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*At Fecamp, NFT, Potain and Uperio provide cranes, specialised parts and erection and service, for Bouygues vast offshore wind turbine foundation fabrication yard*



# SMOOTHING THE CYCLE

**Manitowoc - which includes Potain - is the latest tower crane manufacturer to add direct crane rental to its services. Will North looks at how this approach might benefit independent rental houses, as well as end users and the manufacturers themselves.**

**Cyclicality is a key challenge in the construction industry which has a major impact on the tower crane industry. Owners of rental fleets are always battling with the timing of their new equipment purchases and disposals in order to benefit from upswings in demand, without holding too much underutilised equipment in a downturn.**

While rental companies can cut their capital expenditure with little notice - although previous purchase still need funding - manufacturers cannot, given the extended supply chains, long lead times for their investments and ability to adjust highly skilled workforces. It takes time, especially with larger more specialised equipment like cranes, to cut production capacity and more of a challenge to ramp up.

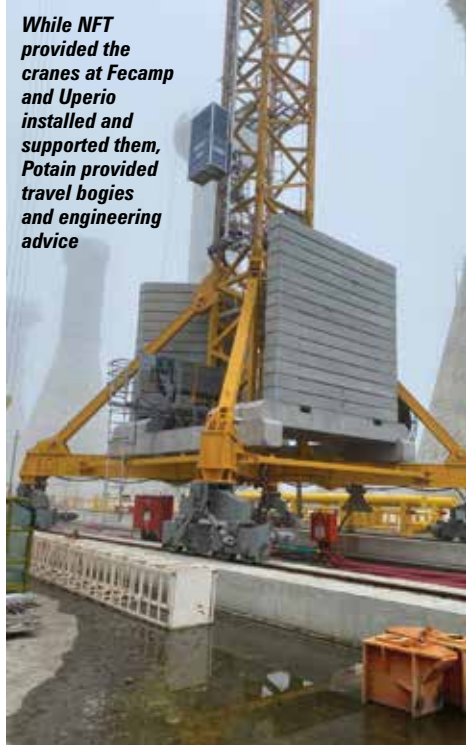
The tower crane industry - particularly the medium and lower capacity classes - is closely tied to two market sectors: residential and commercial construction, both of which are particularly prone to the variables of economic cycles. Schedules for major projects such as power generation or major infrastructure products are so long that they do not tend to stop in a downturn. But the market for residential skyscrapers, office developments or retail and entertainment complexes can rise and fall over the course of a few months. Although tower cranes do not tend to be removed from a stopped project as much as mobile cranes, the ability or willingness of a developer to pay for an idled crane can still have an impact.

One way to avoid the highs and lows of a cyclical business is to diversify. Those long-term infrastructure and energy jobs usually require high capacity tower cranes. A fleet that includes these, alongside more standard equipment, may be able to win work that other competitors cannot. But, for fleets below a certain size without a wide geographic coverage, finding consistent work for high capacity cranes can be a challenge.

The larger crane manufacturers have the advantage of crane lines that meet a variety of market sectors. This was part of Tadano's motivation for the Demag acquisition, adding crawlers and larger All Terrain cranes to its range. Others such as Liebherr, the Terex cranes business as was, Japan's Kobelco cranes and Hitachi/Sumitomo/Link-Belt, or China's XCMG, Zoomlion, and Sany, are parts of much larger diversified corporations and are often part of the parent group's diversification strategy.

## **DIVERSIFICATION STRATEGIES**

This was the case for Manitowoc for much of its history. It began in 1902 as a shipbuilder on the Great Lakes, before adapting its skills to add lattice boomed crawler crane production in the mid 1920s. Further diversification came after World War II when it started manufacturing commercial refrigeration equipment, acquiring related businesses along the way. The crane division added tower crane manufacturer Potain to the mix in 2001, with wheeled mobile crane manufacturer Grove joining the following year.



*While NFT provided the cranes at Fecamp and Uperio installed and supported them, Potain provided travel bogies and engineering advice*





*Two of Wolffkran's giant 1250 B luffers at work on the Spittalamm Replacement Dam project, in Lake Grimsell in the Alps*

Credit: videobilder.ch

Over the following decade Manitowoc's customer base covered a wide and varied swathe of the economy including shipbuilding, ship repair work often for the US government, and the consistent demand from the restaurant and catering market, each of which helped offset against the up and down cycles of each sector which were rarely on the same calendar. However, by 2008 the increasingly challenging ship building business had become an increasingly small part of the whole and was sold to Italy's Fincantieri.

That same year, the company acquired the food service business of Enodis. For a few years, the sure and steady food sector balanced the cycles of the crane industry. But, by 2015, some activist investors saw the quick profit potential of spinning off and splitting the two businesses. They got their way and in 2016 the Manitowoc crane operation became a standalone business.

**ALONE AGAIN**

For the next few years, the company's focus was purely on building and selling new cranes, and the resulting after-sales support. Christophe Simoncelli senior vice president for Potain tower cranes in Europe confirms: "The way to invest into our product was basically to invest into our production capacity, or to invest into the development of new products."

At an earnings call to discuss the company's 2021 results, chief executive Aaron Ravenscroft presented his first full year financial results since replacing Barry Pennypacker in August 2020.

His presentation laid out a new approach and strategy which the company is calling 'Cranes+50'.

"Our goal is to increase our aftermarket or non-new machine sales by 50 percent over the next five years. Historically, our business model has been highly product focussed," said Ravenscroft. "Our objective is to grow beyond machines and products and to sell more aftermarket parts, field service, lifting solutions, rentals for fleet management, used sales, remanufactured cranes and digital solutions

that provide greater customer connectivity. As a jumping-off point, we ended 2021 with \$449 million in non-new machine sales."

Reporting the first quarter 2022 earnings just three months later, Ravenscroft highlighted the fact that revenues from areas other than new crane sales had increased 20 percent year on year, mostly due to the acquisition of the crane operations of one of its major distributors, Louisiana-based H&E Equipment as well as the assets of Aspen Equipment.

Ravenscroft explained that the new business formed in part from these acquisitions - MGX - would boost Manitowoc's aftermarket activities in



*Luffers, such as these 1250 B Wolffs, are only heavily used in certain cities, and large projects.*

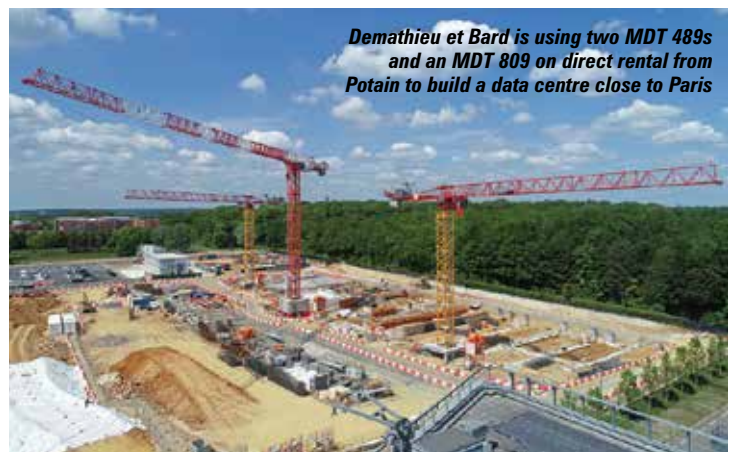
Credit: GrimselFoto.ch, D. Birki

the mobile crane market and how it would allow Manitowoc to more strategically participate in used All Terrain crane sales. The company could buy or trade in second hand cranes in Germany, where the newest All Terrains are perhaps most highly prized, and ship them to America, where customers tend to be more 'value focussed'.

Another strand to the Cranes+50 strategy is Manitowoc's investment in a tower crane rental fleet. In 2021, the company invested \$15 million in its European tower crane fleet, which, according to Ravenscroft: "Helped us increase our market share in Germany and win some strategic orders with key accounts." The company currently has



*At the Tour Mirabeau project in Marseille, Potain is supplying four anchorage frames for two units of its MR 295 rope luffer*



*Demathieu et Bard is using two MDT 489s and an MDT 809 on direct rental from Potain to build a data centre close to Paris*



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*...and they can assemble them for customers*

around 100 cranes in the fleet and is continuing to ramp up its investment programme.

While the company's switch in investment focus to add areas other than just new crane production is recent, its involvement in the tower crane rental market is not new. In the past, Potain used to offer cranes for direct rental in major European markets such as Germany and France. In the 1980s and 1990s it had a strong rental fleet for both self-erecting and top-slewing cranes in both countries. These activities were halted at the end of the 1990s and only to quietly resume in a modest way in 2011.

"In Germany the company restarted in 2011 with a focus on the top slewing crane business and a few years back, also restarted the rental business in France focusing on large capacity top slewing and luffing jib cranes, but also on big crane components for specific mast compositions," says Simoncelli.

This approach helps the company find work for its largest cranes, over a wide geographic area. By focusing on these more niche cranes, it can help build sales without competing directly with its customers which have more general rental fleets. But it can also help those customers win contracts that they could not otherwise be able to compete for.

France and Germany remain the largest market for its rental operation, thanks to a dedicated rental and used crane facility in the Paris area, which it has extended recently. In Germany, it operates two rental yards, and occasionally makes use of space at its local distributors.

## **DIFFERENCES BETWEEN FRANCE AND GERMANY**

In France, where the company has an established top slewing crane distribution and rental network, the key focus is on supplementing its existing offer. "Our French fleet is made up of big machines not otherwise available on the market. It includes luffers and new models that we want to promote, plus specific devices such as internal climbing systems. Most dealers, rental houses and even contractors are unwilling to invest in them because utilisation is pretty low. So, as we have European coverage, we have the possibility to maximise the utilisation of this type of equipment, we put it into our rental fleet helping complement customers' own fleets," says Simoncelli.

The focus is somewhat different in Germany. Here, Potain does not have distribution partners with large top-slewing crane fleets. Instead, it works with a number of smaller, regional distributors and rental companies which have fleets well stocked with self-erectors, but not so well populated with top slewing cranes. "They

are very strong on the self-erecting crane segment, but they don't have the capacity to fulfil all the top slewing rental demand," he says. "So we rent to them, so they can re-rent to the market." The core of this market is made up of relatively smaller cranes, with capacities ranging from six tonnes up to 10 or occasionally 12 tonnes.

In Germany a 25 tonne MDT 569 with jib tip capacity of 4.2 tonnes at 80 metres is working on a battery plant near one of Europe's busiest and most high profile projects, Tesla's new 'gigafactory' plant on the outskirts of Berlin. Potain's Berlin based distributor Wilhelm Banzhaf has rented the crane from Manitowoc in order to re-rent it for the project.

In Paris, one job site has two of the new 20 tonne capacity MDT 489 flat top cranes on site with a 3.5 tonne capacity at its 88 metre jib tip. On the same site an MDT 809 is working with an 8.3 tonne jib tip capacity on its 80 metre jib. The customer, Demathieu et Bard, already has 55 tower cranes in its mostly Potain fleet, but chose to supplement them with the new or larger cranes.

One advantage of contracts like this, Simoncelli says, is that it allows Potain to demonstrate the advantages of its latest products to customers, without them committing to an immediate purchase.

At Fecamp, near Le Havre, French contractor Bouygues is building 71 wind turbine foundation pieces, ready to be shipped to a new 500MW offshore wind farm. The job required 16 Potain MR 608, 32 tonne luffing jib cranes with a 60 metre jib able to handle nine tonnes at maximum its radius. The foundation pieces are being built concurrently over a large facility, with the cranes travelling on rails between them.

For this job, Potain worked with two key partners: NFT, which provided the cranes, and Uperio, which installed them on site and takes care of their maintenance. Potain provided technical support and from its own rental fleet, the big chassis and bogies needed to complete the crane package and allow the equipment to move as needed.

## **RIISING ABOVE ADVERSITY**

Wolffkran's rental fleet has grown in a slightly different way. The company started offering direct rental in the 1990s and has grown this both organically and through acquisitions. One of those acquisitions, the UK's HTC Plant, demonstrates



*Credit (all in group): Grimselfoto.ch, D. Bürki*

the challenge that independent tower crane rental companies can face.

HTC had gone through a series of owners but had been Wolffkran's exclusive distributor in the UK since the 1970s, having started buying the German cranes in 1975. In the years following the millennium, the company invested heavily in a booming market. When the global financial crisis hit in 2008 and 2009, it was ill-prepared to cope with the resulting downturn.

The company bled out financially for several years, in a market defined by low demand and low rates. A collapse like this can damage the whole industry as fleet owners are tempted to accept uncommercial rates and terms in an attempt to keep up with financial commitments. When that happens with a large fleet it suppresses new crane sales and adds to the downward spiral in rental rates.

By 2015, Wolffkran stepped in, apparently getting a good deal to buy the company. The deal boosted the size of the Wolffkran group rental fleet, and perhaps saved the UK market from the ugly impact of a major player continuing to struggle to stay afloat.

Today, Wolffkran is led by a former HTC - and Select - executive Duncan Salt. Dave Holder - whose first job out of school in 1981 was at one of HTC's predecessor companies - is now director of European operations for Wolffkran's group rental fleet.

## **THE WOLFFKRAN FLEET**

The Wolffkran fleet is significantly larger and has a wider geographic spread than Manitowoc's. "We have about 200 units in the UK," says Holder, "around 150 over three depots in Germany and between 100 and 150 in Switzerland at two locations. We also have rental fleets in France and Belgium, while our Austrian fleet is getting stronger. And in the US we now have just 20 units but are trying to build up the rental fleet there." In total, the fleet comprises around 700 units.



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The UK market is an unusual one, and one in which Wolffkran plays an important role. There are few spots in central London without at least one cluster of red luffing jibs pointing skyward. The acquisition of HTC both stabilised the business in the UK and added some specialised cranes to Wolffkran's fleet. Applications for luffers are still rare outside of the UK but when a customer needs one, Wolffkran is in a much better placed to provide them.

"We share the availability of the full 700 assets," says Holder. "The UK is more luffing crane dominated, and we tend to focus the luffing crane fleet there. When we have work for luffers in other parts of Europe, they tend to ship out from the UK and return there afterwards. We mix the saddle jibs around different areas. The smaller cranes tend to be more popular in Switzerland and Austria, larger cranes in Belgium and the Netherlands."

The Netherlands has a particular demand for cranes able to handle heavy prefabricated elements. "It's quite a market for large saddle jib cranes and even though there are a lot of them there, the rates reflect that. You tend to be very busy in the Netherlands, but you won't get rich doing it."

### NO ADVANCE PLANNING CAN BE ADVANTAGEOUS

Beyond the particular demands of markets in the UK and the Netherlands, more general requirements can be seen across mainland Europe. "There's a fairly standard size of crane across much of mainland Europe, including France and Germany. They tend to be 200 tonne/metre up to about 400 tonne/metre, and all the companies stock flattop or saddle jib cranes, therefore, they have maximum flexibility. The fact that nobody plans well in advance of a job is actually quite an advantage. Companies expect to pick up the phone at request a crane at very short notice."

"As this expectation is so widespread, fleets do not tend to commit to orders in advance, fleets with the right number of these cranes can benefit from consistent work coming in at short notice. The problem, for rental fleets and customers, comes when larger cranes are needed. Even for a direct rental manufacturer like Wolffkran, with an international fleet of luffers and heavy cranes, this can be a challenge. They tend to think that all cranes are available at short notice. But when you're talking of luffing cranes and anything over 400 tonne/metres, they're not. You have to do a little bit more planning than that. And that comes as a bit of a shock and a surprise."

### UP TO 25 YEARS LIFESPAN

As well as supplementing independent rental companies with luffing jib and larger saddle jib cranes, Wolffkran's fleet can help take some of the risk away from their crane purchases. "Customers can take a new crane, use it for three to five years, and we'll then take it back into the rental fleet. It's ideal for us, especially if we've done the maintenance through a service deal. Our fleet age profile tends to be quite high, because it's a very well-made product. Ideally, we try and get 20 to 25 years out of it."

However not every regulator or major contractor



*In September 2021, Van der Spek subsidiary Hexagone took over Liebherr's direct rental business in the Paris region and Northern France*

recognises the longevity potential, which often prevents national companies running older fleets. Wolffkran uses its geographic spread, often finding work in markets where age is less important than condition and rental company reputation.

A manufacturer like Wolffkran, can support demand for its used cranes, but there are limits of course. "The buyback rates for a complete cash trade-in are not as attractive as for part exchange," says Holder. "And it has to be a model that sits within our rental portfolio."

This can help contractors with their own fleets, re-renting the specialist cranes to work alongside the standard models from their own fleets. While they may choose to buy a crane out right for longer term jobs saving money on rental costs, they may struggle to find work for the crane when the contract ends.

"We're just in the middle of buying one back from Balfour Beatty," says Holder. "It's just under three years old, it's never broken down, and works perfectly. They bought the model for a specific project, and now they haven't got work for it. They don't want it sitting in the yard so it's coming back to our into Sheffield yard, where it will be returned to Wolff red and will go back into service."

### TARGETING DEMAND

The idea of crane manufacturers building their own direct rental fleets, can cause concern for independents, on the basis that they might use their advantage to undercut prices, while others will consider a purchase from such a manufacturer as an investment in a rival.

The manufacturers are unable to reassure them lest it be seen as colluding on pricing. Manufacturers have to make their own assessments on the pros and cons. In any market, local knowledge is key. A well run and funded independent rental company always has the advantage over a large manufacturer. They speak the same language and can react more quickly.

### A COUNTER TREND

While the trend appears to have been moving towards manufacturers renting directly, there have been examples of them stepping back from a market when an independent company is ready and willing to take over.

That was the case for Liebherr in France last year when it sold its Paris-based tower crane rental fleet - Liebherr-Grues à Tour SAS - to Hexagone, a subsidiary of Netherlands-based Van der Spek which runs a fleet of Liebherr tower cranes shaped by domestic demand for high capacity cranes to handle heavy prefabricated concrete building modules.



*Liebherr retained the tower crane support centre at its former direct rental subsidiary in Fontenay-Trésigny, which will now support customers across the country*



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*Liebherr's new 470 EC-B at work in the Carlsberg Byen district of Copenhagen*



While Hexagone took over the Liebherr fleet in Île-de-France and Northern France, the manufacturer did not abandon its presence in the region. As part of the deal, it retained its facility at Fontenay-Trésigny, which had been the base for its direct rental subsidiary, converting it into the Liebherr National Technical Centre for tower cranes across France.

## TOP PLAYER

Liebherr still runs by far the largest of the direct rental fleets we've covered in this article, with a fleet of more than 1,650 cranes worldwide - twice as many as Potain and Wolffkran combined. But the company isn't looking to compete with its customers. Stefan Groeber, head of TCC (Tower Crane Centre) used and rental at Liebherr says: "We are active worldwide and offer our rental services through our dealer/partner structure, as they are very familiar with the local conditions. In markets without dealers or partners, we usually only become active if it is a large project and our support is requested. We only offer direct rental in exceptional cases when we do not have a local dealer or partner."

Despite its size, Liebherr did not get into the direct rental business that much earlier than Manitowoc. In fact, the business started up in much the same way, and under similar market conditions, as Wolffkran's expansionary acquisition of HTC.

Marco Guariglia, sales manager at Liebherr-Werk Biberach explains: "We started in the south of Germany in 2009. At that time, a dealer in southern Germany gave up his business and the decision was made to serve parts of the market there ourselves, to act in the same way as our dealers, but directly from the factory. Then in 2013, it was strategically decided to serve the international used and rental market directly from Liebherr. The initial focus was on the rental of special parts or special cranes. This means that if a dealer or partner has a large project or a special set-up, we keep the parts in stock and rent these out to them. In other words, we keep parts that

the dealer does not need in his daily work. These are for example special adapters, large bases or certain cranes like our HC-L (luffer) cranes or larger EC-H cranes."

"In the used crane business, the focus was on taking back used equipment from our dealers and partners as well as finding suitable equipment when requested. At the same time, our dealers and partners can then order new cranes from the factory. All these activities take place worldwide, which means, for example, that a crane can be taken from Dubai to Germany, inspected, and then shipped on to France."

The bulk of the Liebherr rental fleet consists of smaller cranes and even includes self-erectors. Around 1600 cranes with capacities up to 400 metre/tonnes are based at directly owned rental subsidiaries as far afield as Switzerland and Australia.

At the Tower Crane Centre in Bad Waldsee, Germany, Liebherr also maintains an international fleet of 50 cranes, including large cranes such as

*A 1000 EC-H 50 Litronic from Liebherr's rental fleet was used at this cement plant in Schelklingen*



a Liebherr 1000 EC-H 40. The Centre also holds many special components such as climbing cages and travel bogies. These can be used to support customers' own crane packages, backed-up with engineering support from Liebherr's Tower Crane Solutions division. ■



*Four 357 HC-L 18/32 Litronic and two 280 HC-L 12/24 Litronic luffing jib cranes from Liebherr's rental fleet were used on the Axel Springer Verlag in Berlin*



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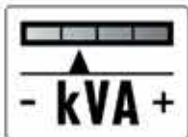
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CTT 202-10	10 t	65 m	2.1 t



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