BARNHART CRANE & RIGGING CO.

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THE LIFTING LETTER

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Heavy Cargo Storage Facilities and Services Expand

Barnhart has been awarded contracts to store heavy cargo from various industries including medical, HVAC, air separation, electric power generation and manufacturing. Barnhart's Heavy Lift Terminal at the Port of Memphis and its 150 plus acre facilities at branches throughout the United States well suit Barnhart to provide heavy lift and storage services.

At the request of our customers, Barnhart now provides preservation initiatives to prepare electric power plant cargoes for long term storage. Providing this service requires Barnhart to interface between equipment OEMs and service specialists to ensure that appropriate procedures are followed. The condition of the equipment is monitored throughout the storage term.

Numerous power plant projects have been deferred or cancelled creating an increased demand for storage facilities. Barnhart is constructing a new indoor storage facility engineered to accept heavy cargo. The facility will be located at the Heavy Lift Terminal in Memphis adjacent to Ichabod, the 1250 ton derrick crane located on the Mississippi River. This storage location will facilitate discharging heavy cargo directly from rail or barge to inside storage.

EQUIPMENT MODULE SETTING

Barnhart Crane supplied two cranes and rigging crews to lift and place two modular equipment skids and one stair tower at a rubber plant in West Tennessee. The 500 ton crane had to be placed in an existing elevated driveway with half the crane placed off the driveway ramp, to keep the radius of the lift within the crane's capacity. The equipment skids (96'high and 90,000 lbs. each) were lifted off transporters, stood vertical with a 110 ton assist crane, lifted over existing equipment and set within inches of the existing structures. A difficult crane and rigging project made easy by experienced crews and good engineering.

Photo courtesy of State Gazette

MRI UNIT INSTALLED WITH CANTILEVER BEAM

Recently, a hospital in Western Tennessee purchased a new Magnetic Resonant Imaging (MRI) unit. Installing an MRI unit is usually straight forward with the MRI room built at ground level. In this case, the MRI room was built on the second floor with additional obstacles in front of the wall opening and restricted head room. The Barnhart team called on it's engineering department and top rigging superintendent to come up with a solution for this complicated job. A special forked cantilever beam and a 60 ton crane with two load lines was utilized to make this difficult job go safely and smoothly.

BARNHART DELIVERS 400 TON TRANSFORMER

COVER STORY COVER STORY COVER STORY COVER STORY COVER STORY

Barnhart Crane and Rigging's Chicago Branch was entrusted with the movement of an Illinois nuclear facility's spare main power transformer for its Power Station. The 833,000 pound transformer was transported inland by barge from New Orleans to BC&R headquarters in Memphis, TN.

After being transloaded to another barge by Barnhart's 1250-ton derrick crane, Ichabod, the transformer was then transported up the Mississippi River to the Illinois River, rolled off, transported, and set on a temporary base at the customer's facility. The transformer measured 11 feet wide by 33 feet long by 17 feet tall and was the largest transformer ever handled by Barnhart.

Our coustomer's senior project manager, said, "There was a high degree of confidence in Barnhart Crane & Rigging from the start because of the depth and breadth of BC&R's equipment and expertise. Their management had a real professional knowledge of how to work on a nuclear site, preventing the logistics and technical aspects of moving the transformer from becoming a problem."

REACTOR PRESSURE VESSEL REMOVAL AT A NORTHEASTERN NUCLEAR FACILITY

The final phase of Barnhart Crane's scope for this project was completed in September. Barnhart removed the Reactor Pressure Vessel (RPV) from the reactor cavity in the containment building and placed it on a transportation saddle. The RPV removal was part of site decommissioning.

The RPV lift was accomplished with a specially configured twin strand jack system mounted on an existing overhead crane in the containment building. The strand jack system incorporated a tandem Barnhart slide system to move the RPV laterally for insertion into the shipping container. The tandem slide system was mounted on each of two girders on the existing overhead crane. Following the lateral move with the slide system, the RPV was carefully lowered in to the shipping container with the strand jack system.

The final set of the shipping container package was done with Barnhart's Modular Lift Tower (MLT) and strand jacks augmented by a pair of 800 ton gantries. The saddle was maneuvered with nine lines of Barnhart self-propelled Goldhofer trailer.

BC&R Engineering & Specialty Tools

Barnhart crews traveled to Kansas to set a cement ball mill. The ball mill was 55' L x 18' W and weighed 320,000 lbs. Existing foundation piers and limited area around the saddle foundations proved to be a great place to show off some of BC&R's specialty tools. Barnhart engineers decided to use 60' L x 5' H box girders along with 500 ton hydraulic gantries and ten lines of self propelled Goldhofer trailer. Rigging crews lifted the ball mill with gantries and placed it on the Goldhofer trailer for on site transport. Then crews repositioned the gantries and track system next to the ball mill bearing foundations. Crews then moved the ball mill into position for lifting and movement across the top of the trailer for final placement on top of saddle piers.

Barnhart Completes Time Critical Exchanger Project

At a Alabama refinery, Barnhart's customer needed to maintain a tight schedule during a revamp project. One dilemma involved removing multiple heat exchanger units to dispose of some while retaining others. Additionally, the exchangers were housed in the lower bay of a multiple level structure without crane access. Even more problematic was the need to remove the tube bundles from the disposable units while leaving the bundles in the "keepers." One of the keepers was perched atop two empty shells making for a high center of gravity. The challenge was to remove the exchangers without damaging the units scheduled for reinstallation.

Barnhart decided to remove the exchangers as two large units. The solution required turning eleven individual heat exchangers into a "six pack" and a "five pack." The individual units were configured to units weighing up to 180,000 lbs. By tying the exchangers together the top heavy keeper became part of a larger more stable unit.

Barnhart provided the engineered plan to tie the units together. Using a hydraulic slide system, the "five and six pack" units were removed safely and ahead of schedule. Once in the open, a crane removed the disposable units and prepared the keepers for reinstallation.

YOU SAY PROBLEM
BARNHART SAYS CHALLENGE

What do you do when you purchase equipment you can't get delivered? Call Barnhart Crane & Rigging and make your problem become our challenge. After waiting months for a solution to get two Amine Drums from a fabricator's shop in St. Louis to the Mississippi River, the refinery decided to send out a call for assistance. Barnhart coordinated with local and state authorities to make the haul of two Amine Drums (64' L x 18' W x 20'H) weighing 110 tons each. Two Goldhofer trailers with BC&R designed inserts made bridge crossings and narrow streets seem like a typical Sunday drive on the way to a Rams football game.

TELESCOPIC BOOM CRANES	MODEL NO.	BOOM
500 Ton Liebherr All-Terrain (2)	LTM 1400	440′
440 Ton Demag Truck Crane (2)	HC 1010	348′
300 Ton Demag All-Terrain	AC 665	389′
225 Ton Liebherr All-Terrain	LTM 1160	364′
210 Ton Krupp All-Terrain	GMK 5210	322′
180 Ton Demag All-Terrain (3)	AC 435	262′
165 Ton Demag All-Terrain (3)	AC 335	302′
150 Ton Demag All-Terrain (2)	AC 395	253′
150 Ton Krupp All-Terrain (2)	KMK 5100	227′
120 Ton Demag All-Terrain	AC 265	204′
110 Ton Liebherr (3)	LTM 1090	243′
110 Ton Krupp All-Terrain	KMK 5110	214′
100 Ton Demag All-Terrain (4)	AC 205	219′
80 Ton Krupp All-Terrain (4)	KMK 4070	175′
80 Ton Grove RT (2)	RT 990	206′
70 – 60 Ton Truck Crane (5)		186′
50 – 30 Ton Grove Truck Crane (14)		142′
22 Ton Grove All-Terrain/Truck (4)		113′
27 – 12 Ton Boom Truck (6)		149′
17.5 – 8 Ton Carry Deck (7)		37′

CRAWLER/RINGER CRANES	MODEL NO.	BOOM
1800 Ton Demag with Ringlift	CC 4000	595′
880 Ton Demag Crawler with Superlift	CC 4000	550′
600 Ton Demag Crawler with Superlift	CC 2600	295′
500 Ton Demag Crawler	CC 2600	295′
440 Ton Demag Crawler with Superlift	CC 2000	435′
386 Ton Demag Crawler with Superlift	CC 1200	433′
360 Ton Link-Belt Heavy Lift	LS 718 HL	480′
330 Ton Demag Crawler	CC 2000	433′
275 Ton Demag Crawler	CC 1200	433′
250 Ton Link-Belt Crawler Tower Crane (2)	LS 718	550′
250 Ton Link-Belt Crawler Crane (2)	LS 718	450′

LATTICE BOOM TRUCK CRANES	MODEL NO.	BOOM
800 Ton Demag Truck Crane with Superlift	TC 3000SL	496′
550 Ton Demag Truck Crane	TC 3000	496′
440 Ton Demag Truck Crane with Superlift	TC 1200 SL	472′
308 Ton Demag Truck Crane	TC 1200	472′
200 Ton Link-Belt Truck Crane	HC 258	370′
125 Ton Link-Belt Truck Crane (2)	HC 238	300′

HEAVY LIFTING, MOVING & SLIDING

500 Ton Hydraulic Gantries (20)
1000 Ton Sliding Systems (8)
Forklifts to 120,000 lbs. with hydraulic booms
1800 Ton Strand Lift
Lift Towers to 1200 Tons
2400 Ton Jacking System
Air Casters to 500 Tons

MARINE SERVICES

Memphis, TN - Heavy Lift Terminal with 1250 Ton Derrick Crane, Rail Service, Heavy Storage
Mobile, AL - Heavy Cargo discharge and storage, RO-RO, Barge/Rail Loading Heavy Lift Services
Decatur, AL - Barge Dock, Cranes to 500 Tons, RO-RO
Pascagoula, MS - Heavy Cargo discharge and storage, Barge/Rail Loading, Heavy Lift Services

TRANSPORTATION SERVICES

Over 2000 Tons of Hydraulic Platform Trailer Capacity including SPMT
Barge and Rail Loading and Securement
Dolly Transporters to 1000 Tons
48 State Heavy Haul, Stretch Trailers, Tank Trailer to 16′ diameter
Temporary Bridges to 152′
Jumper Ramps 30′-152′

INTERNATIONAL SERVICES

The following can be shipped in standard containers:
Lift Towers, Dolly Transporters, Gantries, Goldhofer Trailers, Sliding Systems, Barge Ramps, Temporary Bridges, Strand -Lift Systems

STORAGE CAPABILITIES

500,000 Square Feet of Indoor Warehousing
Over 100 Acres of Outdoor Storage

BARNHART
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