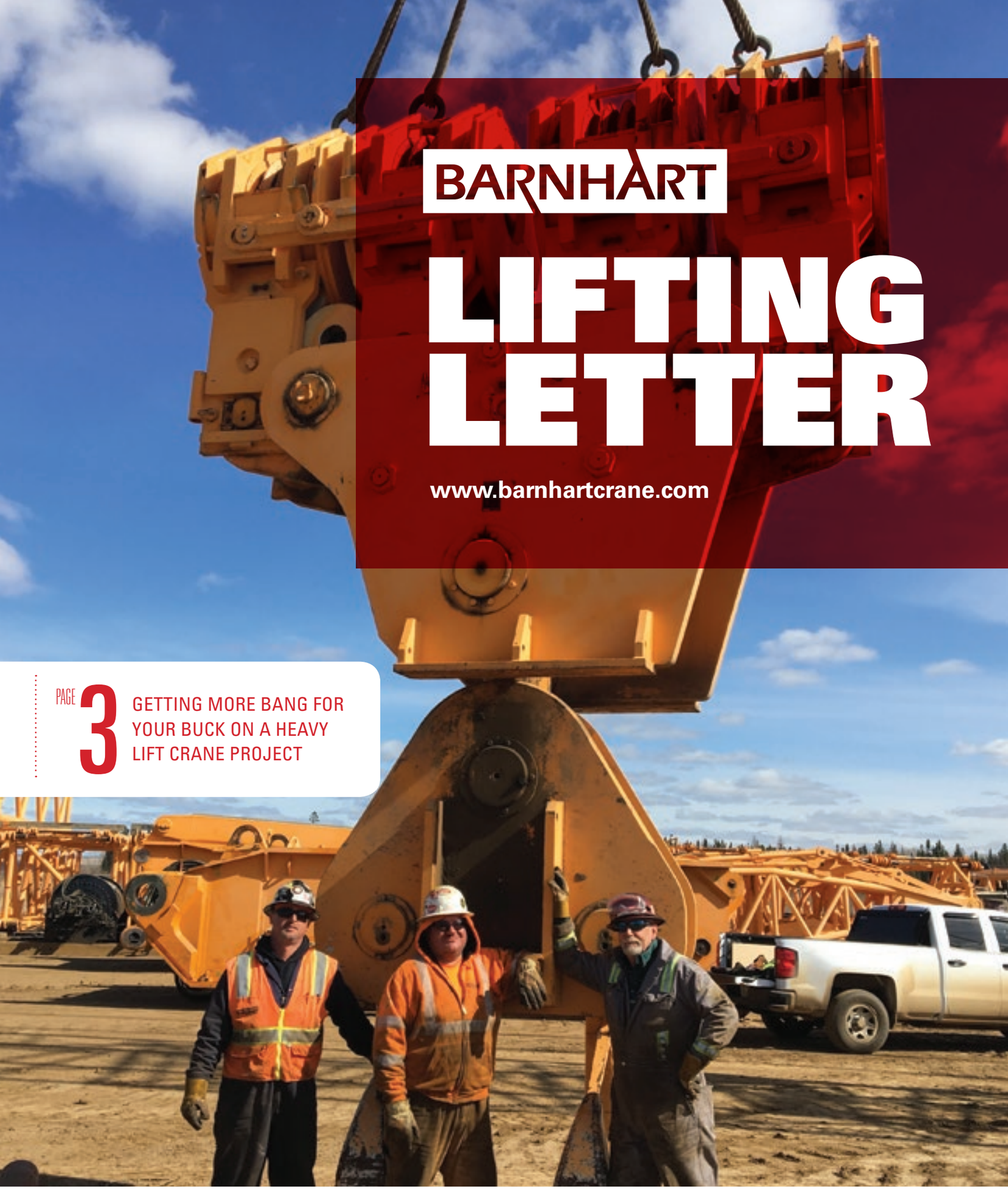

BARNHART

LIFTING LETTER

www.barnhartcrane.com

VOL. 62

A Publication of Barnhart

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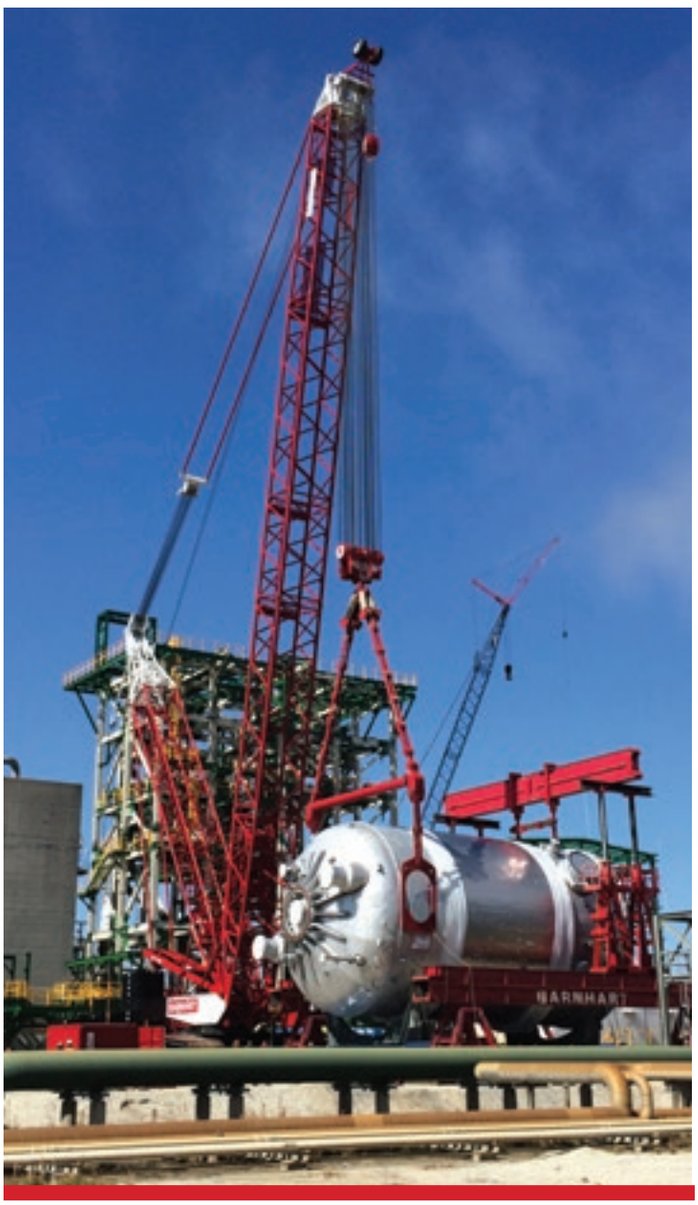


UNLOADING THE REACTOR USING THE ADJUSTABLE LINK RIGGING SYSTEM BEING TAILED WITH 500-TON GANTRIES.

THE REACTOR BEING SET IN ITS FINAL POSITION.

THE BEAMS BRIDGING OVER THE DUCTWORK.

GETTING MORE BANG FOR YOUR BUCK ON A HEAVY LIFT CRANE PROJECT

When a company is faced with a project that requires a heavy lift crane, it's a major expense. One might say a crane is a crane and just look at price. But it's what Barnhart can provide along with that crane that sets us apart.

Barnhart has the ability to maximize potential benefit on your project through experienced crews, engineering, and innovative solutions. We particularly excel when a project involves a difficult layout, a congested site, or obstacles blocking egress. That's when we bring in our engineering team to determine the best way to access and lift the vessel or unit and provide documentation to prove it can be done safely.

Projects that require difficult rigging and specialized tools are another area in which Barnhart exceeds expectations. Barnhart's cantilever beams, tips sticks, adjustable link rigging system, and other tools can be used in conjunction with our heavy lift cranes on projects in heavy industrial, refineries, chemical plants, plant construction, and plant expansion.

One project that required cool tools and engineering know-how took place in an operational plant and involved adding components, including a 500-ton vessel, to an existing unit. Access to the unit was blocked by an immovable duct bank. Our competitors proposed setting up a crane 10 feet off the bank to clear it. Our team came up with solution that bridged over the bank with slide beams supported by matting and shoring stands. This enabled the size of the crane to be reduced, saving 20-25 truckloads of crane components and longer set up time.

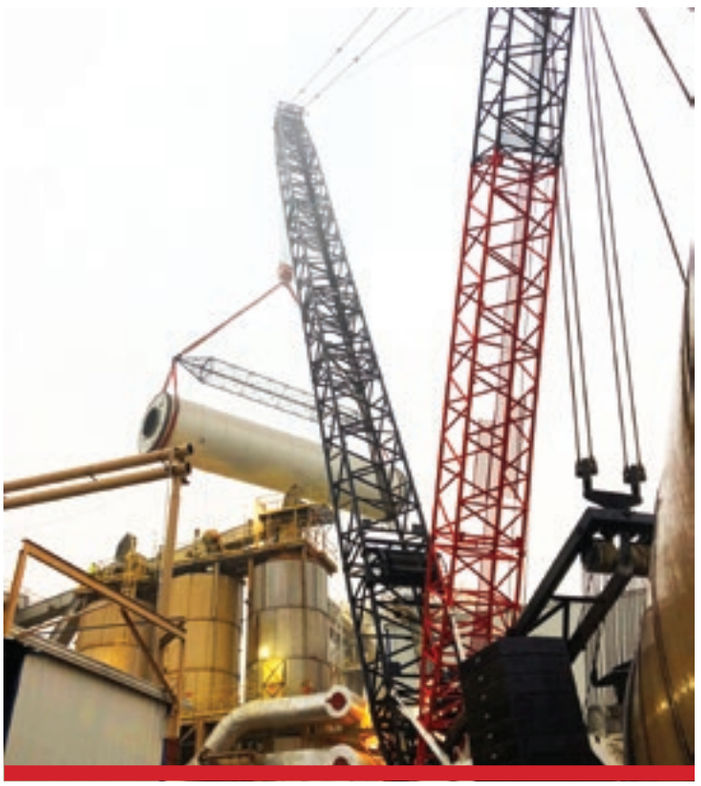
A recent addition to Barnhart's heavy left crane inventory is the Demag CC8800, a 1,375-ton crawler crane. Its advantages are easy assembly and an interchangeable counterweight system with other Barnhart-owned Demag cranes across the country, helping with mobilization. This crane is often used for refinery work, chemical plants, steel mills, and large stadium construction.

We recognize that a heavy lift crane project is an investment for our customers. Therefore, we are always striving to save you time and money without sacrificing safety.

1 Tight areas proved to be a challenge for a project involving the removal and replacement of a dryer drum at a pulp and paper plant in Louisiana. Before the crane could be set up, loads of rock had to be brought in to level out the ground and create sufficient ground bearing pressure. Mats were then placed over the rock, and the crane set up was performed during a rainstorm, increasing its difficulty.

2 The existing dryer drum was removed using a 58-foot long spreader bar. The CC600 had a very tight area in which to maneuver, lift, and swing the dryer. Barnhart was able to lift the drum with the superlift system pinned off, then boom up to decrease the radius and unpin the superlift to swing the dryer.

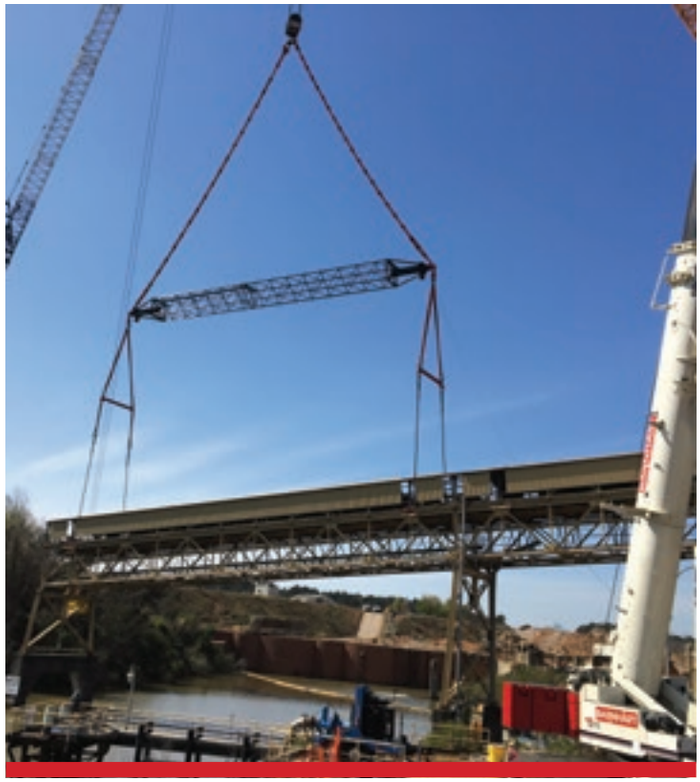
3 The new 150,000-pound dryer drum had been offloaded with a 500-ton and a 165-ton crane and staged inside the plant.



4 This drum was brought to the CC600, and the process was reversed to set it into place. The project required the resources of Barnhart's Houston and West Monroe branches.

1 A project in Georgia involved the dismantling of a coal-fired power plant. Barnhart had to provide engineered plans, supervision, trained personnel, and the appropriate equipment to rig and remove four coal conveyor spans and two pipe bridge spans and stage on grade to be demolished at a later time.

2 The ground conditions and calculated ground bearing pressures were a major concern during the project. The tests were conducted at each crane setup location, and it was determined that the existing bearing capacities were not suitable. Barnhart's engineering team worked with a geological engineering firm to design adequate crane pads for each set-up location.



3 The coal storage facility had been on the opposite side of a waterway from the power plant. The 370-foot. long conveyor spanned this public body of water. No materials or debris were allowed to fall into the water during any stage of the project, which included cutting, hoisting, and rigging.

4 The heaviest conveyor section was 110 feet long and, with rigging, weighed 300,000 pounds. Barnhart developed and executed a strategic plan to attach rigging, cut the conveyor sections free from the support piers, and complete each lift safely and with no environmental issues. It was a challenging project that resulted in a satisfied customer.

1 Barnhart was selected to remove and replace a 260,000-pound acid tank standing vertically on a foundation in the center of an acid plant and surrounded by structures. Crane access was not possible because the radius was beyond what a crane could reach given where it could be set up. Plus, the egress was a small alleyway with vertical and horizontal obstructions, so the tank could not be placed in a horizontal position and removed by a Goldhofer.

2 Additionally, there was no way to remove the vessel from the plant on the ground due to exterior cable trays. Faced with these challenges, Barnhart fabricated a jacking base for the old vessel that would allow it to be slid on a 500-ton slide system vertically. Using a 750-ton turntable, the vessel changed directions three times over the distance of 50 yards through the acid plant to the edge of the plant.

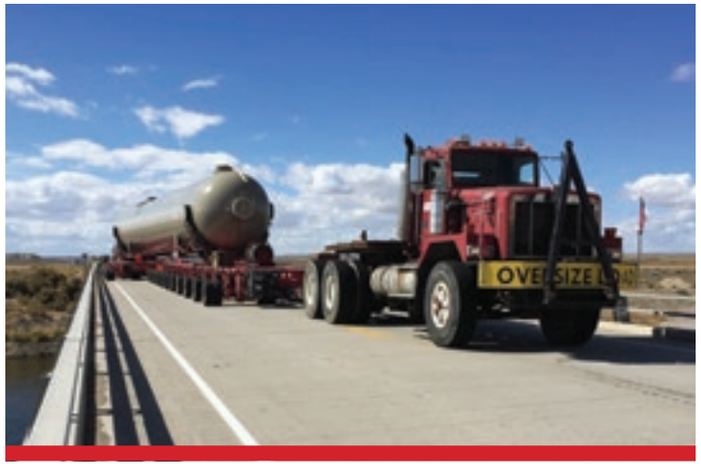
3 A 600-ton AT crane had to be placed in a small, uneven area to lift the vessel out when it reached the edge of the plant. The vessel was lifted over the 40-foot cable tray and set onto a Goldhofer.

4 Using a Barnhart tailing device, the vessel was laid horizontally and loaded on to a Goldhofer. It was removed from the area and placed on stands for eventual removal.

5 The replacement vessel was lifted by the Goldhofer from stands and transported in reverse to the existing foundation. The new vessel had to be set in exact orientation to line up with existing duct work. Despite considerable challenges, work was completed safely and on time.

BARNHART FABRICATED A JACKING BASE FOR THE OLD VESSEL THAT WOULD ALLOW IT TO BE SLID ON A 500-TON SLIDE SYSTEM VERTICALLY.

1 Barnhart was contracted to haul three tanks from the manufacturer in Idaho to two different natural gas facilities in Colorado and set them at the sites. The tanks were 117' X 13' X 14' and weighed 635,000 pounds. Transportation permits had to be secured from several states, plus the arrangement of pilot vehicles and bucket trucks. The load was carried on a bolstered 22-line West Trac dual-lane transporter, which is designed to handle extremely heavy loads and to meet DOT requirements for roads and highways in the western United States.

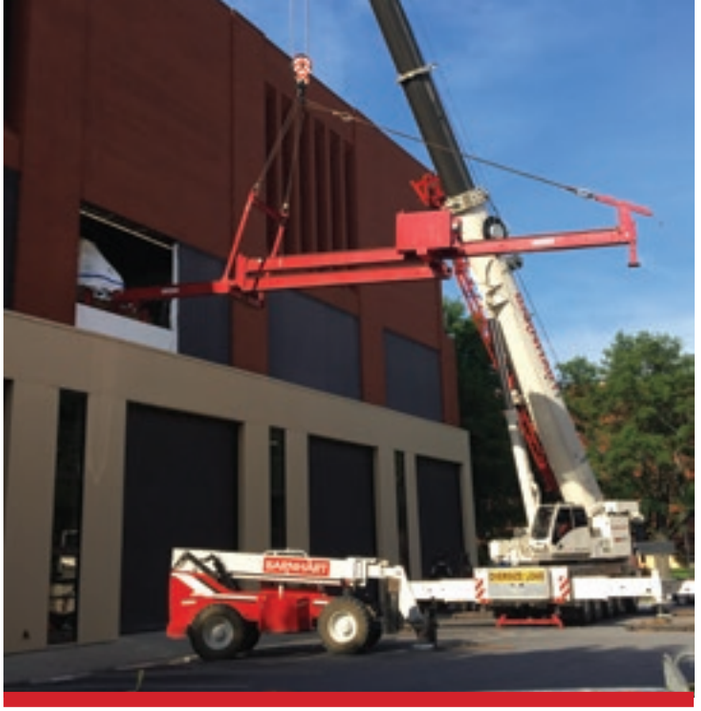


2 Barnhart had to come up with several different options to cross over bridges that were downgraded, including crabbing over one bridge. Because of the configuration of the trailer, the front and rear trailer could split, so the load could be distributed over different lanes.

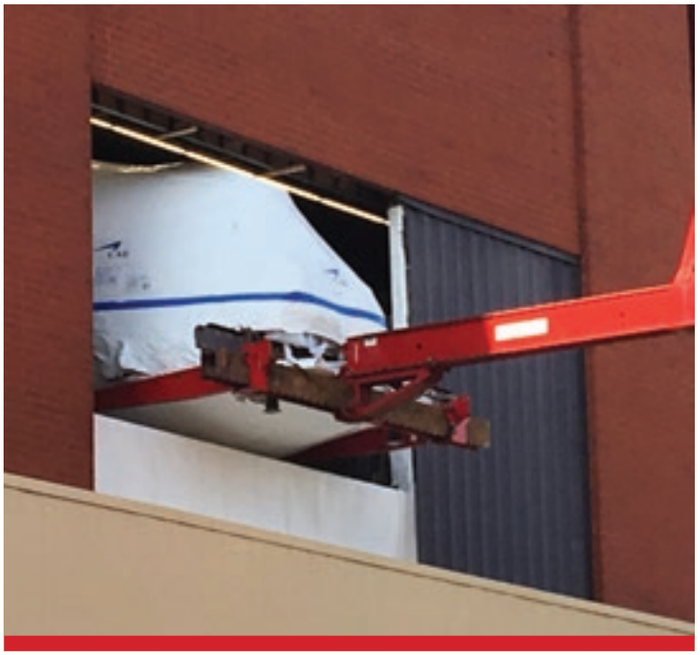
3 At the site, the tanks were offloaded to elevated pedestals. A solution had to be devised to meet the ground bearing requirements under the pedestals.

4 The team's ground bearing solution was to build a temporary runway next to the pedestals for the trailer to come alongside and use Barnhart's 500-ton one shot gantries to pick up and set the tanks.

1 Navigating tight spaces is a Barnhart specialty. This was evident in a project when Barnhart provided an engineering and lift plan for offloading two 10,000-pound flight simulators and hoisting them into an elevated opening at a training facility in Atlanta. Riggers, special equipment operators, and a crane were mobilized at the site.

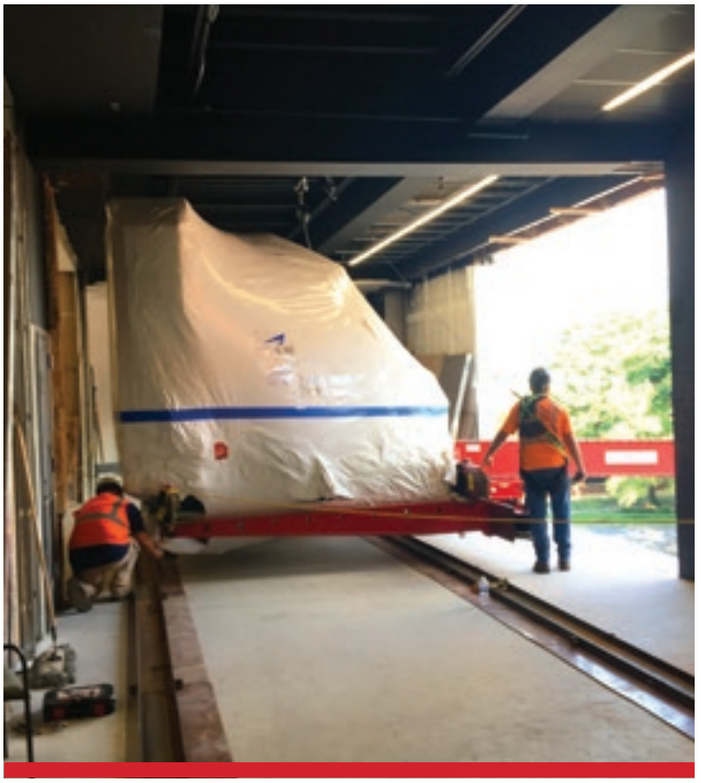


2 The client cut an opening in the side of the building, but it only provided a two-inch clearance for the flight simulators. Barnhart utilized the crane with the Movable Counterweight Cantilever System to hoist and maneuver the simulator into the building.



3 The wall opening was located at approximately 32 feet off grade. The building floor had a very low load bearing capacity of 200 pounds per square foot.

THE CLIENT CUT AN OPENING IN THE SIDE OF THE BUILDING, BUT IT ONLY PROVIDED A TWO-INCH CLEARANCE FOR THE FLIGHT SIMULATORS.



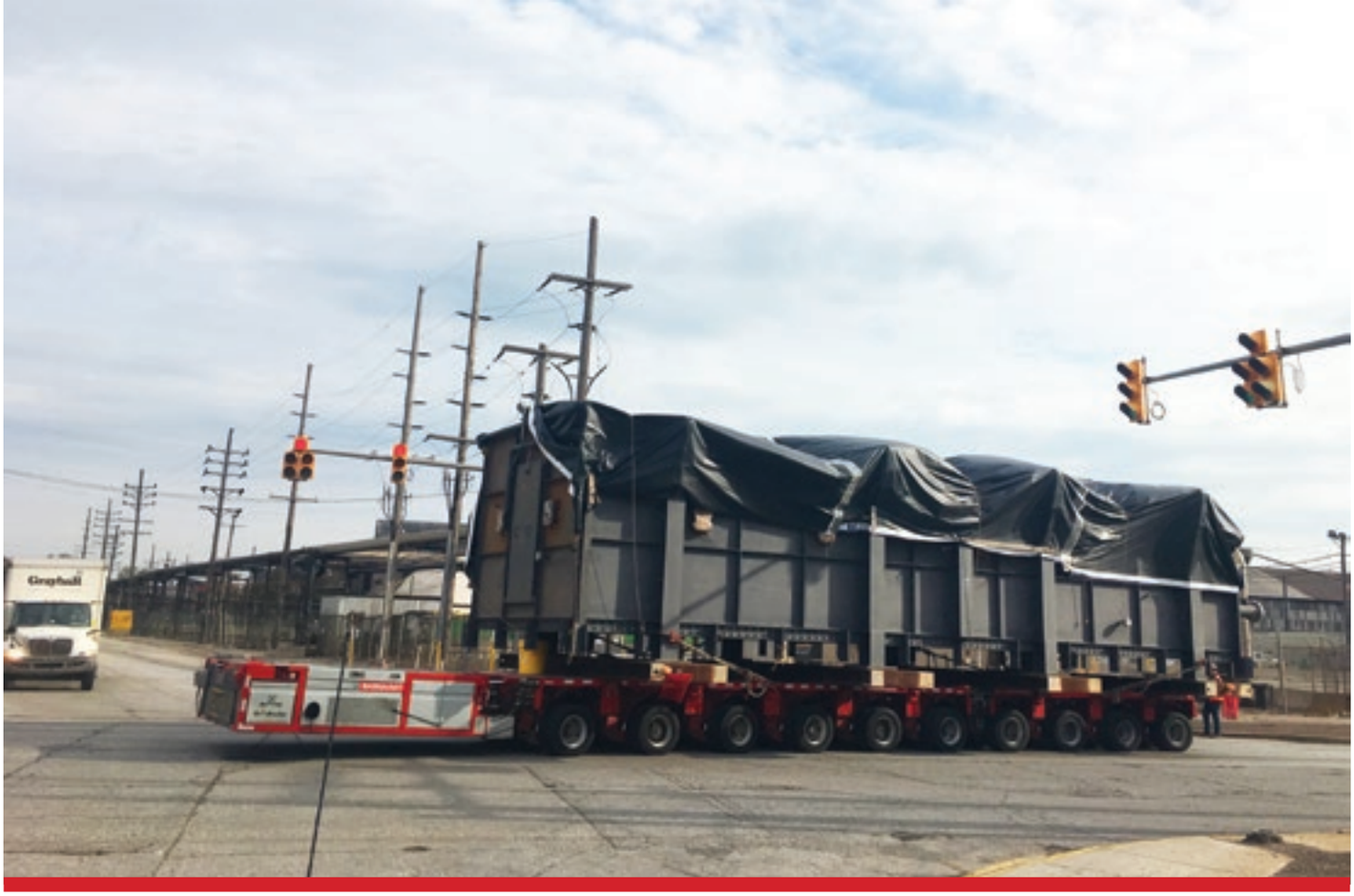
4 The structural support beams with sufficient load bearing capacity were 15 feet away from the access opening. Barnhart placed temporary beams in strategic locations to bridge the load from one building floor support beam to the next. The process was repeated for the second simulator.

1 Barnhart was contracted by a chemical plant in Illinois to load out five temporary boilers. All five had to be moved under a pipe rack, which presented low headroom issues. Two of the boilers had to be moved under an additional pipe rack.

2 Barnhart set up a 500-ton slide track system for the move. The first boiler was slid under a pipe rack to a 300-ton hydraulic crane and loaded to a trailer.

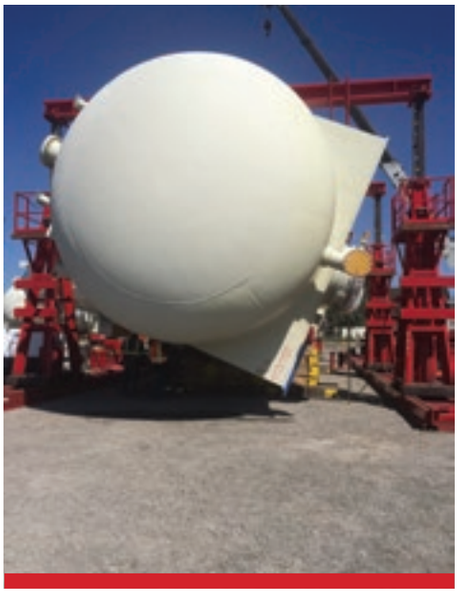
3 The crane, which was operating in a confined space, was repositioned. It loaded two boilers to the slide system and they were moved under the pipe rack. The crane was repositioned again for the boiler load out to trailers.

4 Multiple crane movements were a challenge on this job. In all there were four crane moves involved in sliding out the five boilers and loading them into waiting trailers. Despite the confined space and multiple moves, the project was completed safely with no incidents.



1 Barnhart displayed its equipment arsenal in a project at a refinery that required engineered rigging and hauling services for over 15 vessels of various sizes and weights. The vessels were transported one mile from the roll off dock to inside the refinery. Barnhart provided crew, equipment, engineering, and project management onsite for the duration of the project.

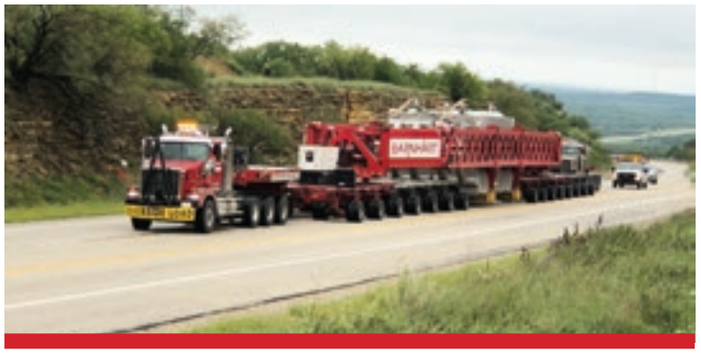
2 Barnhart transported various reactors, towers, drums, and furnace sections on a Goldhofer with PSTE. There were multiple overhead obstructions on the haul route that required some pieces to be transloaded from PSTE to a slide system.



3 Some vessels had to be rotated at the roll off dock with gantries to a 45-degree angle prior to hauling to shorten the overall height during sliding operations.

4 The slide system, single shot gantries, and custom built low profile transport saddles were needed to slide the vessels the full length of the refinery road under pipe racks and fiber optic wires. It took three months to complete the scope of work.

1 Barnhart was tasked with hauling a nearly 289,000-pound heat exchanger from New Iberia, Louisiana, to Opal, Wyoming. At the fabricator in Louisiana, the exchanger was self-loaded onto Barnhart's GS-800.



2 The trip was over 2,313 miles through six different states, requiring DOT plans and permitting in each state and municipality the cargo traveled through. The trailer combination was 260 feet long and traveled at an average speed of 30 mph.

3 One of the challenges of such a large haul was traveling through congested areas in Lafayette, Louisiana, Houston, Texas, and Fort Collins, Colorado. Weather was a factor as well, as the team was trying to reach their destination before the early winter snow hit in Wyoming in October.

4 After over 2,000 miles and 14 days, the heat exchanger reached its destination at a chemical plant in Opal where it was self-loaded to customer staging. Due to maximizing the driver's schedule, the heat exchanger was delivered early, resulting in a delighted customer.

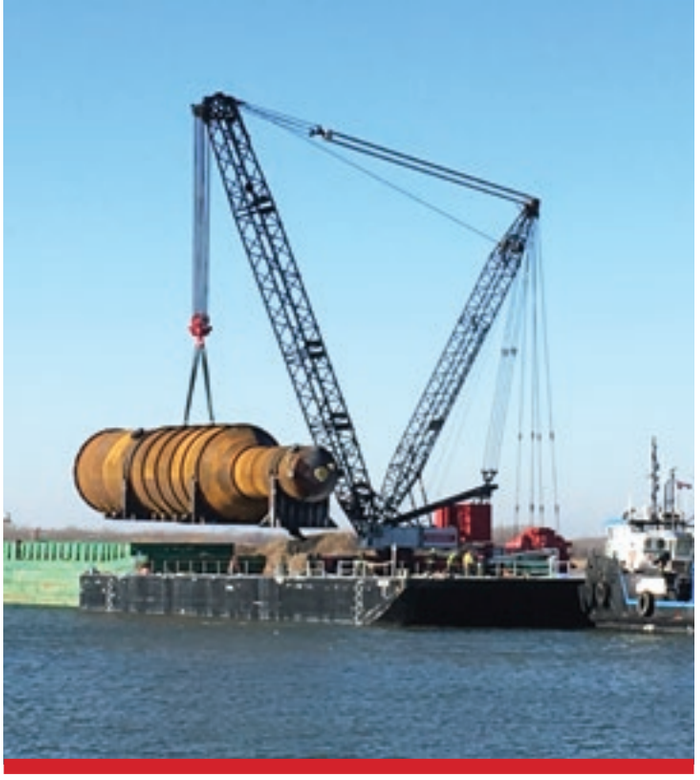
1 Barnhart received a 525,000-pound press from rail car and loaded it into a PSTE Goldhofer using 600-ton gantries. The gantries were then moved to the industrial site.

2 The team transported the press through the plant to the receiving building and faced limited space to maneuver and set up. The Goldhofer took the frame as far into the building as possible and a slide track was utilized to receive the frame.

3 Gantries and specially designed trunnions were utilized to upend the press. This was a challenge because of the maximum stroking of the 600-ton gantries.

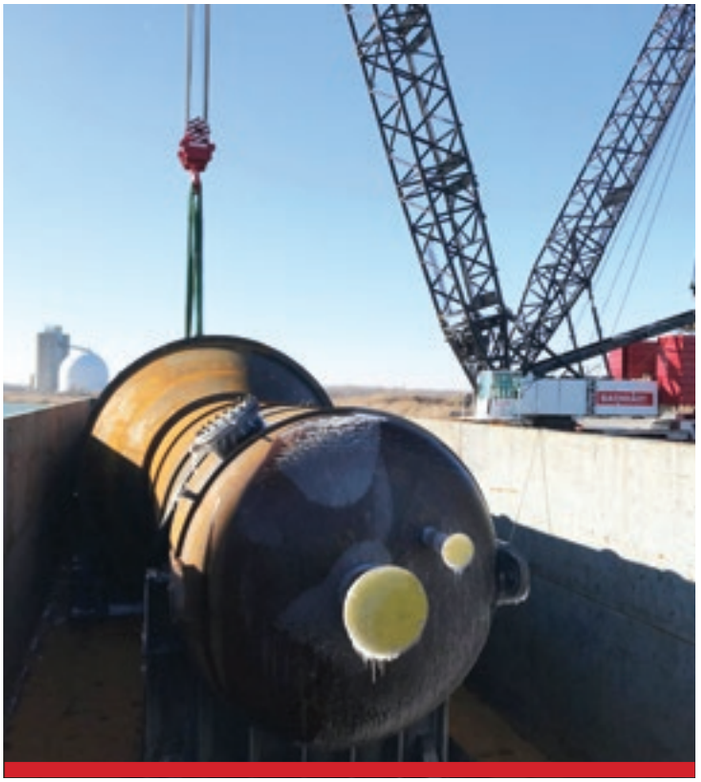
4 The press was then lowered into the pit.

1 Barnhart was contracted to transload a 500,000-pound pre-flash drum at our Chicago transload facility during a tight schedule between Christmas and New Years. The vessel's actual weight turned out to be 50,000 pounds more than the original proposed weight.

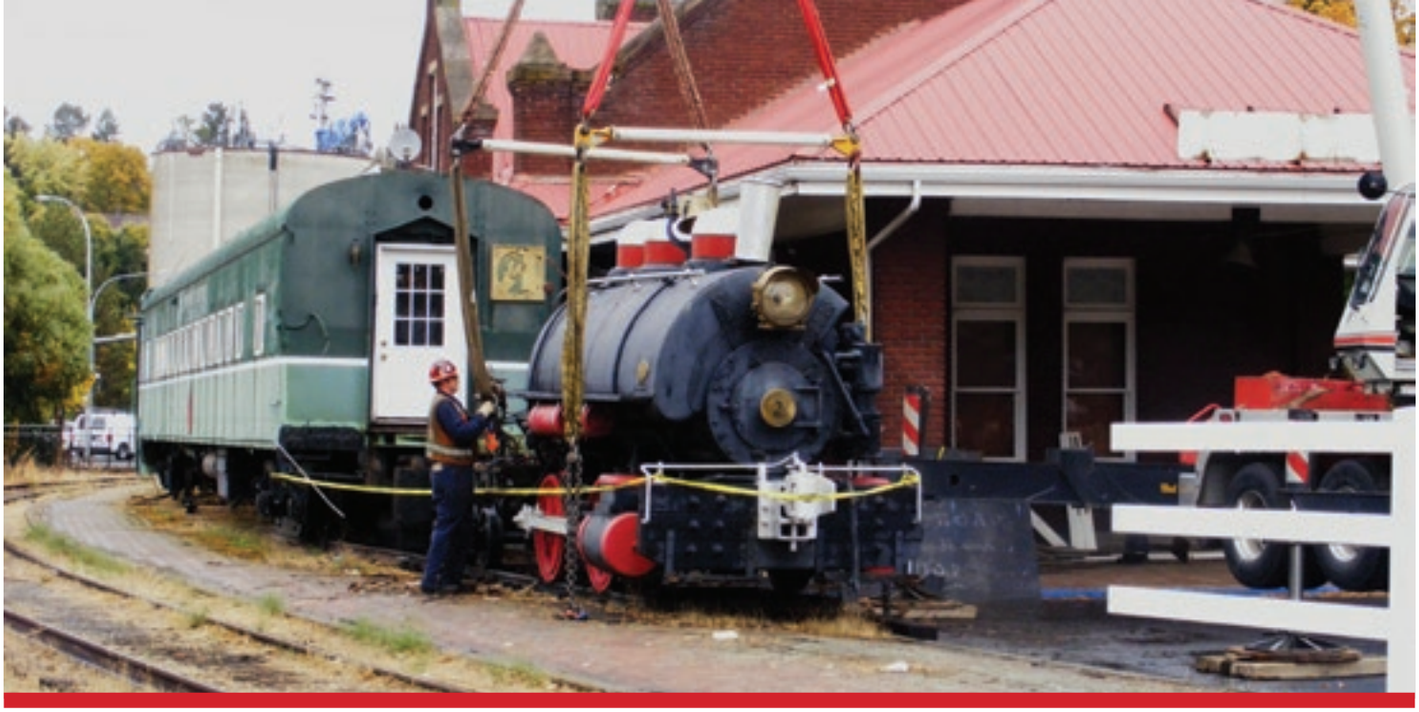


2 The team used our TC3000 dock crane to lift the vessel from an ABS deck barge.

3 The drum was then loaded into a Ceres Hopper barge.

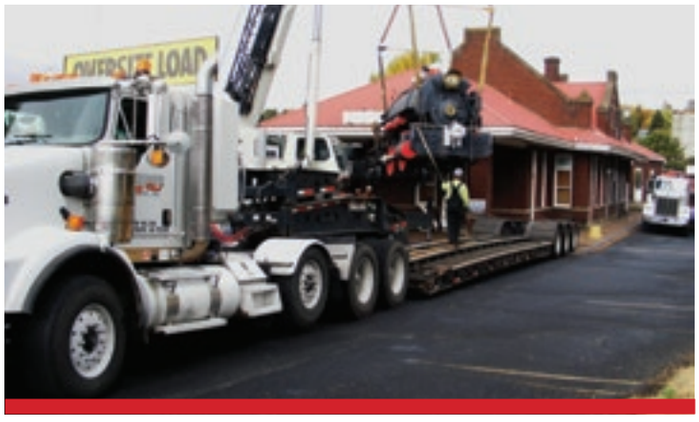


4 Once the transload was complete, the crew secured the drum to the deck of the hopper barge. The project transload was completed in a one day shift.

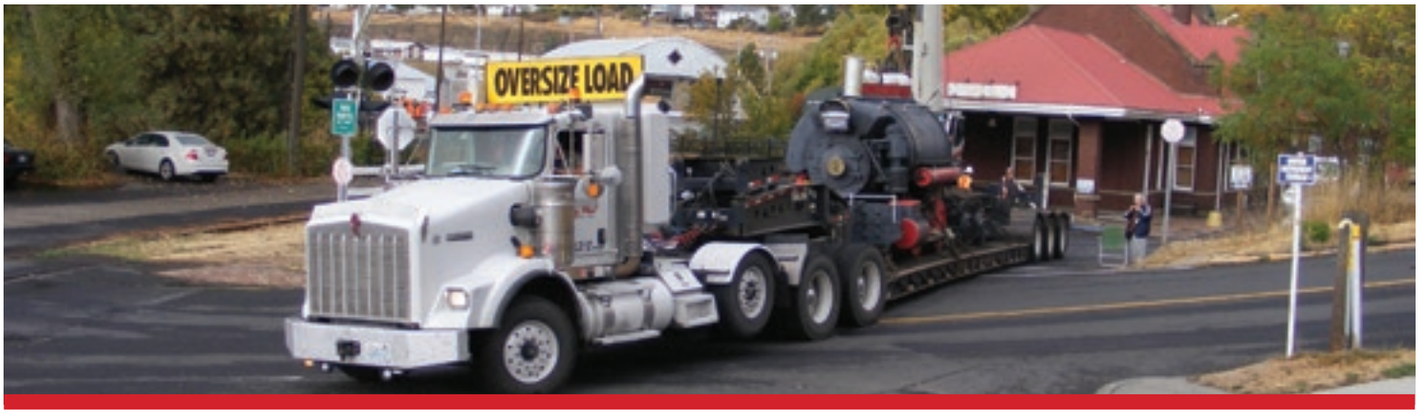


1 Barnhart's Spokane, Washington branch was hired to move a 1920s era Forney steam locomotive from its site at the Pullman Depot Heritage Center in Pullman to the Inland Northwest Rail Museum in Reardon, Washington. The main concern was protecting the components of the antique piece during all phases of the project. Barnhart carefully fastened slings and chains to the engine, so it could be lifted and moved. *Photos courtesy of the Pullman Depot Heritage Center.*

2 The locomotive weighed approximately 60,000 pounds. The crew used a 100-ton Linkbelt machine, a crane operator, and a couple of riggers to complete the team. The crew helped guide the locomotive with ropes as it was a tight fit between the depot and the crane.



3 The locomotive was guided with ropes and set on a heavy haul seven-axle lowboy.



4 Once secured, the truck left for the 100-mile trip to Rearden. At the Northwest Rail Museum, the locomotive was offloaded and set on their display track.

1 Barnhart was hired to set concrete bridge spans on two bridges in Illinois, near Galena and Fenton. The beams were transported from Peoria, about four hours away, and the roads to get to the bridge were very winding and narrow. At the Galena site, the customer built an island in the river to set the 300-ton crane.

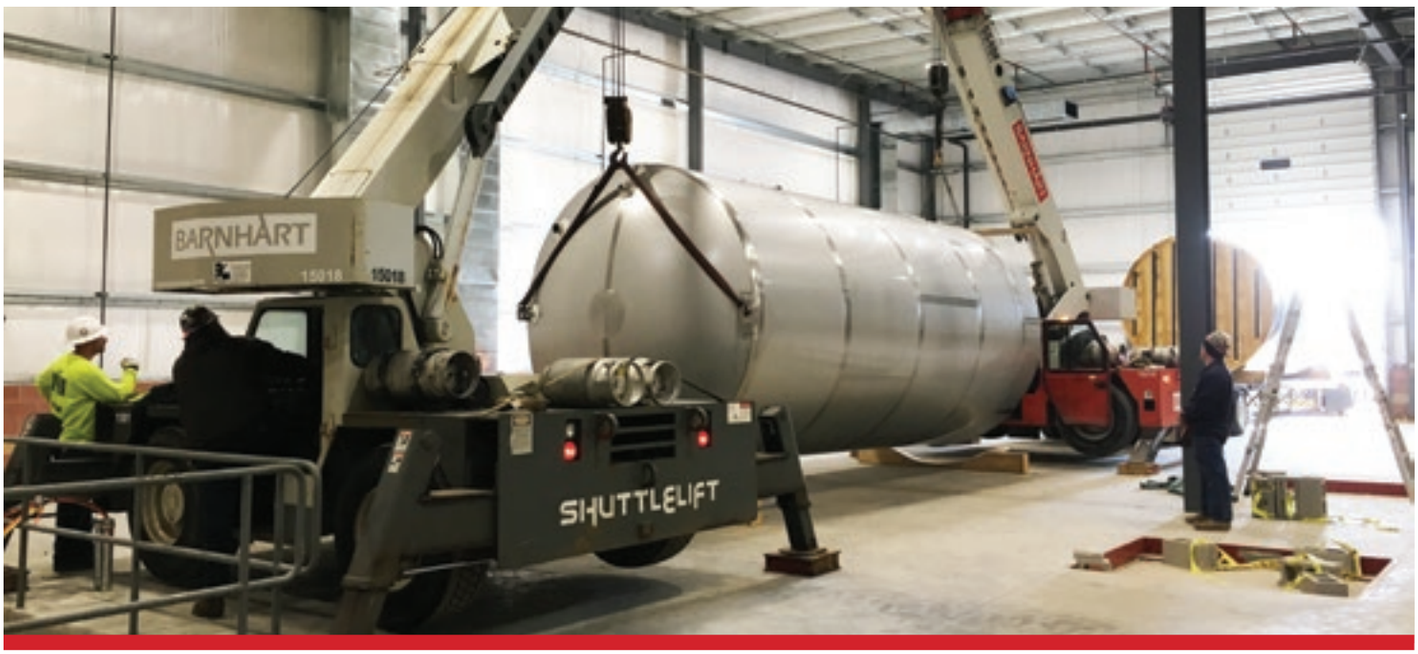
2 The island enabled the Barnhart team to set all the beams with one crane in the middle. Seven beams, each one 83' long and weighing 76,400 pounds, had to be set on the two section bridge. The team had to work around rain storms and finished right before a severe storm caused the river to rise about a foot.

3 In Fenton, Barnhart set seven beams on a three-section bridge, each one 57' long and weighing 55,600 pounds. The west end was set first with one 300-ton crane.

4 The beams in the middle section were 71' long and weighed 67,700 pounds each. They were unloaded with one 300-ton crane, but it took two 300-ton cranes, one at each end of the bridge, to set. The beams were hauled one at a time from Peoria, so being ready to set the beams in a short amount of time was essential.

CANTON, OH

BARNHART'S CANTON BRANCH IS A FULL-SERVICE FACILITY, STRATEGICALLY SITUATED TO SERVE CUSTOMERS IN OHIO AND SURROUNDING STATES. THE BRANCH NOT ONLY SERVES LARGE METROPOLITAN AREAS IN OHIO LIKE CINCINNATI, CLEVELAND, AND COLUMBUS, BUT ALSO METROS SUCH AS MORGANTOWN, WEST VIRGINIA, PITTSBURGH, PENNSYLVANIA, AND PARTS OF KENTUCKY.



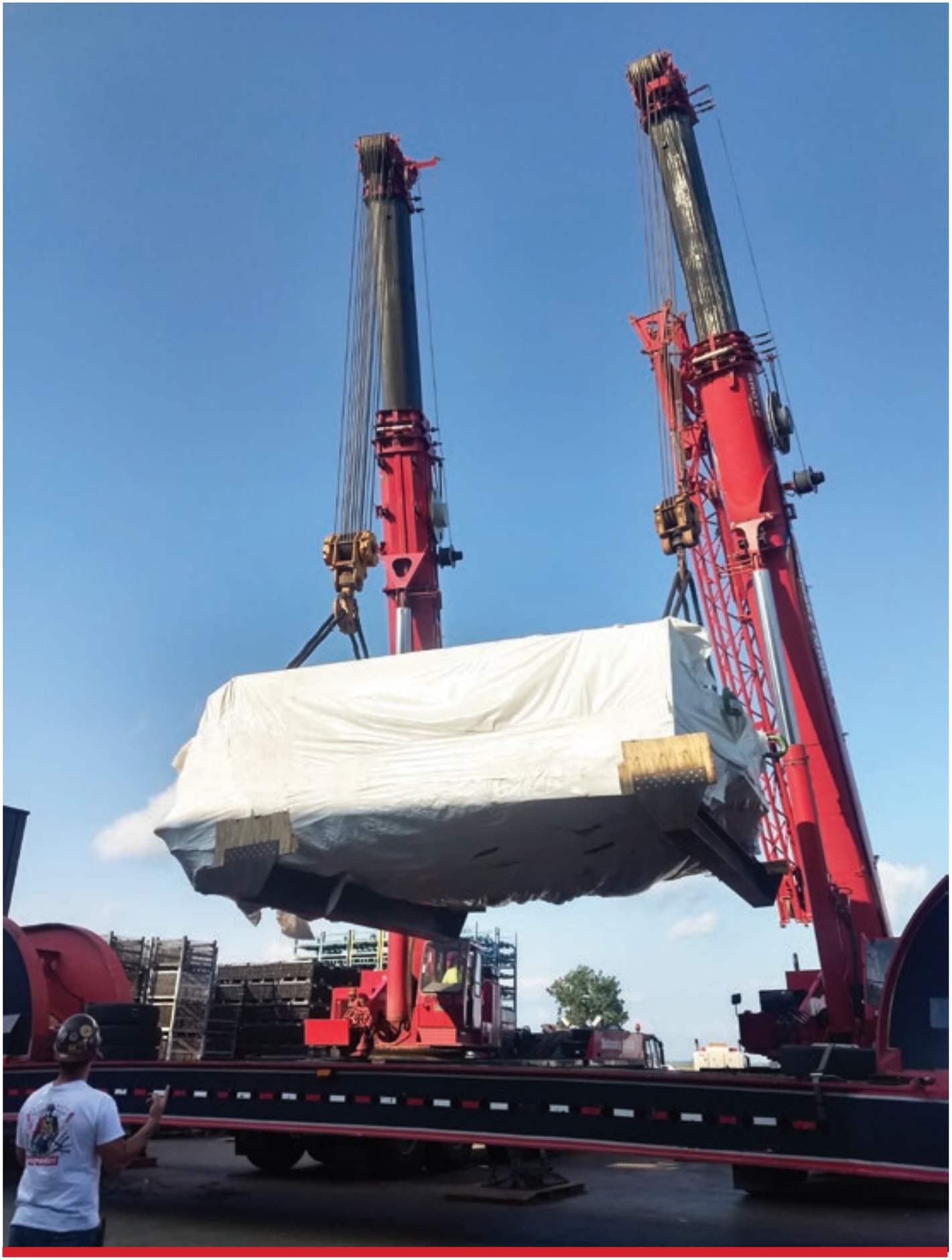
UNLOADING AND SETTING VESSELS INTO A PIT WITH LOW HEADROOM IN A CUSTOMER'S BUILDING.

Formally the rigging and hauling division of Selinsky Force, Barnhart's Canton team focuses on machinery moving and installation, heavy haul, transformer work, and crane services. With rigging as one of their specialties, they offer standard and custom-engineered rigging solutions for challenging component removal and replacement projects.

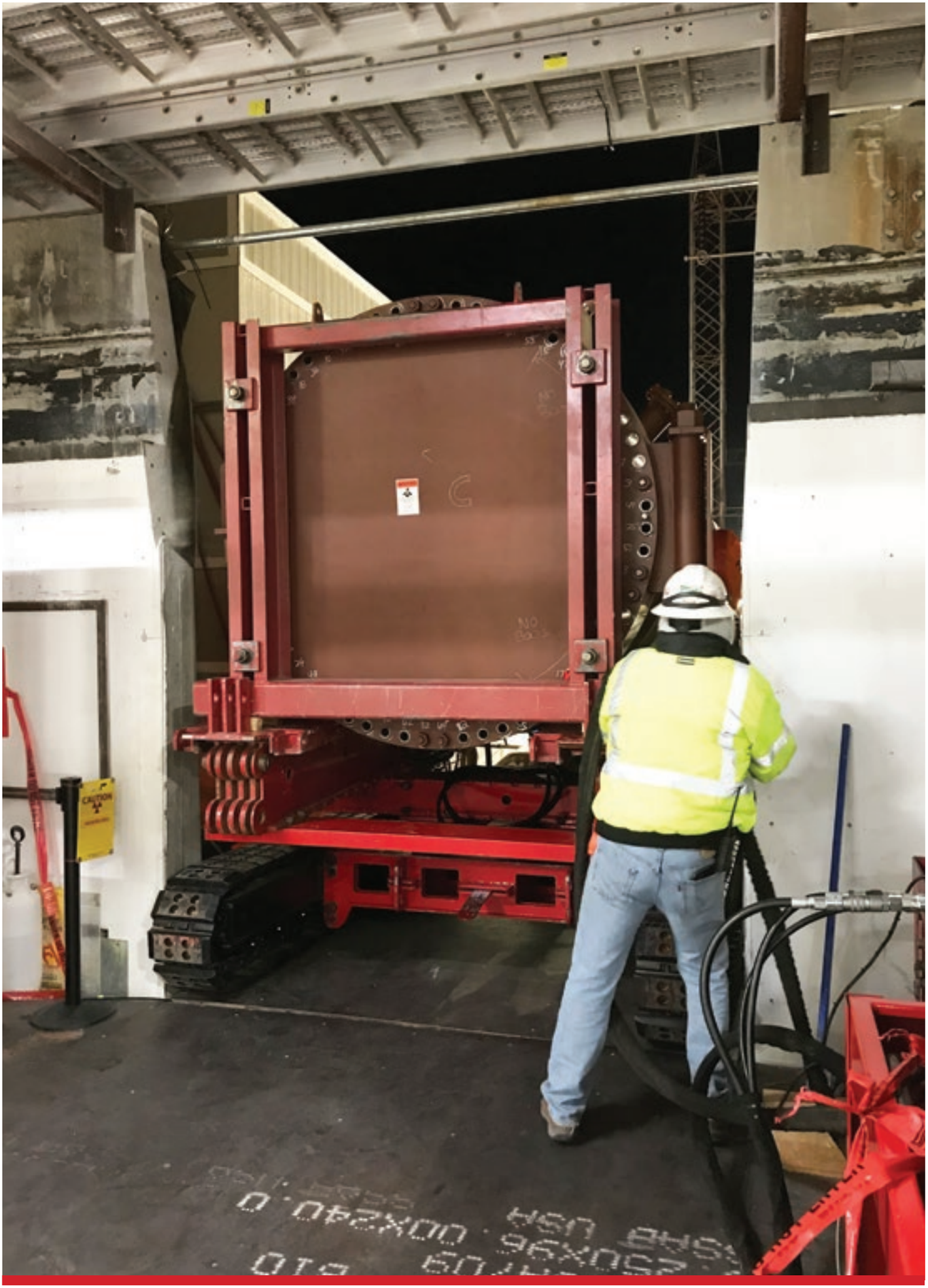
"For decades, the rigging and hauling unit of Selinsky was one of the top service providers in the region," says Branch Manager Jim Chapman. "Now that we are part of the Barnhart organization, we have access to a country-wide network of resources. We can offer expanded and innovative solutions to our existing and future customers and further training to our employees. We truly are proud to be part of this team."

Industries that the Canton branch serves include nuclear, power generation, petroleum refining, and chemical process. The office is located on 11 acres with storage capabilities, including seven acres of outdoor and 12,000 square feet of indoor storage. The property has immediate access to Route 30 and 77.

TRANSLOADING, HAULING, AND SETTING A 300,000-POUND TRANSFORMER IN INDIANA.



UNLOADING PRESS COMPONENTS TO BEGIN INSTALLATION FOR A LOCAL MANUFACTURER.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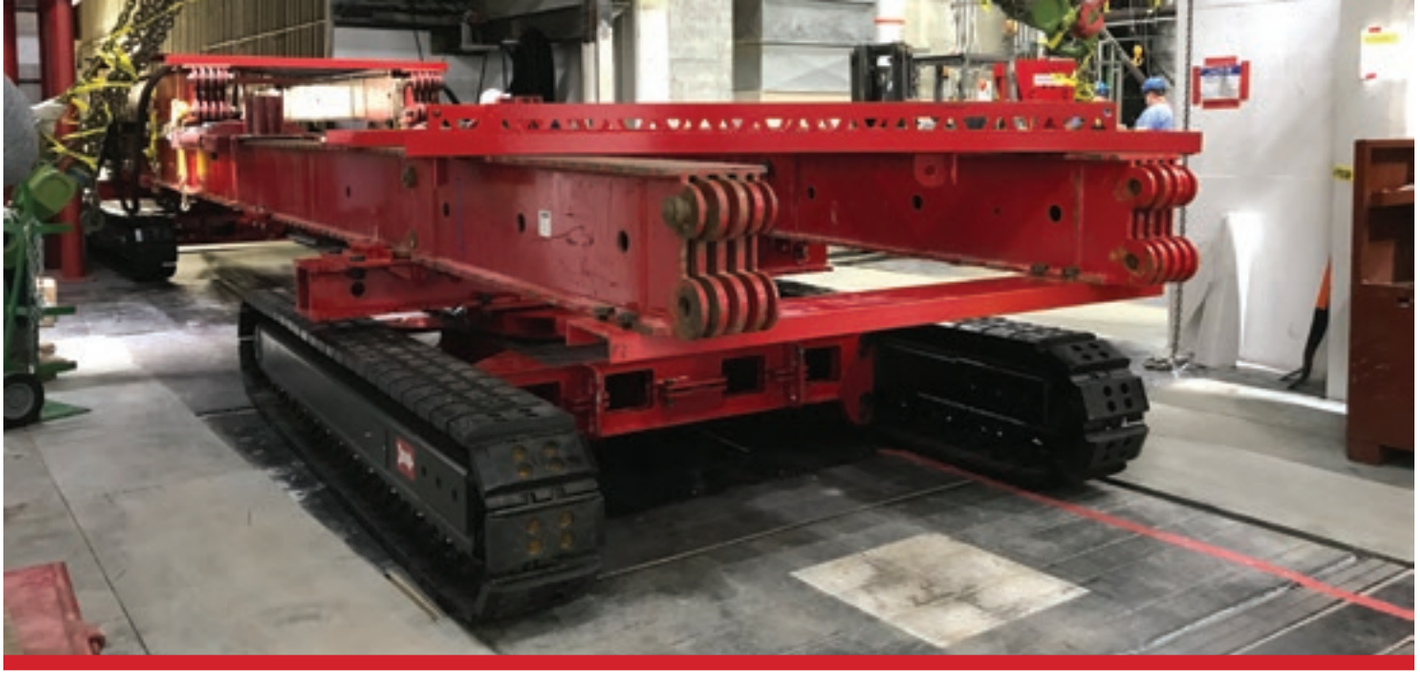


SOFTRAC

BARNHART'S SOFTRAC IS THE LATEST COOL TOOL IN BARNHART'S EQUIPMENT ARSENAL, DESIGNED TO NAVIGATE PROJECTS IN WHICH HEADROOM, FLOOR LOADING, AND TRAVEL PATH ARE A CONCERN.

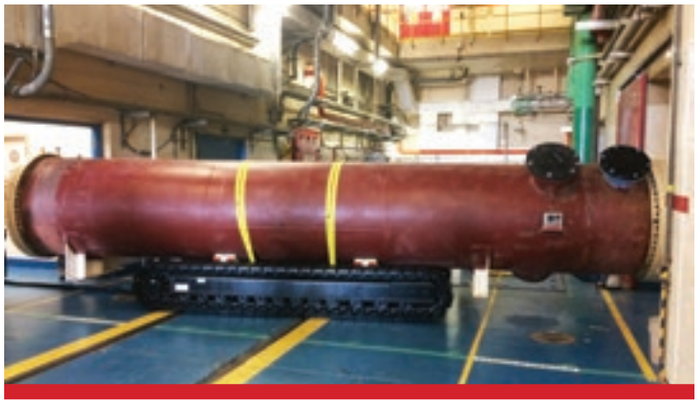
The SofTrac system is composed of two 12' long polyurethane crawler tracks and a carbody. The tracks are remote controlled and hydraulically driven. They can operate in tandem or independently to allow for skid steer action, which gives them excellent maneuverability and control over their payload.

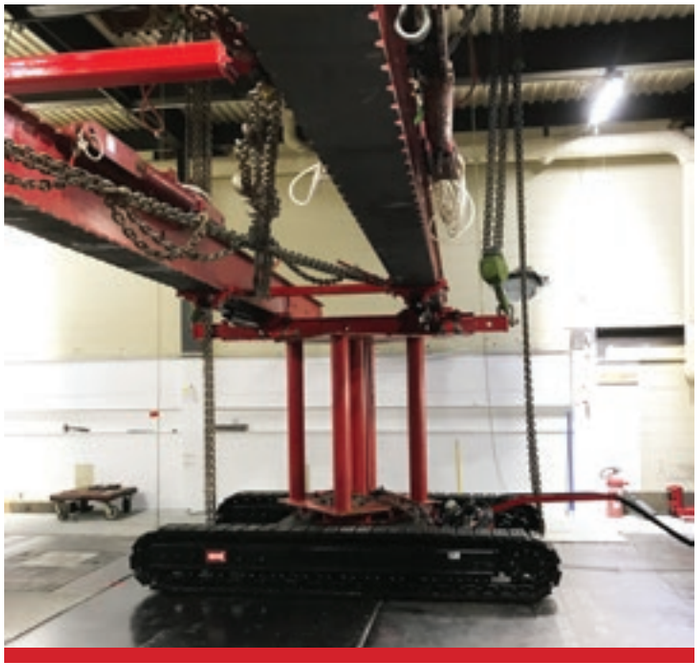
The benefits of the SofTrac system are its non-marring rubber tracks and low-height profile, maneuverability, and load spreading footprint. It can be used in a variety of projects, particularly heat exchanger and feedwater heater remove and replace projects, or any situation in which low headroom, tight clearances, or floor loading is a concern.

The design of the system allows for custom modifications. There are several attachments, such as a rotating bolster, that can mount to the top of the carbody. The attachments allow the SofTrac to navigate sharp turns and other obstacles in a plant environment.

The system was designed and fabricated by Barnhart and tested in-house. Different width or height carbodies can also be fabricated for use in different applications, such as removal of pumps, motors, and smaller components.

Transport and set up is easy compared to the alternative of using long runs of slide track and powered turntables. The SofTrac system reduces transport cost and setup time dramatically.





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- GADSDEN, AL | FULL SERVICE
- MOBILE, AL | FULL SERVICE
- BLYTHEVILLE, AR | FULL SERVICE
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- LONG BEACH, CA | RIGGING & TRANSPORT
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- CEDAR RAPIDS, IA | FULL SERVICE
- DES MOINES, IA | FULL SERVICE
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- MONROE, MI | RIGGING & TRANSPORT
- JACKSON, MS | FULL SERVICE
- LINCOLN, NE | FULL SERVICE
- OMAHA, NE | FULL SERVICE
- SOUTH SIOUX CITY, NE | FULL SERVICE
- OKLAHOMA CITY, OK | FULL SERVICE
- CANTON, OH | FULL SERVICE
- PORTLAND, OR | FULL SERVICE
- PHILADELPHIA, PA | RIGGING & TRANSPORT
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- KNOXVILLE, TN | FULL SERVICE
- MEMPHIS, TN | FULL SERVICE, SERVICE CENTER, HEAVY LIFT TERMINAL
- HOUSTON, TX | RIGGING & TRANSPORT
- HAMPTON, VA | FULL SERVICE
- KENT, WA | FULL SERVICE
- MT. VERNON, WA | FULL SERVICE
- RICHLAND, WA | RIGGING & TRANSPORT
- SPOKANE VALLEY, WA | FULL SERVICE

BARNHART EQUIPMENT

ALTERNATIVE HEAVY LIFT
- MODULAR LIFTING TOWER
- PULL-UP GANTRY
- HYDRAULIC SLIDE SYSTEM
- JACKS & RAMS
- 4-POINT GANTRY SYSTEM
- STRAND JACKS
- MODULAR HOISTS

TRANSPORTATION SYSTEMS
- DUAL LANE TRANSPORTERS
- GOLDHOFER PSTE
- HYDRAULIC DOLLY SYSTEMS
- BARGING
- RAMPS AND TEMPORARY BRIDGES

MARINE HEAVY LIFT
- DERRICK CRANE – MISSISSIPPI RIVER
- BARGE CRANE – GULF COAST
- BARGE CRANE – GREAT LAKES
- HEAVY LIFT TERMINAL – GREAT LAKES
- HEAVY LIFT CRANE – HOUSTON

TELESCOPIC BOOM CRANES
- FROM 7 TONS TO 650 TONS

LATTICE BOOM CRANES
- CRAWLERS FROM 100 TO 1800 TONS
- TRUCK CRANES FROM 115 TO 800 TONS
- RINGER CRANES FROM 360 TO 1,800 TONS

OPERATED CRANE SERVICE
- OVER 450 CRANES
- LATTICE BOOM TO 1,760 TONS
- TELESCOPIC BOOM TO 600 TONS
- FULL TURNAROUND SERVICES
- NATIONWIDE NETWORK OF CRANE BRANCHES