Multi-Link Terminals	St Petersburg, Russia	1
CTP	Castellón, Spain	1
Terminal del Golfo	La Spezia, Italy	1
Estibadora de Motril	Motril, Spain	1
Sapir	Ravenna, Italy	3
PSO	Bahonar, Iran	1
PSO	Lengeh, Iran	1
PSO	Chabahar, Iran	1
PSO	Feriydonkenar, Iran	1
TGC	Castellón, Spain	1
Luka Ploc'e	Ploc'e, Croatia	1
Libra Imbituba	Imbituba, Brazil	1
Sea Port Corp.	Port Sudan, Sudan	1
EST	Catania, Italy	1
Servimad	Málaga, Spain	1
Convicon	Vila do Conde, Brazil	2
Total		30

Source: Fantuzzi-Reggiane (Guido Prignacca)

new standard with a maximum lift capacity of 200 tonnes-20m.

Seaside production

Liebherr's production capacity has been increased by the opening of the new, strategically-located factory in Rostock, Germany. This waterside plant can also be used to ship out fully-erect cranes, unlike the Nenzing, Austria plant, from where cranes are generally moved in pieces by road to the river port of Regensburg.

The Nenzing facility cannot be expanded any more in any case, as there is a main road on one side and a mountain on the other!

Other Liebherr group products being made in Rostock include hydraulic excavators, ship-board cranes and crawler cranes, but not ship-to-shore container cranes, RTGs or RMGs.

Back with a bang

In relative terms, the increase in Reggiane's output compared to 2004 is the most marked (+75 per cent). With final agreement now reached on the Reggio Emilia (RE) site (see item on page 27), the company has the chance to expand its manufacturing capacity at the waterside plant in Monfalcone - again a strategic location as fully-erect cranes can be shipped out. This avoids the extra cost associated with having to disassemble a crane for shipment in pieces after pre-delivery testing at a land-locked factory such as RE.

Guido Prignacca, Fantuzzi-

Reggiane's area manager, Europe for harbour mobile cranes, points out that the top part of the cranes from the slew ring upward can easily be mounted on a portal on rails (RHC), just like Gottwald's HSK or Liebherr's LPS variants.

Provided as standard with all Reggiane's heavy models is the digital Teleassistance system to provide an easy link between the on-board electronics and Reggiane's technical department. This permits an interchange of technical data in real-time and facilitates after-sales service.

All the models in the range can be operated as standard by radio remote control, covering all crane functions. This is useful for long-travelling the crane from the ground, for example, and during maintenance and repair work.

Europe accounted for 60 per cent of Reggiane's orders last year. Sales in Italy and Spain led, but there were also interesting projects in the Balkans and in the Baltic area. The company also draws attention to its sales in Brazil, its repeat deal with Port Sudan (first one supplied in 2002) and the "breakthrough" orders in Iran.

There were no new orders in Belgium last year. In all there are eight Reggiane harbour mobile cranes here - Ostend (1), Gent (3) and Antwerp (4). A "breakthrough" order in Holland could be on the cards this year.

New markets

Established markets for Liebherr

Table 4: Liebherr - cranes delivered in 2005

Crane type	Customer	Number
LHM 150	Peinemann, Holland	1
LHM 150	Londonderry PHC, UK	1
LHM 150	CFT Location, France	1
LHM 150	Tartous Port General Co, Syria	2
LHM 150	Novograins Sarl, Algeria	1
LHM 150	Terminales Maritimas de Aviles, Spain	1
LHM 150	A&P Falmouth Ltd, UK	1
LHM 150	EP d'Annaba, Algeria	1
LHM 150	Gönyü Hafen, Hungary	1
LHM 150	Ege Gübre Sanayii AS, Turkey	1
LHM 250	JSC Norilsk Nickel & Mining, Russia	2
LHM 250	EP de Béjaia, Algeria	3
LHM 250	Fortesolo Serviços Integrados, Brazil	1
LHM 250	EP d'Annaba, Algeria	1
LHM 250	Atlas Steel GmbH (in UK)	2
LHM 250	Blyth Harbour Commission, UK	1
LHM 320	ABP Goole, UK	1
LHM 320	Serra Morena, Rio Grande do Sul, Brazil	1
LHM 320	Port of Tyne Authority, UK	1
LHM 320	ABP Hull, UK	1
LHM 320	PSO Bandar Bushehr, Iran	2
LHM 320	NorSea AS, Norway	1
LHM 400	Ent. J A Cowan et Fils, Fr. Polynesia	1
LHM 400	Bothra Shipping Services, India	2
LHM 400	Klaipėdos Smelte, Lithuania	1
LHM 400	Sea Terminal Sassnitz, Germany	1
LHM 400	Samskip, Iceland	1
LHM 400	Saam, ITI Iquique, Chile	1
LHM 400	Westerlund Corp, Belgium	2
LHM 400	Halmstads Hamn, Sweden	1
LHM 400	Scorpion, Astakos, Greece	2
LHM 500	Westerlund Corp, Belgium	1
LHM 500	Kumport, Turkey	2
LHM 500	Auxiliar Portuaria SL, Spain	1
LHM 500	Serposur, Spain	1
LHM 500	Wallmann & Co, Hamburg, Germany	1
LHM 500	PSO Bandar Iman Khomeini, Iran	4
LPS 500	Tarragona Port Services SA, Spain	3
Total		53

Source: Liebherr-Werk Nenzing (Thomas Bachmann)

such as Spain, Iran and the UK were buoyant last year, but it also made an entry into several new markets - Greece, Hungary, Syria and French Polynesia.

The order for two LHM 400s from Scorpion in Greece is of particular relevance, says Bachmann, as Liebherr has been working on the Greek market for several years against very tough competition. Now that the breakthrough has been achieved, the company feels that more orders will follow.

Bachmann paints a similar picture in Chile, where a Saam concession (Iquique Terminal Internacional) ordered a Liebherr crane for the first time. The orders from Brazil - Serra Morena and grain handler Fortesolo - are described as "strategically important" and the unexpected importance of the Algerian market (six cranes) is emphasised.

The crane for Serra Morena is an LHM 320 G (grab type), equipped with 2 x 70 tonne winches as well as a 26 m³ grab, designed for heavy duty bulk handling. Fortesolo's LHM 250, with an outreach of 38m and a max. lift capacity of 64t (hook), was also equipped with a 4-rope grab with 20 m³ capacity.

500...1000

Whilst the crane delivered to Samskip last year (an LHM 400) was Liebherr's 500th in 30 years of production, Gottwald has sold some 1000 in 49 and, as noted, its

order intake last year was a record 76, compared to 66 in 2004 and 62 in 2003.

Demand was strong in all geo-

Indian file

Problems that arose with mobile crane operations last year at DP World/CCI's Gateway Terminal in Kochi because of overflights by naval aircraft appear to have been settled. Navy officials claimed that the cranes interfered with the flight path of aircraft using the training base located adjacent to the container terminal.

The two new Gottwald HMK 300E cranes were unable to operate at their full outreach of 50m for some 10-15 hours every week. This restriction, shipping agents claimed, caused productivity to drop to 60-65 containers per shift compared to 20-25 moves per crane hour at Tuticorin, and vessel turnaround times suffered as a result. The Navy also objected to the height of some of the container stacks at the terminal, for the same reasons.

As part of the solution, the Navy has set up a telephone "hot line" with Gateway Terminal, which will be informed when overflights are due in the area and the cranes' booms can then be lowered to expedite smooth overflights. □

This new picture from the Port of Liverpool shows the versatility of harbour mobile cranes. The port used a Liebherr crane to offload wind turbine blades from Vestas in Taranto, Italy for swift transfer by road to the site of a mountain windfarm at Mynydd Clogau in Powys, mid-Wales. The shipments were offloaded from the vessels OOSTVORNE and WESTVOORNE at Berth S8, Seaforth Dock. Landed with the 39 blades, each 27.5m long, were 10 nacelles. "The whole discharge, storage and despatch operation went perfectly," said Stephen Deakin of ships' agent OBC Shipping. "The Liebherr crane was ideal and the whole exercise met the client's stringent requirements"



graphic regions. The order intake in Europe, Gottwald's main market, remained strong and the company says it strengthened its position in the Middle East region and in Latin America, which have

Key Fantuzzi agreement

In what could turn out to be a decisive turn for the better for Fantuzzi Noell group, agreement has finally been reached with the unions on the sale of the original Reggiane SpA (ex-Reggiane OMI) factory in Reggio Emilia (RE).

Most of the 26.5-ha site, privately owned by Luciano Fantuzzi, can now be sold to the RE city council, which has long coveted the site, in the heart of the city, for rezoning as housing, recreational and cultural facilities. The sale price is forecast to be in the €150-190 mill range.

At the time of the deal with bondholders and other creditors last year, Mr Fantuzzi declared his willingness to plough the sale proceeds into the company and this could prove timely, as the first €35 mill tranche of the renegotiated €125 mill bond falls due this July (see *WorldCargo News*, May 2004, p4).

Coupled with the increase in group sales and, more importantly, the return to profitability under the company's new management (see *WorldCargo News*, November 2005, p4 for update), an injection of liquidity and reduction of debt should put the group on a much firmer footing that would make its sale in whole or in part far less likely.

In recent years the RE plant had mainly been used for harbour mobile cranes. Even though production has been already been partly transferred to the new waterside facility in Monfalcone - which, crucially, has its own load-out quay for shipment of fully-erect cranes - the closure of the historic RE factory was always going to prove difficult.

It could be that the rumours of the break-up and sale of the group last year to Texas Pacific and/or industrial buyers - with the likely loss of even more jobs - were part of the negotiating tactics. At any rate, under the new agreement with the unions, a 15,000 m² parcel at the RE site will not be sold to the city but will be retained and redeveloped as the corporate headquarters and some engineering will be based there.

Reggiane increased its sales of harbour mobile cranes last year by 75 per cent compared to 2004. Among the last of the consignments from Monfalcone in 2005, was an MHC 200 - the second biggest in Reggiane's range with a maximum lift of 120 tonnes - delivered to Tarros' Terminal del Golfo (TG) ro-lo terminal in La Spezia, for container handling.

Traffic has been growing strongly at TG and privately-owned (by Giorgio Musso) Mediterranean/Aegean feeder and shortsea specialist Tarros recently began two new services: a weekly link with Salonica with a transit time of three days and a monthly link to Béjaia, Algeria with a transit time of two days. □

● It is understood that Reggiane has received an order for two more post-Panamax (16-wide) cranes from Trieste Port Authority for the Molo VII container terminal. SWL is 42 tonnes-42m and 45 tonnes-30m. □

The new MHC 200 at Tarros Lines' Terminal del Golfo, La Spezia facility



become important and continuously growing markets for it in recent years.

In the Middle East there were four orders for eight cranes and in Latin America six orders for six cranes, including the 10th HMC for Chile. As Table 2 shows, performance was also strong in the USA and the Far East.

Sales director Giuseppe Di Lisa emphasises that new customers as well as traditional Gottwald customers have been placing orders. The eight orders in the Far East for 13 cranes included the very first Gottwald cranes for operators in Thailand and market entry was also made in Bulgaria. Today Gottwald cranes are present in 83 countries.

Travelling on barge

The pontoon-mounted HPK variant was

Liebherr's deliveries included this LHM 320 G for intensive bulk handling to Brazilian operator in the Port of Rio Grande do Sul

first provided to a Mississippi midstream operator in 2004 (HPK 330 EG), but a notable order last year was two HSK 330 EG cranes for coal handling from Shipyard River Terminal in Charleston as these rail portal variants are also mounted on pontoons, - the first time that any HSKs have been supplied on a pontoon.

Gottwald is now offering its Visumatic semi-automation system with special options for bulk handling as an extra efficiency aid. A load-sensing mode registers and records the number of lifts required to remove a quantity of bulk goods from the hold, to determine the best procedure and sequence for unloading.



The visualisation and control system determines the bulk tonnage in the individual holds and provides data on the total quantity handled. If the cargo is loaded directly into trucks or wagons, the precise readings make it possible to make full use of the carrying capacity without the risk of overloading (the trucks).

When discharging to a hopper, the cranes can use the point-to-point handling mode to reduce cycle times significantly. Once the hopper location has been entered in the system, Visumatic drives the slewing gear and luffing gear automatically to position the grab over it and the operator has only to lower the grab and open it. The Visumatic is also pre-programmed for direct hopper control via the screen in the crane tower cab. □