

# LIFTING LETTER



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## COVER STORY: QUICK CHANGE ARTISTS

Nimble equipment exchanges and installations save the customer valuable time and money.

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MLT



## Barnhart: Quick Change Artists

In the world of heavy industry, with today's rising construction costs, there is even greater stress to reduce down time during major component replacements. The ability to lessen or eliminate lost production by working quickly, methodically and safely is what sets Barnhart apart from its competitors in the heavy rigging and transportation industry.

# Time Is Money...



the phrase may indeed be an overused cliché, but few would debate its accuracy. In the world of heavy industry, with today's rising construction costs, there is even greater stress to reduce down time during major component replacements. The ability to lessen or eliminate lost production by working quickly, methodically and safely is what sets Barnhart apart from its competitors in the heavy rigging and transportation industry. Barnhart has mastered the art of performing nimble equipment exchanges and installations that save the customer valuable time and, of course, money.

In 2008, Barnhart won two *Rigging Jobs of the Year* awards from the Specialized Carriers and Rigging Association partly for its ability to develop innovative solutions to reduce customers' profit-consuming down time. One award was given for Barnhart's work at a Midwest nuclear plant. The company was challenged to erect a

new 104' long, 75-ton overhead crane inside a congested 80' x 22' work space while the plant was in full operation. To accommodate the length, the crane was separated into two halves. With the logic of a puzzle master, Barnhart used Modular Lift Tower components, girders and gantry to shore up and position the new crane halves into the super tight quarters. To lift the halves in place, Barnhart fabricated a device which attached directly into the existing overhead crane, effectively eliminating the tight headroom issues. The device allowed Barnhart to enter the crane half through the top, rotate ninety degrees, and attach to the crane half girder flange.

The other award-winning job Barnhart completed was to relocate two aging precipitators at an Oklahoma paper-mill. To keep the plant online during the retrofit, the team removed, lowered, transported and re-erected two 600-ton precipitators.

*(See Lifting Letter Summer 2007 issue for details).*



**SC&RA**  
**\$150-\$750k**  
**2008 Rigging Job**  
**Of The Year**

Barnhart worked at a Midwest nuclear plant to erect a new 104' long, 75-ton overhead crane inside a congested work space while the plant was in full operation.

**SC&RA**  
**\$750k Plus**  
**2008**  
**Rigging Job**  
**Of The Year**

Barnhart relocated two aging precipitators at an Oklahoma mill, and met the challenge of keeping the plant online while doing so.



## PROJECT REVIEWS



### POWER DISTRIBUTION: Massive South Texas Dolly Haul



**The transport of the generator was over 120 miles, and involved six utilities and multiple state agencies.**

Barnhart recently completed a major haul, lift and set of a 865,000-pound generator near San Antonio for a new coal-fired power plant. The generator was originally shipped from Japan to Corpus Christi where it was unloaded onto a deck barge and shipped to Victoria, TX. There, the generator was offloaded onto a 24 line Dolly Transporter Trailer. The haul was one of the largest the company has ever done. Combined with the weight of the trailer, the haul weight was over one million pounds. The transport of the generator was over 120 miles, and involved six utilities and multiple state agencies.

Once the generator arrived at the power plant, it was offloaded onto a 10-line double wide THP Goldhofer trailer. Barnhart had assembled a short configuration of its Modular Lift Tower, or stator frame, with 800-ton gantry, 500-ton hoist and heavy gantry track. The trailer with the generator was positioned under the gantry and hoist, and was lifted and transferred into its final location.



## **BARNHART'S MOBILE PHYSICS CLASS**



A principal and physics teacher of Cuero, TX High School took 20 students out to see the haul and the 24 line dolly rig. Eric Barnhart was able to teach a five-minute “class” on the project. The team presented the class with an autographed copy of the plan drawing of the transport crossing a bridge. Later, as the transport passed the school, the Barnhart team was greeted by a huge crowd who hurried out to see the trailer and its 192 tires ease by.

## PROJECT REVIEWS



### POWER GENERATION: Feedwater Heater Replacement

Barnhart was again able to use its experience of shortening outages through innovative methods when low pressure heaters at a power plant were successfully replaced.

The heaters were located in a confined turbine hall of the power plant. The units were lightweight, but presented challenges, mainly due to design errors with the overhead crane in the room. The service crane had a max hook height of 31' while the vertical heaters were 37' feet long.

Originally, a competitive plan called for removing a portion of the lead-lined roof which would have exposed the turbine room to the elements. Alternatively, the plant sought a method of isolating one heater at a time to stay online during the exchange.

Barnhart's plan was innovative but simple – it included four pipe stands, a modified I-beam for gantry and a couple of chain hoists. The team changed out both heaters with no power generation interruptions.





## WIND POWER MAINTENANCE: Blade Assembly

Barnhart continues to do exceptional work within the Wind Energy industry. Recently, at an Illinois wind farm, Barnhart completed a project of lowering massive blade assemblies for repair on six wind towers. The team used the M16000 crane to handle the rotors while a 150-ton crane tailed the assemblies.



## PROJECT REVIEWS



# 1

The first step for the team was to shore up the span with a gantry system while the damaged section was cut for dismantling and removal.

### HEAVY CIVIL: Emergency Bridge Repair

In Cocoa Beach, FL a truck carrying an excavator met a low bridge and created a traffic nightmare. Barnhart was called in to help. State officials closed the interstate the night of the urgently needed bridge work. Then, the first step for the team was to shore up the span with a gantry system while the damaged section was cut for dismantling and removal. Next, Barnhart used a PSTe Goldhofer trailer stacked with pipe stands and topped with beams to lift and transport the damaged section to a staging area near the median for dismantling.



# 2

3



4





**NUCLEAR POWER:  
Major Component Disposal**

As a result of a major nuclear plant upgrade Barnhart was contracted to offload one reactor head and two steam generators from a barge and haul them to a facility on Presidents Island in Memphis using “Ichabod,” their 1,240-ton derrick crane.

The reactor head was offloaded first, set directly to a 6-drop-6 platform trailer, and hauled to site. The two steam generators were set to stands for later hauls.

The reactor was delivered in the vertical position and was down-ended to the horizontal position.

Mobilization of this stage of the project included the 500-ton hydraulic crane, 4 legs of 800-ton gantry, 16 lines of platform trailer (configured in three different ways) which resulted in 23 trucks of equipment and gear.

This process involved multiple steps and exacting measurements to ensure the head came down at the precise

location in front of the door. The facility owner then removed the rods inside, resealed the reactor, and then Barnhart upended the head. Finally it was broken into three sections for the final insertion into their building.

The steam generators were hauled to site on 16 lines of double wide Goldhofer trailer. The units were then placed on stands inside a newly erected building at a facility specifically for storage and dismantling.





## OIL & GAS: Compressor Engine Install

Barnhart was asked to install two compressor engines in a new natural gas pumping station in Neely, MS. Options were limited because the station housing was already under construction.

The two generators arrived via the Port of Mobile and were hauled to the site one at a time. Barnhart used two 150-ton cranes to offload the equipment onto sets of stands and beams at the facility site. Then a six-line Goldhofer PST was positioned under the first engine to lift and transport it to the building site. There, Barnhart had a gantry system set up which lifted the compressor engine off the trailer and then carried it into the building and over the pad, where it was lowered into position.

The entire process was repeated for the second compressor. The project was completed on time, without incident, and with a very happy customer.



**Because the station housing was already under construction, options were limited. After transporting the engine to the site, Barnhart set up a gantry which lifted the compressor engine off the trailer and then moved it into the building and over the pad, where it was lowered into position.**



### **CHEMICAL & REFINING: Scrubber Roll-Off and Install**

Barnhart's Chicago crew rolled off a 309,000-pound, 40-foot scrubber at a refinery in Joliet, IL.

The vessel arrived resting on cribbing on the deck of a barge. The team used 200-ton climbing jacks to lift it high enough for a double 12-line PSTe Goldhofer trailer to be installed under the saddles. The scrubber was then self loaded and successfully rolled off of the barge and into a temporary staging area. Later Barnhart supplied a Demag CC2600 for erection.

## Branch Profile: **HOUSTON**

In 2003, Barnhart made an important move that significantly helped its ability to serve their customers in the petrochemical and heavy construction markets – it opened an office in Houston. To some, Southeastern Texas is the center of the industrial universe and Barnhart's Houston branch is determined to be major force in it.

In Houston, Barnhart has a very experienced and knowledgeable staff. The branch's sales team has over 60 years experience in the heavy lifting and transportation industry, and the project managers have a combined 45 years of industry expertise. Through the company's unique network, the Houston branch has access to one of the most extensive equipment inventories in the country; the local inventory is broad as well. With a full line of gantries - up to 800-ton, Goldhofer trailers, Modular Lift Towers, Slide Systems and Trail King Transport systems, the Houston Branch is ready to perform the most challenging projects. *(Some of those projects are covered in this issue.)*

Since opening its doors in Southeast Texas, the Barnhart team has focused on bringing the company's innovative solutions to large project work in the area. However, the team is now ready to do more. "We want to be able to provide more service to our customers needing traditional day-trade work," expressed Rick Gobert, Branch Manager of Houston. "We want to be able to provide a full range of lifting and heavy transport services. Regardless of the size, big or small, the Houston team is ready to take it on."

Branch Profile:

**Houston, TX**



**“Regardless of the size, big or small, the Houston team is ready to take it on.”**



## Equipment Profile:

### Barnhart's Modular Lift Tower System



**The MLT was designed to minimize the impact on the jobsite. Unlike a crane, the Modular Lift Tower can be assembled among plant equipment without major interference.**

**F**or almost four decades, Barnhart has been helping heavy industry by providing innovative heavy transportation and heavy lifting solutions. One such solution is Barnhart's Modular Lift Tower.

The Barnhart Modular Lift Tower (MLT) offers a highly competitive and cost-effective alternative to heavy lift cranes.

The MLT was designed to minimize the impact on the jobsite. Unlike a crane, the Modular Lift

Tower can be assembled among plant equipment without major interference.

Finally, because Barnhart developed the system, Barnhart knows the system. From grillage to girders, there is not one inch of the Modular Lift Tower that Barnhart did not take into account.

Low impact, low ground loading, low mobilization costs and high lift capacity make the Modular Lift Tower a workhorse for heavy rigging.

# Training & Inspection Resource Center

- Reference Cards
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## Mike's Safety Tips

By Training & Inspection Resource Center

**3 booklets, 26 pages, 2.75" x 4.75"**

These easy to read "tips" booklets work great as a set or as individuals. Each booklet contains over 25 tips per subject: rigging practices, mobile crane operations and overhead crane use. Your employees will really enjoy the discussion that is generated around the "tips" subjects during monthly safety meetings. These booklets are also excellent for annual employee handouts, safety gifts and training supplements.



Item # 7050 - 3-Booklet set with plastic caddy

1-99	\$6.99 each
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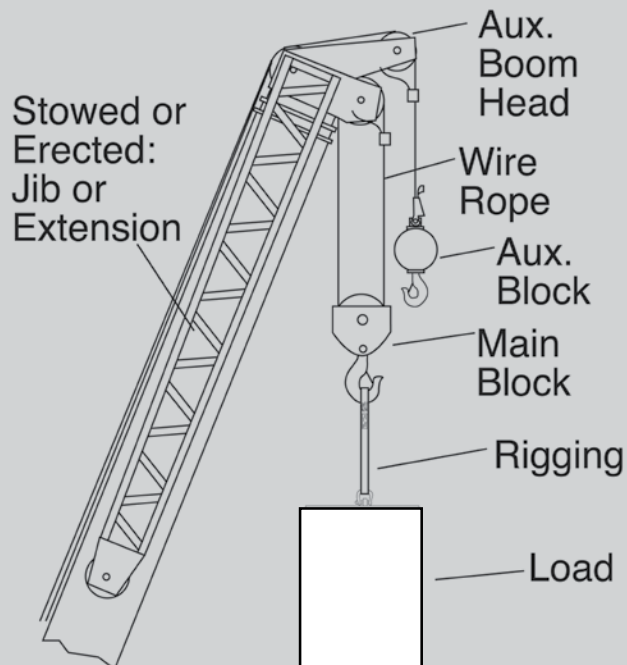
**See our 30+ page catalog online @ [www.tirc.net](http://www.tirc.net) Call 1-888-567-8472**

## WEIGHT HANDLED BY CRANE

**Account for all of the weight handled by the crane when reviewing the gross capacity chart and reeving/block/hook minimums.**

The gross load generally includes the load, the rigging, the suspended blocks, headache ball, the hoist rope(s) as applicable, stowed or erected jibs/extensions and auxiliary boom head.

*For more rigging tips or to order a copy of Mike's Safety Tips, go to [www.tirc.net](http://www.tirc.net) or call 888.567.8472*



## Rigger's Corner

**HEAVY LIFTING, MOVING AND SLIDING**

Hydraulic Gantries to 800 tons  
 Sliding Systems from 100 to 1000 tons  
 Fork Lifts to 120,000 lbs w/hydraulic booms  
 Strand Lifts to 700 tons  
 Hoists to 500 tons  
 Modular Lift Towers to 2800 tons

**TELESCOPIC BOOM CRANES**

110 cranes from 17.5 to 80 tons  
 25 cranes from 100 to 180 tons  
 15 cranes from 210 to 500 tons

**LATTICE BOOM CRANES**

Crawlers from 250 to 700 tons  
 Truck cranes from 125 to 800 tons  
 Ringer cranes from 360 to 1,760 tons

**TRANSPORTATION SERVICES**

Capacity of over 6,500 tons of Hydraulic Platform Trailers, including SPMT and PSTe  
 Barge and Rail Loading and Securement  
 Dolly Transporters to 1,000 tons  
 Temporary Bridges to 152'  
 Jumper Ramps 30' to 60'

**STORAGE CAPABILITIES**

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

**MARINE SERVICES**

**Memphis TN** – Heavy Lift Terminal with 1,250 Derrick Crane, Rail and Heavy Storage  
**Mobile, AL** – Deep Water Port, Heavy Cargo discharge and storage, RO/RO, Barge/Rail Loading Heavy Lift Services  
**Decatur, AL** – Barge Dock, Cranes to 500 tons, RO/RO

OF COURSE WE **PROTECT**  
 OUR MOST **POWERFUL**  
**EQUIPMENT.**



It's not our equipment, it's our people that make Barnhart the better choice. That is the essence of "Minds over Matter." Whatever your heavy industry needs are, from complex lifting solutions to transportation services, Barnhart approaches each unique job one way – the right way.

Let us start putting our minds over what matters to you most: your next project.

**BARNHART**

Minds Over Matter

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