

ACT

The magazine for the crane, lifting and transport industry

A KHL Group
Publication
www.khl.com/act



MARKETPLACE

PRODUCTS, PARTS
& ACCESSORIES 55

EQUIPMENT FOR
SALE OR RENT 65

TRANSPORT &
HEAVY HAUL 73

Tower power!

New feats in
specialized lifting



Official
domestic
magazine of
the SC&RA

Extra-specialized

Innovation abounds from manufacturers of specialized lifting machines. **Lindsey Anderson** reports on these technologies and applications

No job is too heavy, awkward or extreme for those who offer specialized lifting services. Whether enormous heaters need to be replaced, heavy stamping presses installed, trees transplanted or components moved in and out of industrial facilities, manufacturers in the specialized lifting realm have developed solutions and custom designs to make the job at hand easier and safer.

Recently, new equipment from Lift Systems, Holland Moving & Rigging Supplies, Shuttlelift, Mijack and others, has been unveiled, and in the wake of these mega-movers, new jobsite applications have popped up.

Huge heaters

As a heat wave choked most of the Midwest and eastern United States in late July, it was hard to imagine a project back in February where temperatures were -22 degrees Fahrenheit with a wind chill that came in at -44 degrees. But for Barnhart

Crane & Rigging, no matter if the weather is sweat-inducing or bone-chilling, the job still has to get done.

A customer contacted Barnhart to remove and replace three nuclear feedwater heaters in February 2011, with one heater weighing 67,000 pounds. What normally could have been a fairly routine haul for Barnhart soon became a test.

Due to the critically cold temperatures, crews added insulation to the conex to protect the pumps from the fierce weather and then employed heat tracing on the hydraulic lines, which is a method using electric heating elements that run along the lines to raise or maintain fluid temperature.

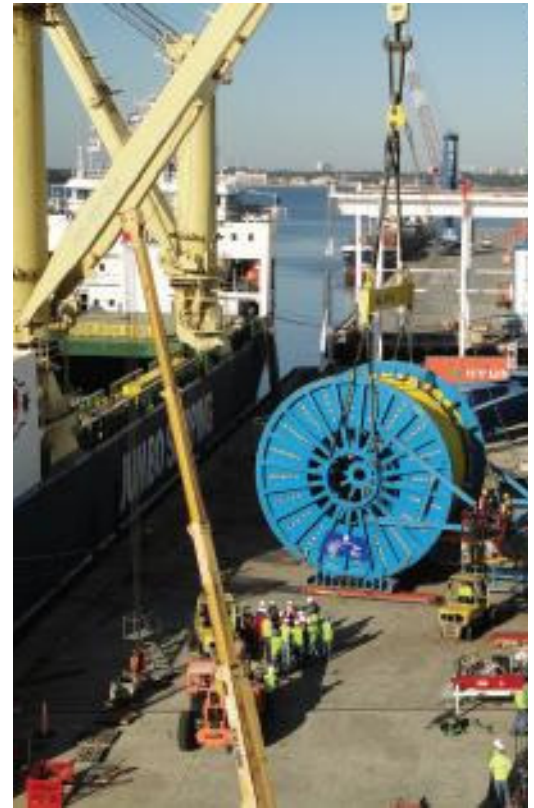
“Although this method is not standard, it raised the temperature of the hydraulic fluid in order to keep the gantry cranes functioning properly,” the company says.

Barnhart used a Lift Systems 48A gantry, slide track and a 50-ton Grove RT 760 rough terrain crane to complete the project.

Stamping press installation

Since 1973, Indiana-based Egenolf Industrial Group has provided industrial rigging services, including stamping press installations and machinery moving, throughout the U.S. Earlier this year Egenolf crews tackled a huge project involving the transport and installation of three presses at heating and air-conditioning manufacturer Carrier Corp. From the start, the project was a challenge due to a tight window of time for transportation and installation.

“We were the general contractor for the



entire endeavor,” explains Ken Sitzman, chief executive officer of Egenolf. “There were many scopes of work beyond the rigging, including: heavy-haul logistics, electrical distribution, controls installation and steel fabrication. We had to work around the clock to meet the deadlines.”

The job involved installation of two 600-ton and one 1,200-ton Minster stamping presses. The 1,200-ton press had a 20-foot bed, which is a large frame press with a crown weight of 250,000 pounds,” Sitzman says.

“It’s a completely automated line with feed line, transfers, conveyers, stackers and washer,” he says.

The 1,200-ton press measured approximately 35 feet tall, 30 feet wide and 12 feet deep. The total weight was about 700,000 pounds. The other two presses measured 30 feet tall, 15 wide and 10 feet deep. They weighed 250,000 pounds apiece.

Sitzman says crews unloaded the

Egenolf used its Lift Systems Power Tower to install three stamping presses



lifting



In order to move these 400-ton wheels, Berard Transportation would need to modify their 300-ton skid system. With the help of Hydra-Slide Ltd., Berard's 300-ton system was turned into a 600-ton system. All they had to do? "We added additional skid shoes and push cylinders," Don Mahnke of Hydra-Slide says

presses in an driveway outside of the manufacturing facility. Egenolf crews set up its 500-ton Lift Systems Power Tower 34PT5400WS gantry system on tracks in order to lift it off the transporter and onto a custom-designed Egenolf Die-cart.

"The Die-cart was designed and built by Tim Egenolf," says Sitzman. "It will carry upwards of 400,000 pounds without damaging concrete. It is hydraulically, crab steerable and powered by our large, extendable-chassis fork trucks."

Using the Die-cart, the presses were moved through the plant and set directly in front of the press foundation. At that point, the overhead lifting beams and Power Tower units were brought into the building and set up. The gantries lifted the press components off the Die-cart and into position for stacking each press and

completing the installation.

"We have enough of the Lift Systems track that we could set up outside and inside, allowing us to execute the job efficiently," Sitzman says.

Because of the magnitude and profile of the project, Egenolf hired Chris Zachidny of Tangent Media Network to produce a high-definition, time-lapsed video of the installation. To see the video, visit www.egenolf-rigging.com.

Skid system ingenuity

Hydra-Slide Ltd. is a supplier of high capacity skidding systems specially designed for the rigging industry to move transformers, generators and pressure vessels.

Don Mahnke, president of Hydra-Slide, says that in the past, rigging companies fabricated their own skidding systems using an amalgamation of equipment within their own shops.

In 1983, Mahnke invented a system that has been used throughout North America by companies such as Lackie Bros., ETARCO Ltd. and Mammoet Canada Ltd., he says.

"In 2006, I started to make the equipment available to the general industry and sold many of these systems through my company Westport Canada Ltd.," he says. "The business continued to grow with a very strong demand throughout North America and internationally and this summer we incorporated as Hydra-Slide Ltd. to better market and sell the equipment."

Customers of the Hydra-Slide skidding system include HWP Rigging, TNT Crane & Rigging, Berard Transportation, Singer Specialized, Duncan Machinery Movers and Atlas Industrial Contractors, to name a few.

When it was time for a New Orleans refinery to maintain their 240,000-pound heat exchanger, Berard Transportation was called in to remove the exchanger from its crowded operating location to a cleaning area.

Berard utilized a unified jacking system and Hydra-Slide skidding equipment to lift and move the exchanger from its original supports. The 300-ton Hydra-Slide system was positioned beneath the saddles and the jacks were removed. Berard crews then extended the slide track into the neighboring alleyway.

Two six axle Goldhofer PST-SLE units were situated so that the slide track would move the exchanger directly atop the transporters. In a matter of hours, the

POWER RIGGERS

Rigger trucks are among the most useful machines in the realm of heavy lifting. Custom Mobile Equipment's Nathan Dick says one of the company's 25/35 E-Series Versa-Lifts was picked to do a job at Ground Zero in New York City.

Versa-Lifts are essentially fortified forklifts in which the frame extends in order to achieve greater capacities and is equipped with a removable hydraulic boom.

"The Versa-Lift was designed specifically for moving heavy machinery smoothly and safely on solid surfaces for riggers," Dick says.

The 25/35 E-Series feature hydrostatic drives, an on-board charger, 80-volt AC motor and comes with options such as remote controls.

Another busy rigger truck is working in Stockton, CA where Sheedy Crane and Rigging has been using a Brute Lift that they purchased from Precision Crane Service, Inc. in Santa Rosa, CA. The 80,000-pound Brute Lift, manufactured by HMS Lift, Inc., has been disassembling and loading onto and into shipping containers.

"The versatility, maneuverability plus the heavy lifting ability made this job much easier for the crew doing the job," says Deryl Damboise of Sheedy Crane and Rigging.

Brutes can be manufactured with small dimensions yet with lifting capacities that range from 40,000 to 140,000 pounds. The units can be engineered with different style cabs, various fork and tire sizes and a range of lifting capacities and lifting heights. Units can be fitted with optional equipment such as booms, coil prongs, quick disconnect carriage, side shift, fork positioners and choice of Tier III certified LPG or diesel engine.



A Brute Lift with an optional disconnect

exchanger was slid from its operating location onto the transporters, and transported out of the operating unit for maintenance.

Tree mover

A new Straddle Mover from Holland Moving & Rigging Supplies was originally designed as a custom piece of equipment to transport trees that weigh up to 10 tons. For the customer, it was important that the specialized lifting machine be able to carry trees in the center of all the axles, be capable of traversing sideways and able to negotiate openings on the surface. The high-profile move involved transporting Swamp White Oak trees on the elevated 9/11 Memorial Plaza in New York City.

The Straddle Mover's knuckle suspension allows for up to 135 degrees of steering, and is able to lift and lower the frame and load 20 inches. There is a gate located on one side to allow the trunk of the tree to pass through. The load is then carried via a block and cable mechanism with a hook that raises and lowers as hydraulic cylinders are extended or retracted. The block and cable system is capable of lowering the load below ground level, if needed, and the hydraulic cylinders supporting the frame are connected to form a three-point system that provides stability and suspension as it travels over uneven surfaces. A single operator and a remote control operate the Straddle Mover.

Although the Straddle Mover was originally designed for moving trees, Holland Moving & Rigging says it can be used for bridge deck replacement. Upgrading bridges has been high priority

Mi-Jack's MJ70 Travelift features a lifting capacity of 140,000 pounds

in the past couple years, and contractors have asked for an easier method of upgrading bridge decking to reduce the downtime for bridge repair, Holland says.

Lean machines

The sky is the limit for rubber-tired gantry application. These machines, which now come with all sorts of options and bells and whistles, make moving heavy components from place to place almost effortless. Plains Fabrication & Supply, a steel fabrication company based in Alberta, Canada, looked to increase productivity and workflow as a part of its lean manufacturing program. In order to do so, the producer of heaters, separators, pressure vessels, skid packages and other custom fabrication items, invested in a Shuttlelift SL 75II.

"Once we had the facts, it was time to find the product that would help us achieve our goals and the Shuttlelift SL 75II fit the bill," says Paul Pagenkopf, operations manager.

Pagenkopf says that on a WAC vessel, material handling time required about 10 hours of labor. It required two pieces of equipment and three workers to move the product from assembly to the paint process.

But the mobile gantry crane reduced the workflow by more than half. "Now, it takes approximately four hours of labor using one machine and two workers to complete the process," Pagenkopf says.

Besides the increase in production, Pagenkopf has been pleased to work with



Shuttlelift. "This was our first unit and it was remarkably easy for the operators to become confident using the unit," he says.

For the most part, the Shuttlelift SL 75II moves product from bay to bay and raw product from outside to the fabrication area. It moves fabricated products to the blast bay and into the paint bay. It also moves completed products to storage or it can load products directly onto trucks for shipment to customers.

The Shuttlelift mobile gantry crane was chosen to avoid installing outdoor stationary cranes on either sides of the building due to the cost associated with the cranes as well as the limited specialized lifting capabilities for each application.

"The stationary characteristics limit your work area," says Pagenkopf. "Whereas the Shuttlelift allows you to move anywhere in the yard or building and allows us to easily adjust the crane for each application. It is invaluable."

The Shuttlelift SL 75II was custom designed for Plains Fabrication & Supply. The machine includes a hydraulic block adjust that maximizes the versatility and lifting potential, enabling the operator to change the spacing between the slings at the touch of a button.

"This feature gives the ability to maintain a straight wire rope to the products attach points and allow adjustments to suit the variety of lifting lug center distances," says Pagenkopf.

The mobile gantry crane also included a wireless remote control that allows the operator to be on the ground anywhere around the crane.

"It is a very tight fit at our facility between the door frame and the crane, so the remote makes the operator's job much easier. The operator almost always uses the remote control," Pagenkopf says.

Another key feature that has provided flexibility is the all-wheel electronic steering that enables each wheel on the



Barnhart Crane & Rigging used a Lift Systems gantry, slide track and 50-ton rough terrain crane to remove and replace three nuclear feedwater heaters



This Shuttlelift SL 75II was custom designed for Plains Fabrication & Supply. The machine includes a hydraulic block adjust that maximizes the versatility and lifting potential, enabling the operator to change the spacing between the slings at the touch of a button



gantry crane to steer independently. Plains Fabrication & Supply specifically purchased the optional carousel steer because it allows all wheels to turn around an axis point at the machine's center.

Custom fits

Mi-Jack's new MJ Travelift series of rubber-tired gantries (RTGs) fit the bill for handling heavy, awkward loads. Mi-Jack, which can build the RTGs to customers' requirements, has manufactured various-sized units, including the Mi-Jack MJ 70 Travelift, a 25-foot-high, 140,000-pound capacity

RTG. The unit was made to move loads through overhead doorways, says Mike Lanigan, Jr., sales manager for Mi-Jack's Travelift division.

"The crane's configuration allows our customer to fabricate their products inside, where they use the RTG like an overhead crane, then pick up the finished assembly and carry it safely outdoors to be stored until it is shipped to its final destination," says Lanigan.

RTGs are versatile and excel at handling odd-sized loads. "Although not heavy by relative standards, one customer's lifting requirements offered a unique set of problems to conventional material handling equipment," Lanigan says. "With its offset 'L' configuration, our customer's pipe assembly could not be picked with either a conventional crane or forklift."

Mi-Jack built the 50-ton MJ 50 Travelift,

which is equipped with an auxiliary hoist.

"The hoist was able to keep the pipe assembly level while securely moving it to the next stage of installation and offers the ability to rotate the load for further fabrication," Lanigan says.

The biggest of Mi-Jack Travelifts is the 200,000-pound-capacity MJ 100 Travelift.

"This works well in confined areas [because it doesn't require] any space for the boom swing of a conventional crane," Lanigan says. "RTGs also allow for denser stacking for better utilization of storage space and provide for better selectivity when retrieving materials." ■



Goldhofer

GOLDHOFER HEAVY-DUTY MODULES

QUALIFIED SOLUTIONS FOR EXTREME TRANSPORT CHALLENGES.

Our heavy-duty modular systems can be individually matched to meet your requirements. At Goldhofer, providing qualified solutions means not only building resilient high quality products, but also giving our customers highly functional solutions for transportation and logistic challenges. Through our comprehensive project engineering and competent after sales program, Goldhofer is there when you really need to get down to business.

Goldhofer products are the result of over 300 years of investment, development of new technologies, and perfection of our customer service. One thing is absolutely clear; Economy is ultimately a function of high resale value, long term durability, and safety. This is what we stand for and promise. Invest in your future. Goldhofer – The Original.