

**Noticeable in the booming UK tower crane market is a strong concentration of niche market luffing jib and flat top saddle jib models, largely concentrated in and around the City of London, as HEINZ-GERT KESSEL discovered when he visited late last year**

**A cluster of popular Potain MR220 and MR225 cranes working for Sir Robert McAlpine on inner city sites**

# London towers

**D**ramatic change has characterised the last five years in the UK tower crane market. Following major fleet consolidation in 2002, buoyancy has returned to the market for new tower cranes and it is yet to peak.

New entrants to the market, including Arcomet, London Tower Crane Hire and Sales, and Henry Cranes have emerged and are challenging the established big three companies, Falcon Crane Hire, Select Plant and HTC (Harrington Tower Cranes).

In 2000 it was safe to assume that a white Comedil crane on a site would belong to the growing Select fleet and that a red Wolff would belong to Hewden Tower Cranes, the Wolff distributor for the UK at the time, now represented by HTC. Today, however, a red Wolff could also



be from the Henry fleet, which includes Wolffs bought from HTC. In addition to the Terex-Comedil towers in the Select Plant fleet, units from this

**A Saez S-60 3/6 tonne and a Comedil CTT 161-8, both flat top cranes supplied by London Tower Crane Hire & Sales Limited, which claims to be the fastest growing tower crane rental company in the UK, with a fleet of about 150 units**

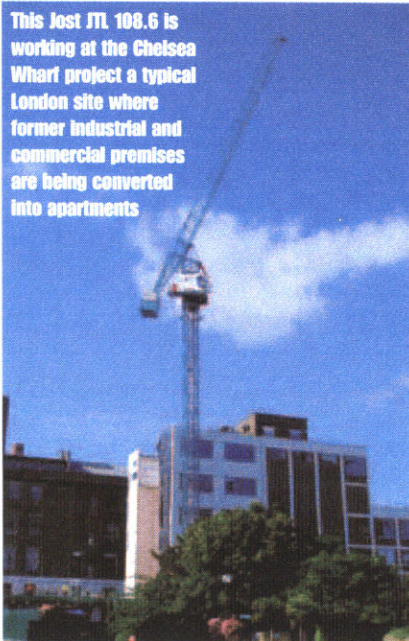
manufacturer have been added to the Arcomet and London Tower Crane fleets.

A visitor to London would notice the number of Peiner SN 86 luffing jib cranes at work on various projects. These units have always proved popular in the UK market, with W.D. Bennett's Plant & Services and Falcon Crane Hire owning several.

A notable difference between the UK tower crane rental market and others, such as Germany



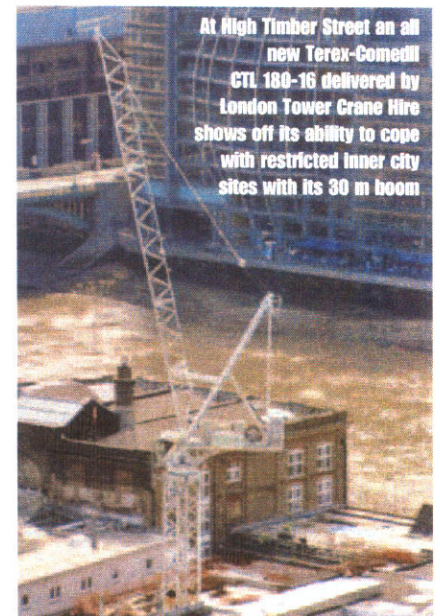
For a house building site at Luking Street, Kier Plant delivered this Liebherr 160 HC-L with 55 m jib. In the one fall operation 8 tonnes can be lifted to 25 m radius and 2 tonnes at 55 m radius



This Jost JTL 108.6 is working at the Chelsea Wharf project a typical London site where former industrial and commercial premises are being converted into apartments



Clearly designed as a city luffing jib crane, this Jaso J80PA supplied by Falcon Crane Hire on a 1.18 x 1.18 m tower system is rigged in the backyard of a renovation project at Great Sutton Street. At 25.5 m radius capacity is 3.5 tonnes



At High Timber Street an all new Terex-Comedil CTL 180-16 delivered by London Tower Crane Hire shows off its ability to cope with restricted inner city sites with its 30 m boom

Details of the BKT typical movable ballast on the BKT BN 105 with a maximum capacity of 8 tonnes on the TG13 city tower system. This crane, originally belonging to Bennett's, was sold to Lancsville Construction, a concrete contractor that entered the tower crane rental industry in 2006 under the name Henry Cranes. Already running 21 cranes, it mainly supplies Mace



for example, is the relationship between the manufacturer and the buyer. In the UK the trend appears to be for a non-exclusive relationship, with the exception being HTC and its Wolff-only fleet. This trend is best illustrated by the new Jost JTL 108.6, a recent entry in the buoyant 100 tonne-metre class. Regional Jost Cranes distributor MTI-Lux has already sold units to Arcomet, Baldwins (which has recently returned to the tower crane market), Bennett's, Falcon and London Tower Cranes. London Tower Cranes operates a fleet of mainly Comedil flat top models and has recently added new Saez models since becoming UK distributor for the Spanish manufacturer.

Visitors looking out over the City of London from the gallery of St Paul's Cathedral will see a large number of luffing jib cranes spread over the →

## TOWER CRANES

area, indicating two more trends. In contrast with other European cities, London has a clearly defined oversailing rights licensing system so luffing jib cranes dominate because they can minimise the oversailing of neighbouring properties.

### London view

In its 264-unit fleet, Falcon Crane Hire has around 90 luffers, mainly Jaso, and most of them are working in London. Select's 337-crane fleet includes 80 luffers, mainly Comedils. With its two CTL630-32s, a 700 tonne-metre version, and about 25 units of the 400 tonne-metre class CTL400-24, Select claims to operate the largest high capacity luffing jib crane fleet in the world. The proportion of luffers to saddle jib cranes in the Bennett's fleet is 40/60 and HTC says that the vast majority of its tower cranes in London are luffers. The fleet of general contractor Sir Robert McAlpine is exclusively Potain MR series luffers, mainly MR220 and the new MR225A.

It used to be that spectacular steel high rise office projects with 500 tonne-metre and above luffers dominated but now there are more medium sized residential projects, narrow city renovation sites and high structures of mixed steel and concrete. Fleet additions are largely in the 100 to 300 tonne-metre range. Many of these are the new Jost JTL 108.6, Terex Comedil CTL140-16 and CTL140-8 models.

In the 100 tonne-metre class the revolutionary flat top luffing jib Jost JTL 108.6 had no real competition at the time of writing in late 2006. This could change with Raimondi's announcement of the LR 90 and Liebherr's new 125 HC-L to be presented at Bauma 2007, and which can be erected on the 120 HC tower system. One can speculate that Potain too will soon have an offering for this market niche.

Since its November 2005 introduction about 40 Jost JTL 108.6 luffers, the backbone



At the 55 Baker Street project this Wolff 180B, the best selling Wolff luffing jib model, is working in the colours of HBG, rented from HTC, alongside two Wolff 100Bs and one 6522FL-6. The 58.5 m free standing 180B is rigged with 55 m jib for a 2.5 t tip load

of Jost crane production, were sold in the UK. Following the same design, with luffing ram instead of luffing winch, is the larger JTL 158.6. UK buyers had ordered 10 units by August, a couple of months prior to presentation of the prototype in October on the Jost test pad in Arneburg, Germany.

Market penetration by new players in the market could largely be attributed to the long delivery times of the established manufacturers due to the worldwide upturn in demand for tower cranes. In the case of the Jost JTL series, however, technical advantages concerning versatility and power consumption are important



A Peiner SN 166 and SN 86, both with rope-moved ballast carriage, towering over the Aybrook apartment project at Blondford Street. Both models were developed with the UK crane market in mind. While the SN 166 is rigged with 40 m jib, providing a tip load of 4.3 tonnes, the SN 86 is rigged with 30 m jib for 3.15 tonnes tip load

additional selling points.

An electrohydraulic luffing mechanism on the Jost JTL158.6 with 3 tonnes capacity at 45 m radius has a power consumption for luffing of 15 kW. The Liebherr 112 HC-L, for example, requires 45 kW for 2.2 tonnes at 45 m radius. The smaller Jost JTL 108.6 requires 11 kW for luffing, while 24 kW is needed for the corresponding Peiner SN 86, which, at around 40 units, was the best selling luffer in its class until production ended. Power supply is critical on many London inner city sites so low consumption drives are a sales argument for Jost. On the other hand, the luffing



Lifting the stripped down machinery platform where the luffing and hoisting winches have been removed to suit the capacity of the MR220 used as the rigging crane

Left: At the New Street Square Building project an all new Potain MT225A was installed on the concrete core using a Potain MR220

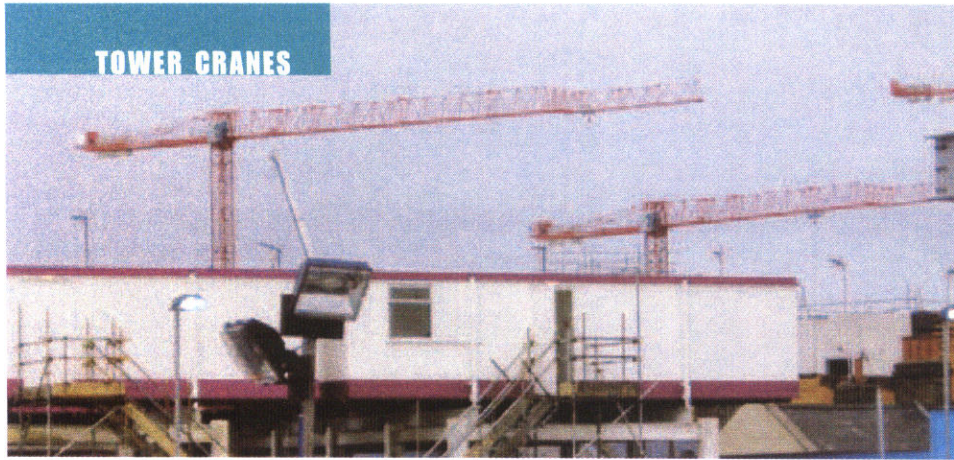


Above: Near King's Cross a Jost JTL 108.6 is rigged on a Peiner S 20 tower system. The detail view shows the unique luffing system consisting of a luffing ram (in red) and a compact electrohydraulic drive unit (in yellow). The hoisting winch (in red) is in front of the turntable

Left: This Tornborgs Magni S-46 supplied by Vertical Transportation is fitted on a combined tower system made up of 1.2 x 1.2 m and 1.8 x 1.8 m Tornborgs tower segments suitable for a free standing working height up to 33.5 m. In the background is one of the Terex Comedil CTT series cranes still dominating the flat top crane scene in London



## TOWER CRANES



**A pair of WT420 e.tronic models makes the London debut for Wilbert at the large scale Westfield shopping centre in White City. While maximum capacity is 16 tonnes, the saddle jib of the flat top cranes can be extended to 85 m where capacity is still 2 tonnes. Thanks to the unique jib design the entire upper crane without counterweight can be transported in four truckloads**



**A new Terex-Comedil CTL 140-8 in the red and white Arcomet colour scheme. Note the cabin design with improved view to the tower bottom**

speed of the electrohydraulic Jost is slower than the traditional winch and rope type.

In most cases the JTL 108.6 is rigged on the 1.38 x 1.38 m Jost city tower system offering up to 30.2 m free standing height on a foundation plate. The ballast swing system means the crane is well balanced in any working condition leading to low overall weight and foundation forces. Counterjib and boom are generally pre-rigged at ground level and lifted up as one unit. For operation on narrow construction sites the jib can be stored at up to 85 degrees in out of service condition.

The Jost JTL 108.6 is competing with and succeeding the Peiner SN 86, Liebherr HB models and the Tornborgs Magni S-46 and S-40 veterans. These jackknife cranes provide a fast luffing speed of 42 m/min and the low weight crane can be installed in the backyard or a lift shaft of a building with its 1.2 x 1.2 m square tower as Tom Newell at UK distributor Vertical Transportation points out. On inner city sites, however, demand is increasing for higher capacity so Vertical Transportation, which still has success with the largest fleet of Tornborgs cranes, is looking at larger luffers to add to the fleet that already includes some Kröll luffing jib cranes.

Jaso has found a ready market in London's city crane luffing jib with its J80PA, which was specially designed for the UK sector. Features include the 1.18 x 1.18 m tower system, the lightweight components of the upper crane and the ability to transport the whole crane with 40 m boom, 31.5 m free standing tower and 4.5 x

4.5 m travelling base, without base ballast, in two truck loads. Maximum capacity is 1.3 tonnes at 40 m, making the crane suitable for housing projects on inner city sites.

In the 100 tonne-metre class BKT veterans BN105 (later produced as the Potain MR105) continue to find a market. Bennett's, for example, operates four of them and advantages cited include, the slewing ballast arrangement and the maximum unit erection weight of 5.1 tonnes.

### In with the new

Joining the Jost JTL 108.6 are two new Terex-Comedil luffers, the CTL 140-8 and the CTL 180-16, which are penetrating the London tower crane market in the hands of several rental houses. Like the well-known CTL 250, the fixed ballast version is used for both cranes. However, in contrast to the older CTL 250 design that is common for modern luffers, a triangular boom design is used to reduce weight and wind area. In addition, both cranes have frequency-regulated drives.

With a 2 tonne tip load on the maximum 55 m jib, the CTL180 competes directly with the best-selling Wolff luffer in the UK market, the 180B. The 16 tonne maximum capacity and 2 tonne capacity at 55 m radius of the CTL180 matches the Liebherr 160HC-L, which is the best selling Liebherr luffer on the UK market but in smaller numbers than the Wolff 180B.

The smaller Terex-Comedil CTL 140-8 offers 1.8 tonnes capacity at 50 m radius and fills a gap between the Wolff 100B and Wolff 160B. It has a counterpart in the Jaso J138PA, extensively used in the Falcon crane fleet. International tower crane rental and sales company, Arcomet, has new Terex-Comedil CTL 140 and CTL 180 luffers up in London in distinctive red and white livery. Last year Arcomet became Potain distributor in the UK and market requirements have contributed to the development of updates to the Potain range in the form of the new MR 225A and, in the higher capacity class, the MR 295, now appearing in London.

A casual observer of London's city sites could be forgiven for not realising that Liebherr is one of the biggest tower crane manufacturers in the world. Again, the special demand for luffing jib cranes may be the reason why only the 160HC-L is represented. In its position in the buoyant 150-200 tonne-metre class the 160 HC-L has



fierce competition. As an example, Edward Eager at Bennett's cites the Jost JL 216.16 luffer. Eager says the moving counter-ballast of the JL 216.16 means low base loadings and surprisingly high lift capacity. At 55 m radius, for example, capacity is 3 tonnes while it is 2 tonnes on the 160 HC-L. Maximum jib length is even 60 m where still 2 tonnes can be lifted. While the biggest component to be rigged for the Liebherr is the machinery deck at around 11 tonnes, the largest component of the Jost upper is 7.16 tonnes.

Developed with the UK market in mind, Peiner presented the 240 tonne-metre SN 166 in 1998. Select has some, following its takeover of Delta Tower Cranes, mainly using them for raising apartment blocks. On projects of this height the 16 tonne maximum component weight of the machinery

**A Potain MR220 and an MR225 on the Ludgate West project, a mixed concrete steel structure. Both are working with 30 m jibs and have to be kept in step position in the out of service condition**





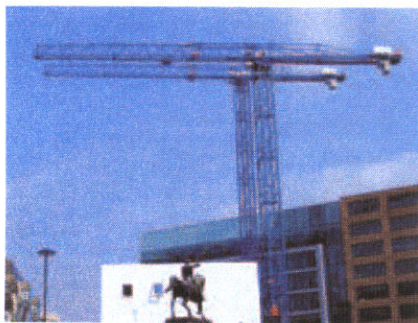
Wolff, distributed by HTC, is clearly in expansion mode, as demonstrated by the huge number of red luffing jib cranes in the inner city area, including many new models with the redesigned cabin

platform and slewing ring can be acceptable.

On London's cramped city sites, however, where mobile crane erection often means expensive road closures, low-weight rigging components can be a real benefit, as recently demonstrated by Sir Robert McAlpine at the large New Square building site where a number of Potain luffers are engaged.

To speed up construction, one luffing jib crane is rigged on top of the building's concrete core as soon as this reaches full height. A large truck crane with luffing jib to erect the tower crane on the core was not an option due to busy roads surrounding the site. McAlpine's solution was to use an already-installed Potain MR220 with 40 m jib and 5.25 tonne tip load to lift the all-new Potain MR225A in the smallest possible components on top of the core. The heaviest part, the 7 tonne machinery deck, was lifted without the luffing and hoisting winch at about 30 m radius and pin-connected to the 7.24 tonne turntable. After this the two winch platforms could quickly be fitted by four pins each to the machinery deck frame.

In the busy market where there is strong new



Two Jost JT 352.12 and JT 312.12 flat top saddle jib cranes working with reduced jib length for Balfour Beatty at the 40 Holborn Viaduct 16,001 m<sup>2</sup> office development project

## TOWER CRANES



At Millstone Road Falcon Crane Hire operates its Jost JL 316.16 with 60 m boom and movable ballast. At maximum radius 4 tonnes can be lifted on two falls

competition focused on London and some other big UK cities, there is an even clearer need than usual for rental companies to refine their crane fleets to make sure they can offer exactly what the market is demanding as quickly as possible. This can mean fleets containing cranes from two or more manufacturers. Falcon Crane Hire, for example, where nearly two-thirds of the fleet is Jaso, added a new Jost JL 316.16 upper crane, which it mounts on the Peiner TS 21.2 tower system already in Falcon's fleet. In two-fall mode at 60 m radius 4 tonnes can be handled by this crane, which has the patented JOMOBA (Jost Moving Ballast) system.

Regarding rental rates, the tip load capacity is especially important in the UK. In this respect the Jost JL316.16 is pushing into the 350 tonne-metre class previously mainly served by the bigger and, therefore, more expensive Terex Comedit CTL 400, providing 4.9 tonnes capacity at 60 m radius.

### Saddle jib

Like luffing jib cranes, flat top saddle jib cranes are also trendsetters in sophisticated tower crane design. In addition to the well-established Comedit CTT series, again newcomers to the UK crane market, including Jost, Saez and Wilbert, are present in London with all new crane models. A Jost JT 312.12 and a larger JT 352.12 are working at the new office development, 40 Holborn Viaduct. Rigged on the 2.24 x 2.24 m Jost TH20.3 tower system, the cranes have reduced jib length to suit site conditions.

A way into the market can be price but delivery times, reliability and spare parts availability, among others, can be decisive factors. Wilbert from Germany entered the market on a cross-hire basis with two WT420 topless saddle jib cranes in the 400 tonne-metre class on the White City shopping centre project. In addition to the unique economic transport logistics developed by Wilbert, it was reliability that impressed the customer, as did engineering tradition and rental business experience. It is likely that this undisclosed rental company will add Wilbert cranes to its crane fleet in the near future.

According to Juan Martinez Gracia, export manager at Saez, the best selling flat top model of the Saez crane range on the UK market is the S-60, a 3/6 tonne flat top tower crane. Two cranes are already working in London – specially adapted models with short jibs – as an example of the design flexibility typically required in the London tower crane market.

# FERRARI

## 90 t/m crane up to 10 hydraulic extensions

NEW



# 990 A10

## The REVOLUTION



# FERRARI



F.lli Ferrari Corporation S.p.A.  
Via Poaglio, 3  
42022 Boretto (RE) Italia  
Tel. +39 0522 484311  
Fax +39 0522 484338  
E-mail: marketing@Ferrari.it  
www.Ferrari.com

TRUCK CRANES FROM 1 to 90 Tm.