

LookingUP

A MANITOWOC CRANES MAGAZINE



Floating counterweight

COMPANY UPDATE
Global streamlining

JOB SITE REPORT
Potain in Switzerland

CUSTOMER PROFILE
Grúas Böhme in Chile

"The MLC650 and MLC300 will be game changers in the crawler crane market."

Joe Vaccarello, MAXIM Crane Works

"The VPC technology is going to set a new standard in Ground Bearing Pressure standards and expectations."

Paul Belcher, Mountain Crane Service

"The VPC technology reduces ground prep, which is an immediate savings for our customers."

Rick Mikut, ALL Erection & Crane Rental Corp.

MLC300 / MLC650

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Comment

It's safe to say that 2014 has been a monumental year for Manitowoc Cranes. Not only has the company released a load of cutting-edge products and services this year, its organizational structure has been completely overhauled.

What we're seeing is a dynamic company at the height of its prowess. The ability to adeptly respond to the forces shaping markets around the world is the hallmark of companies that remain at the top. Full-swing into its second century of existence, Manitowoc Cranes is still adapting, still innovating and still leading the global crane market.

In this issue, we'll take a deeper look behind the scenes at Manitowoc to learn more about what makes this market leadership possible. Global EVP Larry Weyers gives us an in-depth look at the company's reorganization, which in many ways was a natural progression given the acquisitions of Grove, Potain and National Crane over the last few decades. We'll learn how Manitowoc is streamlining the company to be nimble and responsive on a global scale.

We also take a look at Manitowoc's stringent testing regimen, as the Manitowoc MLC650, a crane with the



Ben Shaw
Editor-In-Chief

lauded Variable Position Counterweight (VPC) system, was recently certified by the company's engineers to lift its advertised weight (page 14). Additionally, a new laser welding system at the factory in Wilhelmshaven, Germany, shows how investments in new technology are producing better cranes (page 23). It's efforts like this that lead to milestones like the 5001st Potain tower crane leaving the Zhangjiagang factory in China (page 18).

And it wouldn't be *Looking Up* magazine if we didn't examine how Manitowoc's newest technologies were faring on the job site. The VPC system on the Manitowoc 31000 is halving the cost and time spent on projects for Chunjo in South Korea (page 9). The Grove GMK6400 is taking the place of an entire fleet of cranes for Canada's Guay (page 22). And in the U.S., lifters are choosing Grove to place priceless, irreplaceable artifacts for the Smithsonian Institute (page 17).

Manitowoc Cranes is firing on all cylinders. From research and development to performance on the job site and superior aftermarket support, the company is laser-focused to be the best in the industry. All told, 2014 will go down in company history as a banner year.

IN THIS ISSUE

4	News	Manitowoc around the world
9	Job Site Report	VPC in South Korea
10	Company Update	Larry Weyers on reorganization
12	Job Site Report	Potain in Switzerland
14	Product Update	Manitowoc MLC650
15	Crane Care	EnCORE work in India
17	Job Site Report	Grove at the Smithsonian
18	Company Update	Potain in Zhangjiagang
19	Show Report	Manitowoc on several continents
20	Customer profile	Grúas Böhme in Chile
22	Product Report	GMK6400 for Guay
23	Technical Update	New Laser welding



On the cover:
The Manitowoc 31000, which features the lauded Variable Position Counter-weight (VPC) technology, made lifts at a petrochemical plant in South Korea for Chunjo Construction. *Looking Up* reports on page 9.



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September 2014

A number of trade and brand names appear in *Looking Up*. For ease of design, these are displayed without their superscript or subscript symbols. The most common names are: MANITOWOC®, NATIONAL CRANE®, MANITOWOC CRANE CARE®, MANITOWOC FINANCE®, GROVE®, POTAIN®, TWIN-LOCK™, MEGATRAK™, MEGAFORM™, EPIC®, CRANESTAR®, VISION CAB™, MAX-ER™ and RINGER®.

Manitowoc names new EnCORE partner in Chile

Manitowoc has partnered with Santiago-based Sigdo Koppers to become the first official EnCORE partner in Chile, as it continues to expand the network of support offerings in Latin America.

One of Chile's largest engineering and construction conglomerates, Sigdo Koppers offers full repair and refurbishment services for Manitowoc crawler cranes, Grove mobile cranes, Potain tower cranes and National Crane boom trucks from its hub in the Chilean capital.

"This partnership



Representatives from Sigdo Koppers and Manitowoc Cranes celebrate the company's new EnCORE partner status at Expomin 2014, in Santiago, Chile.

underscores our skills and capabilities in providing first-class service for

Manitowoc cranes," said Felipe Barros, operation equipment manager

at Sigdo Koppers.

Rodrigo Stefanini, senior manager of EnCORE in Latin America, said the company was chosen for its commitment to quality.

"The combination of the company's facilities and its commitment to supporting Manitowoc customers was the key to choosing Sigdo Koppers as our new EnCORE partner."

Manitowoc's EnCORE program now has 19 partners operating from 33 locations around the globe. Its newest locations are in Africa and Latin America.

America's tallest flagpole



A mainstay on wind farm developments, the 16000 is the ideal tool for the project.

A 400 t (440 USt) Manitowoc 16000 crawler crane helped construct the tallest flagpole in the U.S. at ACUITY insurance company's headquarters in Sheboygan, Wis.

Standing at 122 m

(400 ft) in the air, the new landmark is visible from up to 18 km (11 miles) away. The flagpole was installed just in time for the country's Memorial Day celebration. The completed structure weighs 191 t (210 USt).

Mortenson Construction, located in Brookfield, Wis., chose the Manitowoc 16000 for its proven track record of success on similar projects, such as wind farm development.

"We are fulfilling our promise to raise the country's tallest symbol of freedom to pay tribute to the American Veterans," said Sheri Murphy, vice president of services and administration for ACUITY.

Mortenson said there were no surprises and the crane performed flawlessly.

India's new superhighway

The Jammu to Udhampur Highway project is one of India's largest construction projects, and 19 Grove rough-terrain cranes are at the center of the action. The cranes are helping to build 54 bridges, 16 viaducts, eight cross ducts and four tunnels along the stretch of the unfinished roadway. Some 8,000 workers have been called in to the lengthy job site.

On the project is a mix of 60 t capacity RT765E-2s and 30 t capacity RT530-2s, all owned by main contractor Afcons Infrastructure. The company is an ardent user of Grove cranes, having more than 30 in its fleet.

"Working on a narrow and treacherous road – in either extreme heat or torrential rain – is no easy



One of the 19 Grove rough-terrain cranes on the highway project places a concrete beam.

task but the Grove cranes offer excellent maneuverability and are quick to set up, which means we've moved the project along smoothly," said Biplob Chakraborty, deputy general manager of equipment at Afcons.

Potain raises Europe's largest mall

A group of 11 Potain tower cranes are helping to build the largest shopping mall in Europe. Covering 463,000 m² (4,983,732 ft²), Avia Park will be an entertainment and shopping complex in the heart of downtown Moscow, Russia.

Potain cranes were chosen for the landmark project because of the wide variety of capabilities that they offer, said Serhan Arpacı at Rentakran, which supplied the cranes to contractor Renaissance.

"The project needed efficient cranes that can

be individually configured and work for long hours without stoppages," he said. "We immediately thought of Potain, which produces the best quality tower cranes available in Russia."

Potain cranes, including three MC 235 Bs, two MDT 178s, two MC 310 Cs, two MD 265 Bs, an MD 310 C and an MD 285 C, were erected at the job site in March 2013, where they will remain highly active until the project nears completion towards the end of 2014.



Potain tower cranes lift formwork, rebar, structural components, scaffolding and façade materials at the job site.

Remembering Henry and Andre



Henry Wells

Two of the African crane industry's best-loved figures, together with their pilot, were tragically killed in an air accident in February this year. Henry Wells and Andre Odendaal of Crane Load Tech were the only passengers in the aircraft that crash-landed in bad weather at Lanseria Airport by Johannesburg, South Africa.

Crane Load Tech is the Grove dealer for South Africa and was founded by Henry Wells in 1988, while workshop manager, Andre Odendaal, joined the company in 2004. Both were well-liked and well-



Andre Odendaal

respected by customers, colleagues and competitors across South Africa and the surrounding region.

"Henry and Andre weren't just two great crane people, they were two great all-round people," said Eric Etchart, president and general manager of Manitowoc Cranes.

Henry Wells, of Modderfontein, is survived by his wife, Linda and sons, Ryan and Warren, both of whom work at Crane Load Tech. Andre Odendaal, of Kempton Park, is survived by his wife Riana, his daughter Madre and son Charl.

Grove braves winds to complete hospital job

When Howell Crane and Rigging set out to complete a project at Methodist Hospital in San Antonio, Texas, U.S., a combination of careful planning and quality-made Grove cranes helped the company overcome high winds on the job site.

The company was tasked with lifting several HVAC units, as well as structural steel, onto the top of the hospital's roof. Armed with a Grove GMK6400 all-terrain

crane and a TMS800E truck-mounted crane, the company was able to complete the work on time and on budget, even in the strong winds.

The GMK6400 handled most of the heavy lifting, raising 7.3 t (8 USt) HVAC units to heights of up to 61 m (200 ft). The company used the TMS800E to install the luffing jib on the GMK6400, as well as lift structural steel that weighed approximately

1 t (1 USt) onto the hospital's roof.

"The GMK6400 and the TMS800E are two of nearly 25 Grove cranes in our fleet," said Audie John Howell, Sr., president of the company. "They did great, despite the unfavorable windy conditions. The whole project went off without a hitch."

The GMK6400 lifts 7.3 t (8 USt) HVAC units to heights of up to 61 m (200 ft).



MEESA dealer convention



More than 70 representatives from Manitowoc dealers meet near Johannesburg for the convention.

Manitowoc Cranes welcomed more than 70 local guests to its Middle East and English-speaking Africa (MEESA) dealer convention near the city of Johannesburg, South Africa.

The event brought together a variety of companies from across the region to discuss promising signs of growth throughout the market.

All were enthusiastic, with many experiencing increased demand for

cranes throughout the region, explained David Semple, vice president of sales for MEESA at Manitowoc.

“The general outlook of the industry for the region is very positive with lots of new investments in projects and new crane orders underway or soon to get started,” Semple said.

The majority of demand for Manitowoc’s products in MEESA is for the Grove and Potain crane ranges.

Grove crosses the pond for Curacao

A Grove GMK6400 all-terrain crane crossed the Atlantic Ocean, travelling from Antwerp, Belgium, to the Caribbean country of Curacao, to assist with a wind farm project on the island.

It took three weeks for the Netherlands-based company Verschoor Kraanverhuur to transport the 400 t (450 USt) capacity crane to the job site, but the journey was necessary because the demanding job sites required a crane up to the task.

No other crane on the island had the reach or capacity for the project, but the GMK6400 was easily able to perform maintenance on 3 MW windmills at heights of up to 80 m (263 ft).

“We chose the GMK6400 because we had to work with the crane at

three different locations on the Island of Curacao,” said Merijn Vermeij, operations manager with Verschoor. “This crane is very easy to move and to assemble and disassemble. A crawler crane would have taken much more time and would have been much more expensive.”



The GMK6400 performs maintenance at windmills up to heights of 80 m (263 ft).

Manitowoc Crane Care: new training strategy

With a focus on product and service quality, Manitowoc Crane Care’s training center in Wilhelmshaven, Germany, has completely reinvented itself in recent years.

Head trainer Gerald Maderer, who has been running the center since 2010, shifted the center’s structure to provide training to not only Crane Care technicians, but also to dealer and customer technicians from all over the world. The goal: to provide them with the knowledge and ability to diagnose and repair cranes without assistance from



Gerald Maderer with his team in Wilhelmshaven, Germany.

Crane Care.

“We want to give our trainees the knowledge

to think, ‘When a problem occurs, I know what to do to solve it,’”

Maderer explained.

To achieve this goal, Maderer and his team have spent the last three years optimizing the sequences and content of the center’s programs, along with accompanying literature. Also, the training now puts an emphasis on speed, citing both old and new best practices, as well as an added refresher course, now required every two years.

“We all know time is money, and it can only be earned with a crane that is working!” Maderer said.

Potain builds sky-high bridges in southern China



Potain tower cranes help build Chishi Grand Bridge in Hunan, China.

Six Potain tower cranes spent two-and-a-half years erecting two 280 m (920 ft) tall bridge pylons for the new Chishi Grand Bridge in southern China.

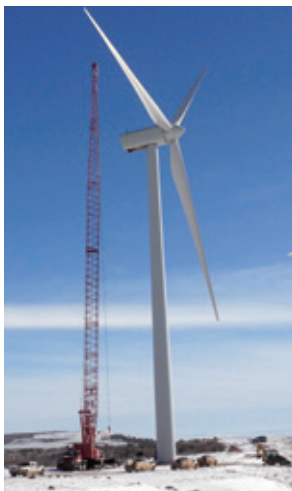
The structure, which at 70 m (290 ft) wide will be one of the widest cable-stayed bridges in the world, will span 1,470 m (4,800 ft) and carry its road deck 180 m (590 ft) above the ground when it opens in late 2014.

The cranes endured the full force of Hunan's subtropical climate during the project. Monsoon rain and extreme humidity

were among the challenges at the job site. Communication between ground crews and operators was also an obstacle, as the cranes were often hidden in the clouds with no view of the ground below.

"We spent considerable time analyzing the correct crane choice for this project before selecting Potain, and once again they have proven to be the best choice," said Jiang Xiong, project manager for main contractor China Railway Major Bridge Engineering Group.

Enduring arctic temps



Rigged with 88 m (288 ft) of main boom, a Manitowoc 777T lifts gearboxes that weigh up to 13 t (14 Ust).

As the United States was suffering through one of its toughest winters in years, Salt Lake City, Utah-based Mountain Crane had no issues completing an important wind energy project at the NextERA

Wind Farm in Wyoming.

Temperatures plummeted to Arctic conditions, sometimes as low as -29°C (-20°F), with extremely high winds and tall snow accumulations. But the company's Manitowoc 777T truck-mounted lattice boom crawler crane and Grove GMK6300L all-terrain crane were unaffected, replacing 13 t (14 USt) gear boxes on several wind towers just outside of Evanston.

"Manitowoc and Grove make great products and both brands have been a mainstay in the Mountain Crane fleet," said Paul Belcher, co-owner and CEO. "In fact, our fleet of 100 cranes consists mostly of Grove and Manitowoc products. Manitowoc, along with its product lines and Crane Care, has been a great partner to Mountain Crane."

Grove at Peruvian mine

A small fleet of Grove rough-terrain cranes is hard at work at an open-pit copper mine that lies 32 km (20 miles) southwest of Arequipa, Peru, to help the site triple its production capacity.

GyM, the company in charge of the project, commissioned several Grove RT9130Es, RT880Es, and RT765E-2s to work at the mine, most of which were assembled at Manitowoc's factory in Passo Fundo, Brazil.

The cranes are assisting with the construction of access roads and platforms, the building of concentrating facilities, the installation of water pipelines and the assembly of other structures, such as conveyors and chutes.

"We chose Grove rough-terrain cranes for this project because many



Rough-terrain cranes assist with the assembly of the processing facilities at a Peruvian mine.

of their standard features make them ideal for use in mining sites," said Carlos Albinagorta, manager of equipment and logistics at GyM. "We're relying on this great equipment for such an important project as the expansion of this Peruvian mine and we're confident we made the right choice."



Mega savings on mega crane lifts

Manitowoc's Variable Position Counterweight is halving the cost and time spent on massive lifts in South Korea. **Ronan Cloud** reports.

Limited room for counterweight can pose a huge challenge on any job site. But this is just the sort of problem Manitowoc's Variable Position Counterweight (VPC) system was designed to overcome.

South Korean company Chunjo Construction was recently faced with such a challenge. The company was tasked with the lifting of a 92 m (302 ft) tall wash tower that weighed 670 t (740 USt) with only 15 m (49 ft) of space in which to work.

The company deployed its 2,300 t (2,535 USt) capacity Manitowoc 31000 crawler crane to the job, which is the largest crane from the company that carries the VPC system.

The lift took place at Korea Petrochemical Ind. Co.'s plant in Ulsan, South Korea, where the crane had to be positioned between existing refinery structures and a small river, which left limited space for counterweight.

No conventional wheeled counterweight trolley could fit in such a small space. But one of the great advantages of the Manitowoc 31000's VPC system is it is suspended above the ground, minimizing the crane's footprint, and in turn, ground preparation ahead of the lift.

Not only was the crane able to operate in limited space, but it actually enabled Chunjo to slice both the amount of time spent on the job and the cost spent on the project in half when compared with using a similar conventional crane, said Jang

Chunjo's Manitowoc 31000 is supported by a Manitowoc 18000.



A Manitowoc 31000 lifts a 92 m (302 ft) tall wash tower that weighed 670 t (740 USt) with just 15 m (49 ft) of space for the counterweight.

Hwan Chang, chairman at Chunjo.

"Any other crane would have taken eight months to complete this lift, but we did it in just three – no other crane would be able to come close to that timeframe," he said. "Manitowoc's flagship crawler crane overcomes the most challenging and costly lifts, and brings a fresh approach to construction challenges."

Most notably, in addition to the Manitowoc 31000, the VPC system comes standard on the 650 t (717 USt) capacity Manitowoc MLC650 and the 300 t (330 USt) capacity Manitowoc MLC300. These two cranes bring the same benefits of the unique counterweight system to a larger pool of users.

Chunjo's Manitowoc 31000 made the journey to the Ulsan petrochemical plant from a previous job at a thermoelectric power plant in Taean, about 400 km (249 miles) away. Once on site, the crane was

assembled in nine days and positioned in a 40 m (131 ft) wide gap between plant equipment and a creek. From there the 31000, together with a Manitowoc 18000 support crane, lifted the 670 t (740 USt) tower into place. The Manitowoc 31000, rigged with a 120 m (394 ft) main boom, completed the lift in just a few hours.

"Each lift is getting bigger and we have more jobs lined up that will change the game in terms of what's expected from high-capacity cranes," Chang said.

Chunjo started in 2009 and has become one of the largest construction names in South Korea. The company has 110 in-house crane operators and runs a fleet of 115 Manitowoc cranes, including Manitowoc crawler cranes, Potain tower cranes and Grove mobile cranes. Chunjo develops projects across Asia, the Middle East, Africa and South America. ♦

Enhancing customer value

Manitowoc has created a Customer Value Stream and put it at the heart of the company's operations, structuring everything around providing better value to customers. **Ben Shaw** talks to Larry Weyers to find out what it's all about.

Focusing your business on customer needs is not a new concept. In fact, it's probably the oldest of business ideologies. And that's with good reason – it delivers the most success.

But in today's global business landscape, it's simply not enough to say you are committed to your customers. To succeed, companies need to show better understanding of their customers and deliver more commitment to them than competitors. Understanding this point is what has driven the organizational change at Manitowoc Cranes that the company announced at the start of this year.

As Larry Weyers, global EVP at the company, puts it: "Without the customer, we have nothing." A pretty blunt and direct assessment of the situation, but also an indicator of how seriously Manitowoc takes the issue of customer care.

Success for the company over the past 12 years has been a function of many elements: building productive cranes that can withstand the pressures of today's job site; delivering superior parts and service support;



Larry Weyers, global executive vice president of Manitowoc Cranes.

developing a global sales network of highly experienced, professional crane people and more.

While it's easy to see how all of these elements help customers get more from their Manitowoc cranes than they would from a competitor, it's more interesting to note that doing

this is no longer enough. At least it's no longer enough for Manitowoc, as Larry Weyers explains.

"Seeing Manitowoc grow over the past 12 years, both in terms of size and stature, has been a source of great pride for all of us at the company," he said. "But for us, our consistent growth and evolution is part of a bigger road map. We know what it will take to succeed over the coming 12 years and beyond, and to help us get there we have reorganized our business around what we call the *Customer Value Stream*. That doesn't mean abandoning what we've been doing so successfully over the past few years, but rather, putting better process and focus on the key areas of our business that deliver the most success to our customers."

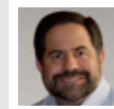
There are five sections of the Customer Value Stream: Customer Identification, Customer Value, Customer Acquisition, Customer Retention and Customer Monitoring. These cover all elements of the relationship between Manitowoc and its customers, from the initial conversation about what a crane might be used for, right through to

Leaders in lifting



Dave Hull

Senior vice president of global sales and marketing. Responsible for global sales and marketing activities, including sales and distribution channels, along with the Crane Care country organizations. He has a degree in business and accounting from Louisiana State University and has been with Manitowoc since 1995.



Ingo Schiller

Senior vice president of rough-terrain, boom truck and industrial cranes. Responsible for new product development, operational marketing, engineering and Crane Care contact centers for the aforementioned product lines. He has a degree in mechanical engineering from the University of Virginia and has been with Manitowoc since 2008.

the constant monitoring of that crane over its working life and beyond.

For a company that's been in business more than 100 years and has some of the oldest cranes still working, it's no surprise to see Manitowoc initiating a company philosophy that covers decades.

"As the name implies, the Customer Value Stream is all about creating value for our customers," Weyers said. "We've looked at all the resources and tools that we use to build, sell and service our cranes, and we've aligned and combined the key ones into a more streamlined setting. We've also looked at how our people are split into different departments and we've adjusted that setup to offer clearer lines of accountability so we can make decisions faster."

As part of this new structure there is now a global sales team, headed by Dave Hull, SVP global sales and marketing, working alongside four product divisions, each under the responsibility of a dedicated SVP. The product divisions are: rough-terrain, boom truck and industrial cranes, headed by Ingo Schiller; tower cranes, headed by Jean-Noel Daguin; crawler cranes, headed by John Kennedy; and all-terrain and truck-mounted cranes, headed by Jens Ennen.

Together, the global sales and marketing team and the individual product lines will work on different aspects of the Customer Value Stream. First is Customer Identification. This is run by the global sales team that will ensure sales and Crane Care distribution channels are running effectively, as it also identifies new customers and opportunities. Additionally, there will be a lot of

data analysis in this stage of the process, as Larry Weyers explains.

"Dave and his team will analyze key customer indicators, such as rental rates, fleet utilization, ROI business models, customer likes, wants, needs etc.," he said. "Comprehensive insight into this data will help us understand better than ever what our customers really want from their crane supplier."

Step 2 is Customer Value, and here the heads of each product line will be responsible for creating the Customer Value Proposition, which is a unique package of features and benefits in a crane that fits with the customer needs identified in Step 1 of the process, Customer Identification.

"The focus here is simple," Weyers said. "It's customer ROI. We want to give our customers cranes that have improved productivity, lower cost of ownership, lower initial investment cost and stronger residual values. But not only that, our product lines will also be responsible for ensuring that no Manitowoc crane is launched before it is ready."

For the third step in the process, Customer Acquisition, the global sales team and the product lines will both have responsibilities. As a major part of this process is selling cranes to customers, the global sales team naturally has the lead. But the product lines provide essential support, giving the sales team cost of ownership models or reliability models, and ensuring all stakeholders in the process have the relevant training. Again, part of the new drive to have higher levels of knowledge and awareness among the Manitowoc team.

For the next step, Customer Retention, roles are reversed with the product lines leading the process and the global sales team providing support.

"Here, we want to be able to solve customer support and technical issues faster," Weyers said. "We want to improve our Mean Time Between Failure (MTBF) for our products and get our Lift Solutions division more involved with customers, giving them the ability to adapt products to changing or special requirements. Additionally, we'll use the information from our Crane Care contact centers to better solve repeating problems or specific customer retention issues."

The final step in the process is Customer Monitoring, and this will be conducted in a number of different ways – most obviously in face-to-face meetings with the customer. In addition, measurable metrics, such as Manitowoc's Customer Satisfaction Index (CSI) will be studied in more detail to better understand what's going right and what can be improved, both with Manitowoc's cranes and its Crane Care support.

"For the most part, customers will keep speaking with the same guys at Manitowoc they've always spoken with. That's something we want to keep because we understand the value of our people, both within our company and at our dealers," he said. "But what will change, and what will be even better, are the cranes we build and the service we provide. Helping our customers deliver better profits for their businesses will lead to a better crane industry for all. And that's what we're aiming for." ♦



Jens Ennen

Senior vice president of all-terrain and truck-mounted cranes. Responsible for product development, operational marketing, engineering, and Crane Care contact centers for all-terrain and truck-mounted cranes. He has a degree in mechanical engineering from the University of Applied Sciences in Osnabrueck, Germany. With Manitowoc since 1991.



Jean-Noel Daguin

Senior vice president of tower cranes. Responsible for new product development, operational marketing, engineering and Crane Care contact centers for tower cranes. He has a degree in business and technology, and a master's degree in information systems and controlling from the University of Rennes. He has been with Manitowoc since 2001.



John Kennedy

Senior vice president of crawler cranes. Responsible for new product development, operational marketing, engineering and Crane Care contact centers for crawler cranes on a global basis. He has a degree in civil engineering from Purdue University and is licensed in the State of Wisconsin. He has been with Manitowoc since 1988.

Potain provides a Swiss solution

Working in congested construction sites is no issue for the tower cranes at a development in downtown Geneva. **Carole Bolomier** reports.



Potain cranes operate on bases that guarantee a compact footprint at the job site.

Three Potain tower cranes are busy building a €200 million office complex in Geneva, Switzerland, providing a solution for a congested work site that has limited space. The 25 t (27.6 USt) capacity Potain MD 560 B cranes are mounted on custom-made 10 m (33 ft) wide bases to allow for the easy flow of vehicles and equipment within the complex.

The cranes were rented to main contractor Implenla to work on average eleven hours a day, six days a week. They are lifting formwork and pre-cast concrete structures, among other loads, for the length of the project. Stirnimann, the official dealer

of Potain cranes in the country, supplied the cranes.

Pascal Buffat, Stirnimann's regional manager, said the Potains were chosen for their surprisingly compact footprints and high capacities.

"We are working in central Geneva near the United Nations. Space is limited and the project has a demanding schedule," he said. "We needed a crane with a compact footprint that could handle demanding loads. We designed the portal base to ensure site traffic could flow freely, so the crane gives us optimal reach and capacity without an encumbering size."

The cranes will place much

of the 5,600 t (6,173 USt) of steel and 16,500 m² (177,606 ft²) of glass needed for the structure and façade of the nine-story building. The trio arrived in April 2013 for the 18-month project. They were fitted with portal bases at Stirnimann's workshop in the city of Olten before being erected on site. They now stand at heights of 48 m (157 ft), 68 m (223 ft) and 88 m (289 ft).

The new complex is situated between the United Nations building and Lake Geneva. Its striking 25,000 m² (269,100 ft²) of development will accommodate approximately 2,000 employees and will include a day-care center for children. The project should be completed by the end of 2015.

Stirnimann, which has been a Potain dealer for more than 25 years, operates an extensive fleet of machinery that includes hundreds of tower cranes and mobile cranes. The company bought its first Grove mobile cranes in 1969. Potain tower cranes soon followed. The company services the majority of the cranes it sells and rents throughout their working life cycle.

Main contractor Implenla is Switzerland's leading construction and construction services company, with more than 6,500 employees. Its headquarters is in Dietikon, a city in the Zürich region. ♦

Vehicles and equipment travel underneath the 25 t (27.6 USt) capacity Potain MD 560 B cranes.



Proven capacity to perform

The Manitowoc MLC650 completed its load test, a crucial step in preparing the crane for the global market. **Chris Bratthauar** explains.

It's official. The Manitowoc MLC650 crawler crane, which features the lauded Variable Position Counterweight (VPC) technology, has completed the required load test to validate its maximum lifting capacity. By raising 650 t (717 USt), the crane has proven its advertised capacity.

Now it's only a matter of time before the MLC650 will be launched to the global market – its development is on schedule and the crane is working impeccably.

Dustin Soerens, marketing manager for lattice cranes at Manitowoc, said the test went precisely as expected.

"The lift went very smoothly. It was a momentous occasion for everyone at Manitowoc that has worked so hard to make this crane a reality," he said. "A large group of engineers witnessed the test lift and were very pleased with how the crane performed under load."

For the trial, the MLC650 was fitted with hundreds of strain gauges that measured the tension and compression of the steel components of the crane while lifting. For the max load moment test, the crane was positioned to apply the maximum stresses through the structure, such as the boom positioned over the corner of the crawler crane.

"We performed a max load test,



The MLC650 effortlessly lifts 650 t (717 USt) of test weights to certify its advertised capacity.

a max moment test and a variety of lifts utilizing different positions of the VPC, and they all were completed flawlessly," Soerens said.

The new crawler crane features a 104 m (341 ft) maximum main boom length and a luffing jib that can be

added to reach a maximum combination of 157 m (515 ft).

"This crane also brings the innovative Variable Position Counterweight (VPC) technology, which worked smoothly to position the counterweight for each of the load scenarios," he said.

The advantages for customers that will utilize the MLC650 and its VPC system include reduced ground preparation, lower ground-bearing pressure and less counterweight, without sacrificing capacity. Also, customers will not have to buy, transport or install as much counterweight compared with a more traditional configuration.

"The completion of the max loading tests is a positive sign that the rest of the structural testing will go smoothly," Soerens explained. "Typically, if any major design changes would be required, they're found during the max load test. We can now rest assured that we're well on our way to releasing this innovative crane to the global market."

Introduced at this year's ConExpo, the MLC650 is equipped with the new Crane Control System (CCS), a standardized operator interface that will eventually be a feature on all new Manitowoc, Potain,

National Crane, Shuttlelift and Grove cranes. CCS is one of the most user-friendly control systems currently on the market, and the use of standard parts will improve fleet management for Manitowoc customers. ♦

New life for Indian tower crane

A storm-stricken Potain MCI 85 A tower crane was completely refurbished at the Manitowoc Crane Care facility in Pune, India. **Punitha Govindasamy** reports.



The recently refurbished Potain MCI 85 A tower crane works on a residential project in Gurgaon, India, soon after leaving Manitowoc Crane Care's facility in Pune.

Once believed to be damaged beyond repair by its owners, a 5 t (5.5 USt) capacity Potain MCI 85 A tower crane was brought back to life in Pune, India. The tower crane suffered major structural harm when it endured 150 km/h (93 mph) winds during a cyclonic storm in Gurgaon, which lies in the northern portion of the country.

The crane was working at the 56-story Raheja Revanta residential complex when a violent storm struck. EnCORE undertook the repairs for the crane which Time Autotech, Manitowoc's tower crane dealer, had previously purchased from another customer. Time decided to get this repaired and refurbished before deploying the crane at its job site.

Gurdeep Singh, Manitowoc Crane Care country head India, said he was delighted that the extensive repairs were successful.

"This was a huge repair and refurbishment job that we completed in a timely manner, keeping costs to a minimum. We are delighted with the result!" he said. "When major components are damaged, logistical costs increase because new parts need to be sourced from several factories, but the work was still cost effective."

From the customer's job site in Gurgaon to Potain's facility in Pune, the crane had to endure 1,465 km (910 miles) on the road, a great challenge for the already impaired crane. The site is one of just a handful of places in the country that can carry out such extensive

repair work. It features specialized workshops and equipment dedicated to Potain tower cranes.

A team of eight EnCORE engineers performed structural repairs to the crane's mast and cage, cathead, cabin, hoist winch and control panels, and it replaced 50 m (164 ft) of jib parts and the counter jib assembly. The repair took 25 days.

Currently, the Potain MCI 85 A is working at a residential high-rise project in Gurgaon for Indiabulls, a major contractor in the region.

Early this year, Manitowoc celebrated the milestone of 1,000 Potain tower cranes manufactured at its plant in Pune. Since 2008, the factory has almost tripled its production to meet growing demand in Asia and other parts of the world.

Potain was the first manufacturer to build tower cranes in India and the Pune factory remains one of the largest tower crane production facilities in the country. Cranes from Pune are used at job sites across the world, from Bangladesh to Peru, and from the United Arab Emirates to Argentina.

Six models from the Potain range are currently built at the Pune factory: the MC 125, MC 175 B, MC 205, MC 310, MCI 48 C and the MCI 85 A, which is one of the most popular tower cranes in India. The cranes offer capacities from 2.5 t to 10 t (2.8 USt to 11 USt), with maximum jib lengths up to 60 m (197 ft).

Potain's Pune plant operates under the same processes and to the same high standards found in all Manitowoc's global production facilities. ♦

Lifting history

Two Grove GMK7550s lifted historic artifacts for the Smithsonian Institution in the U.S. capital. **Damian Joseph** reports.

Tasked with complex and historically significant lifts in Washington D.C., W.O. Grubb chose two Grove GMK7550 all-terrain cranes (known as GMK7450 outside of the U.S.) to lift irreplaceable pieces of history for the Smithsonian Institute's new National Museum of African American History and Culture.

The Smithsonian Institution is the world's largest museum and research complex, made up of nearly 20 separate museums and nine research centers. For an organization as fundamental to the country's identity as the Smithsonian, lifting and relocating objects required the most careful planning and precise execution, from start to finish.

The first of the two lifts required the placement of a 45 t (50 USt) railway car that was so large, it had to be set deep into a construction site before the remainder of the museum could be built around it. The segregation-era railway car, circa 1918, weighed 45 t (50 USt) and had to be lifted without error to ensure it wasn't damaged.

The lift took place on Constitution Avenue, next to the National Mall and in view of the Washington Monument. The road was closed as the two Grove cranes moved in to set the shrink-wrapped railway car into an 18 m (60 ft) deep construction pit.

The cranes performed as mirror images of each other to keep the railway car steady. They were on opposite sides of the 24 m (80 ft) artifact, which was rigged with two straps on each side with 3 m (10 ft) spreader beams. The straps were

The all-terrain crane relocates historic materials near the Washington Monument, on the National Mall.



Two Grove GMK7550s place a railway car into the museum's construction site, an operation that requires careful planning and flawless execution.

connected to beams underneath the car to avoid damage from hooking to it directly. It was then lowered in place to the sound of applause from onlookers.

Stephen Dieren, project manager for W.O. Grubb, said the uniqueness of the project required a unique setup.

"A key challenge of the project was getting the ground bearing pressures correct for the two Grove all-terrain cranes," he said. "They were both set approximately 18 m (60 ft) from the construction pit to achieve the optimum pressures."

The second lift placed into the construction pit a 16 t (17.5 USt) guard tower that was used in the 1930s at Angola, the Louisiana State Penitentiary, which was known as one of the worst in the country. The tower of concrete and its corrugated steel roof was lifted into the pit by a single Grove GMK7550.

"Months of planning and days of prep work were put in to execute this job," Dieren said. "Everything went beautifully."

W.O. Grubb Crane Rental is based in Richmond, Virginia, U.S., and is one of the premier providers of crane rentals, rigging, heavy hauling, major projects and steel erection in the Mid-Atlantic region. The company is family owned and operated, and has multiple locations in Virginia, Maryland and other states.

In 2013 the company added several new Manitowoc-made cranes to its fleet, including two 270 t (300 USt) Manitowoc 2250 crawler cranes, a 150 t (165 USt) Grove GMK5165 all-terrain crane (known as GMK5130-2 outside of the U.S.) and a couple of 55 t (60 USt) Grove TMS760E truck cranes, among others. ♦

Potain's 5,001 benchmark

Manitowoc's factory in Zhangjiagang, China, crosses a huge milestone in Potain tower crane sales. **Stephen To** reports.



Employees celebrate the 5,001st crane to be built at the Zhangjiagang plant in China.

More than 5,000 Potain tower cranes have rolled off the assembly line in Zhangjiagang, China, and the facility continues to go from strength to strength. Recently, the 5001st crane built at the facility was delivered to a customer in Malaysia, marking a monumental achievement in manufacturing prowess for the company.

“This is a huge achievement and is testament to the many years of hard work that our staff has put in to make it a reality,” said Jean-Noel Daguin, senior vice president of tower cranes at Manitowoc.

Opened in 2006, the Zhangjiagang factory employs the latest technology and precision machinery to produce cranes that match Manitowoc’s global quality standards. The factory is the fastest growing Manitowoc factory in the world.

Rapid growth in China has required manufacturers to adapt and keep pace with the country’s

construction boom. High-performance cranes that are equipped with the most cutting-edge technology are seeing the highest demand. Potain tower cranes have been well-received in the country for their quality and innovation, Daguin said.

“We mix Chinese manufacturing with European design to create the highest-quality tower cranes in China,” he said. “All of our crane structures are manufactured locally, but state-of-the-art technology is imported from our sister factories in France. With increasingly tight deadlines and demanding workloads, contractors favor reliability over cost. And our cranes deliver beyond their expectation.”

Today, the 60,000 m² (645, 840 ft²) plant produces the entire lineup of Potain MC, MCT and MCR tower cranes, which range in capacity from 2.5 t to 20 t (2.8 USt to 22 USt), as well as components for other Manitowoc crawler cranes and Grove mobile

cranes. Chinese-made cranes work on projects around the world, with more than 50 percent of the factory’s output shipped abroad.

Manitowoc’s history of manufacturing in China can be traced back to 1984, when Potain established a licensing agreement with three state-owned enterprises to build its tower cranes. In the mid-1990s, Manitowoc set up a joint venture with the Ling Hong Group, which became a wholly-owned subsidiary of Potain in the year 2000, and was integrated into Manitowoc a year later.

The 5,001st crane built at the facility was sold to Kuala Lumpur, Malaysia-based YTL, a leading international construction company. YTL has had Potain tower cranes in its fleet since 1984 and it recently invested in seven new units. A small handover ceremony was held at the Zhangjiagang facility to mark the delivery of its latest Potain crane. ♦

Manitowoc around the world

From Russia to Brazil, Manitowoc brings its leading line of products and services to the most prominent trade shows around the globe.

Two shows in Algeria

Manitowoc took part in two Algerian trade shows: Batimatec and the Algiers International Fair, both held in May. The company displayed a Potain self-erecting crane and a Grove rough-terrain crane at both events with assistance from two of its local dealers, Sarl VIBA and Eurl MGP.

“Demand for our cranes in Algeria has steadily increased over the past few years and the country’s growing economy makes us very ambitious for this exciting market,” said Carlos Pimenta, Manitowoc’s area manager for Algeria.

M&T Expo in Brazil

Manitowoc Crane Care trumpeted its unrivaled menu of after-sales solutions at the M&T Parts and Services Expo 2014, held in June in São Paulo, Brazil.

Crane Care service representatives talked with show attendees about Manitowoc’s comprehensive range of services and support.

“We’ll keep investing in infrastructure and logistics to fully support the region’s sustained growth, which averages 3 percent to 4 percent annually, according to local estimates,” said Leandro Nilo de Moura, Manitowoc’s marketing manager for Latin America.

Open day in South Africa

Manitowoc’s South African dealer for Potain tower cranes, SA French, welcomed more than 80 visitors to an open day in Johannesburg.

“We have restructured to meet the changing demands of the market and to capitalize on ways we can grow – and our Potain cranes are at the core of that initiative,” said Charles Pettit, SA French CEO.

Alongside a Potain Igo 50 was a



Manitowoc displays its full range of Crane Care solutions at M&T Expo.

selection of Potain top-slewing tower cranes and a Grove GMK4100L all-terrain crane.

SA French is one of South Africa’s leading construction equipment suppliers, having recently become a subsidiary of Torre Industrial Holdings.

CTT 2014 in Russia

With a focus on the future and the further strengthening of its position in Russia and the CIS markets, Manitowoc presented a complete range of its products and services at CTT 2014.

The company showed two Potain models at the show, alongside a Grove rough-terrain crane. Manitowoc’s huge range of support services were also a focal point at the event that was held in June in Moscow.

“We have worked in these markets for many years and established ourselves as a loyal and stable partner to many businesses,” said Jean-Claude Doucenc, Manitowoc’s

commercial director for Russia and CIS countries.

Vertikal Days in the UK

Manitowoc brought a nice selection of products to its stand for Vertikal Days 2014, the lifting and access trade show held in June in Merseyside, UK.

Ladybird Crane Hire, the UK’s dealer for Potain tower cranes, shared the stand with Manitowoc, showing a Potain Igo 50. Representatives from Universal Cranes were also at Manitowoc’s booth. The company was recently appointed to a Grove dealer in the UK.

Irlequip, Manitowoc’s new Grove dealer for Ireland, attended Vertikal Days to showcase its Manitowoc Crane Care-backed after-sales support. Crane rental specialist Berry Cranes brought its Grove GMK4100L that it purchased in March of this year. Also, Bronzeshield Lifting, a top rental company in the region, showcased its Grove GMK6300L for event attendees.

Manitowoc enjoyed the best attendance its ever seen at this year’s Vertikal Days. ♦

Mining booms

At the Chilean mine of Sierra Gorda, a small but commanding fleet of cranes help prepare the site for production. **Ricardo Rosa** reports.



The Grove RT765E-2 takes care of most of the day-to-day lifting jobs at the Sierra Gorda mine.

Manitowoc's Grove brand has been an active presence at one of Chile's largest open-pit mines, the Sierra Gorda mine, for more than two years.

The cranes began construction on the mine, along with "pre-stripping" work in October 2011. Since then, They have been helping to build processing facilities and other

structures that are large enough to sort out 110,000 t (121,254 USt) of sulfide ore per day generating 120,000 t (132,277 USt) of copper per year.

Over the course of preproduction phases, four Grove 60 t (65 USt) RT765E-2s, along with several other Manitowoc-made cranes, have been working relentlessly to ensure each step is completed on schedule. The other cranes on site are four 45 t (50 USt) RT750s, four 220 t (275 USt) GMK5220s, one 300 t (350 USt) GMK6300L and one 150 t (165 USt) Manitowoc 555. All of these cranes were supplied by Grúas Böhme, a Concepción, Chile-based rental company that has a long and successful history of using Manitowoc cranes.

"The plan is to keep the cranes working at the mine site for another 10-15 years," said Luciano Bohme Quezada, president and general manager of Grúas Böhme.

"Manitowoc cranes are reliable, and I believe the company provides the best customer service, because I can always count on getting answers right away when I need them."

Most of the day-to-day lifting jobs at Sierra Gorda are handled by the small army of Grove's RT765E-2s, which are assembled just over the border at Manitowoc's factory in Passo Fundo, Brazil. These rough-terrain cranes offer a 33.5 m (110 ft) four-section, full power Megaform boom, which gives enough reach to perform a variety of lifting work at Sierra Gorda. The RT765E-2 is a versatile mobile crane with four-wheel, multi-mode steering and a Full Vision cab – all of which help Böhme crane operators navigate the treacherous topography of the job site.

The mine, which is located within



A 220 t (275 USt) GMK5220 and a 300 t (350 USt) GMK6300L jointly lift structural parts to prepare the site for production.

the Atacama Desert, is a joint venture between KGHM International, Sumitomo Metal Mining and Sumitomo Corporation. It is located 4 km (2.5 miles) north of the town of Sierra Gorda.

In addition to copper, the mine will produce 11,500 t (12,677 USt) of molybdenum and 2 t (2.2 USt) of gold per year. The project has created more than 2,000 permanent jobs and nearly 7,000 contract positions, according to KGHM.

“The mine is in Chile’s largest copper producing region at an elevation of 1,700 m (5,577 ft) above sea level,” Quezada said. “The altitude and the rocky soil conditions make it a tough place to work, but Manitowoc equipment is robust and can be maneuvered rather easily – even in demanding environments.”

In addition to durable, high-performance equipment, Quezada also highlighted the strong relationship between his company and Manitowoc

Cranes, including the support available through Manitowoc Crane Care and its offices across Chile, and the company’s newest tool to assist customers: Crane Care service trucks.

“The implementation of this mobile service allows us to get aid to our customers working in the field much faster than before,” said Eugenio Frings, Manitowoc’s regional business manager in Chile. “The trucks are equipped with all necessary tools to support our partners as well as the highest technology to support our technicians.”

Manitowoc Crane Care service vehicles are located in two strategic sites in Chile. The first in the northern city of Antofagasta, near the Sierra Gorda mine, and the second in the capital of Santiago, to serve the central and southern parts of the country.

“Our support vehicles are complete mobile workshops for our customers in the country,”

Frings said.

Established in 1999, Grúas Böhme provides crane rentals for mining, shipbuilding and repair, bridge building, thermoelectric and paper plant projects. It employs 70 technicians and engineers, and the first cranes of its fleet were from Manitowoc. Today, 14 of the company’s cranes are Manitowoc branded, and the bond between the companies has never been stronger.

“Böhme and Manitowoc have a trustworthy association that has grown closer over the years,” Quezada said. “We at Böhme know what to expect when we work with Grove cranes, which are some of the most reliable around. In addition to that, the after sales support we get from Manitowoc in Chile is highly dependable, whether we’re working in the deserts of northern Chile or the coastal ranges south of the capital.” ♦

One Grove to lift them all

GMK6400 replaces a fleet of cranes for Guay as it is put to work on several projects across Canada. **Damian Joseph** reports.



The Grove GMK6400 overcomes icy weather to erect a wind turbine in Lac-Alfred.

The Grove GMK6400, Manitowoc's award-winning all-terrain crane, recently achieved an important benchmark with the sale of its 50th unit. Having been around for just a year, the crane has collected hundreds of success stories on several continents due to its versatility and top-of-the-line features, as Quebec, Canada-based Guay – one of the first companies to purchase the crane last year – can attest.

A wind energy project in Lac-Alfred is among the many jobs Guay is using the crane for

in the country. The company is repairing gearboxes on 80 m (262 ft) towers. Guay used the GMK6400's MegaWingLift and luffing jib to lift the 29 t (32 USt) load at a radius of 27 m (90 ft). Guay credits the MegaWingLift and luffing jib attachments for success on the project.

Guillaume Gagnon, vice-president of Guay, said the 400 t (450 USt) Grove GMK6400 is a multipurpose crane that is quick to set up, allowing the company to reduce costs.

"We are now able to perform a lot of jobs we were doing in the past with our 500 t (600 USt) all-terrain cranes, but now we can use the GMK6400 with its capacity-enhancing attachments," he said. "Because of this, we can be more competitive on our hourly rate and the cost of mobilization and demobilization, which allows our customers to save money on their projects."

For example, for a project to construct a new Walmart in Blainville, Guay is using the all-terrain crane with 55 m (179 ft) of boom at a 41 m (133 ft) radius, to lift construction materials in loads up to 16.3 t (18 USt). Gagnon said that in the past, Guay would have had to use a larger crane that took up much more space on the job site, adding to the project's preparations.

"What is great about this crane is the strong capacity, especially with the MegaWingLift and optional luffing jib," Gagnon said. "For instance, we are able to replace our 300 t (350 USt) all-terrain cranes on job sites with the GMK6400, which gives us more flexibility in our dispatching because it can handle a wider range of applications."

To further underscore GMK6400's

diverse array of applications, Guay used it to help construct a bridge at Rivière-à-Pierre. The crane lifted construction materials that weighed up to 31.3 t (35 USt) at a radius of 28 m (91 ft). Like before, the reach and capacity of the GMK6400 led to a successful lift.

Headquartered in Quebec City, Guay is a family-owned company that was started by Jean-Marc Baronet in 1964. The company is pleased that Baronet continues in his role as president. Guay specializes in crane rental, rigging and transport, and has one of the largest crane fleets in North America. With 15 branches, the company owns 550 cranes, ranging from 2 t (2.2 USt) to 1,360 t (1,500 USt). ♦



Guay uses its Grove GMK6400 to lift a bridge girder at Rivière-à-Pierre.

Major lasers for Grove

Manitowoc's new laser welding technology in Germany makes for even stronger booms.
Carole Bolomier reports.



The team of welding engineers at Maniowoc's Wilhelmshaven plant.

Laser technology has arrived at Maniowoc's Wilhelmshaven facility in Germany, delivering measurably better booms for Grove all-terrain cranes. A substantial investment in a new laser-hybrid welding and cutting machine offers a new level of precision that delivers noticeable improvements for customers.

Munich, Germany-based crane rental company Tecra, a subsidiary of Klema, is one of the latest companies to benefit from an all-terrain crane with a boom from the new laser welding facility. Tecra purchased a new GMK5095 earlier this year and is already benefitting from the new boom, said Wolfgang Klenner, general manager of Klema.

"In comparison with other crane models, the Grove GMK5095 offers significantly higher capacity," he said. "And since the boom is longer than most, it gives us a clear competitive advantage. Here in Munich, precise compliance with weight limits is crucial, so when you've got a boom

that's been as highly engineered as this latest one on our GMK5095, you can see tangible benefits in terms of weight and design."

Previously, the Grove GMK5095's boom shells were welded manually or semi-automatically. Today, Maniowoc's new laser-hybrid welding process joins the upper and lower shells of the boom by robot. While maintaining the same strength, this process significantly reduces the need for filler material – by up to 120 kg (265 lb) on a 60 m (197 ft) boom.

With the laser-hybrid welding and cutting system there is no tacking of backing strip, submerged arc welding or straightening required, which improves the production rate for mobile crane booms. In addition, the new machine requires lower heat input. All told, this makes for greater efficiency, better precision and less weight in Grove GMK boom constructions.

The new laser welding robot is housed in its own cab that stretches over a large part of the boom

production line. In conjunction with its installation, all workstations on the boom production line have been reorganized to better optimize work flow and ergonomics.

The end results are noticeable and the Grove GMK5095's boom welding seams are barely visible after applying the topcoat, said Sven Bauer, technical manager of the Klema Group.

"The extremely high-finish quality of Grove cranes is emphasized with this new process," he said.

"Maniowoc assembles its cranes after applying the topcoat, which gives them a lasting high-quality style that distinguishes them from cranes that receive their topcoat post-assembly."

Michael Hüneke, welding director for Maniowoc in EMEA, said there were many advantages to the new system.

"To our knowledge, this factory is the only one in the mobile crane industry to use this cutting-edge welding technology – and we are very proud of it," he said. ♦



“The RT9150E fits our company perfectly.”

Paul Cook — Company Director, Monsta Crane Hire

With the largest main boom of any rough terrain crane currently in production, the RT9150E also boasts the highest capacity at 150 USst. Add exceptional maneuverability, comfortable cabs and easy maintenance and you can see why customers like Monsta Crane Hire get more done and win more jobs.

When asked why Monsta Crane Hire chose the Grove RT9150E, Paul Cook, Company Director, simply stated: **“We do ‘monsta’ work, and the RT9150E is a ‘monsta’ crane.”**

> Read Monsta's full story at: www.manitowoccranes.com