

THE HEAVY MOB

Three recent applications demonstrate the ruggedness and versatility of Hydra-Slide's range of heavy-track hydraulic skidding systems.

Hydra-Slide heavy-track skidding systems are one of the most cost-effective and accurate methods for moving, loading, or unloading all types of heavy loads where a rigid, load carrying track is required—as recent case studies prove.

First, Fagioli Inc. used its 500-ton capacity HT500 to remove a 230,000-lb. pipe bending machine and replace it with a spare system. Then, B&G Crane Service LLC utilized a 300-ton capacity HT300 to remove and replace two heat exchanger units for a project in Calcasieu, Louisiana. And, finally, AME Inc. used its HT300 to position two 160,000-lb. boilers inside a packaging manufacturing facility at the base of the Great Smoky Mountains in North Carolina.

Round the bend

Fagioli accepted a scope of work to remove an existing pipe bending machine from a pit, slide it to a loading area, load it onto a hydraulic trailer and repeat the operation in reverse with another pipe bender that was kept in storage for replacement purposes. Both systems were identical in weight and measured 18 ft. x 10 ft. x 8 ft.

Fellow Texas company, Cowboy's Services Inc. (CSI), a Wallisville-based heavy haulage specialist, won the contract for transportation of the machines and sub-contracted Fagioli to execute the replacement operation. All parties combined over three days of planning and a further three days to complete successful installation in the upgraded fabrication shop.

Edoardo Ascione, president and managing director at Fagioli Inc., said: "We already had plans to acquire a Hydra-Slide skidding system and securing the order [from CSI] was the tipping point to

proceeding with the purchase. Given that we already had the contract, we were reliant upon Hydra-Slide's speed of delivery and efficiency of service to honor our commitments."

The team also used four 200-ton capacity Fagioli hydraulic climbing jacks and timbers to raise the machine 6 ft. out of the pit before commencing the slide over 60 ft. Ascione explained that due to limited headroom, the combination of climbing jacks and skidding equipment was the only viable solution to replace the machine. The HT500 has a total height of only 8 in. (205mm), saving jacking time and suiting the product to such confined spaces.

"The safety mantra on the project aligned well with the Hydra-Slide equipment."

Ascione added: "The design information for the machines was not complete, as is often the case for such equipment. We estimated the center of gravity based on how the machine was supported in the pit. The capacity of the jacking system was a lot more than required, as a measure of safety. Once the jacks took the load we could confirm the position of the center of gravity and carry on the replacement operation."

High five

B&G Crane Service's full scope of work included removal and replacement of five exchangers; two were atop a 51 ft.-high structure elevation and removed by crane, while the smallest unit was moved using skates. The HT300 was used to slide the old exchangers, weighing 49,000 lbs. and 59,000 lbs., a distance of 60 ft. before repeating the process in reverse with the replacement units that weighed 58,000 lbs. and 66,000 lbs.

The standard HT300 package comes complete with load-bearing track, four skid shoes, push cylinders and all connecting hardware. The load-moving solution needs minimal clearance and has a total height of only 7 in. (180mm). Additional skid track sections were supplied by Hydra-Slide on short notice to extend the 50 ft. of double track that B&G had available. They connect with a simple lug and pin set and could have been leap-frogged to slide longer distances, if a requirement arose.



B&G use the HT300 to slide the exchangers 60 ft.



The pipe bending machine is raised 6 ft. out of a pit before being skidded over 60 ft.



The equipment combined with other lifting technologies, including two Liebherr mobile cranes—a 100t capacity five-axle LTM 1100-5.2 and a 500t capacity eight-axle LTM 1500-8.1. B&G also utilized a J&R Engineering Lift-n-Lock 1400 series hydraulic gantry and two Scheurle self-propelled modular transporters (SPMT), of six and 12 lines respectively.

Mark Morris, rigging superintendent at B&G Crane, explained that the first stage of the project was removal of the existing exchangers using the LTM 1500-8.1. He added: “At that point, grating from the elevation was opened up to allow rigging to be lowered through the existing floor. The exchangers were then blocked up with cribbing to allow installation of the Hydra-Slide tracks before they were lowered onto the skid shoes.”

“The safety mantra on the project aligned well with the Hydra-Slide equipment,” Morris continued. “Safe and controlled movement of the loads on the elevated platforms not only provides for smooth operation and minimal labor intensity, but also gives clients added confidence in our execution of work.”

Boiling point

Evergreen Packaging Inc., which produces sustainable, eco-friendly paper and fiber-based products for the food, printing and publishing industries, awarded AME the task to receive boilers from a railcar via the onsite rail line, move them to their final position inside the mill and complete their installation by assembling the associated components, all while the Canton-based mill remained operational.

AME used a gantry system and a 500 ton capacity Grove GMK 7550 mobile crane to unload each boiler, rotate the units 90 degrees and set them onto the HT300 system. The 48 ft.-long, 12 ft.-wide, 16 ft.-high boilers were then skidded 200 ft. under the existing utility trusses and through an alley into the construction site, where a second gantry system lifted them onto their respective foundations.

The project presented a number of complications, as Jason Walker, senior project engineer at AME, explained. First, the boilers had to pass through an opening that was 14 ft. wide and 17 ft. high with clearances of only a few inches on each side and to the pipe gallery above.

Additionally, Walker said: “Continued use of the onsite rail lines had to be maintained to allow uninterrupted operation of the facility and the weather could not impact the already tight installation schedule either. The proximity of hazardous materials

in chemical storage also necessitated that every crew member had to carry emergency evacuation respirators throughout the process.”

Robert Young, director of operations at Hydra-Slide, was present for the initial phase of the project, which covered the slide and placement of the first boiler. The HT300 was onsite for approximately one month, including a week for delivery and assembly, two weeks in use and a final week for disassembly and load out.

It took around three days to move each boiler from the railcars to the foundations—much faster than would have been possible with alternative methods. Even with schedule adjustments and leap-frogging the track, the 200 ft. was traversed in about six hours.

Young said: “AME engineered an impressive, detailed multi-lift plan involving gantries, the mobile crane, numerous material handlers and, of course, the HT300 skidding system—all working within an operating paper mill.”

Walker added: “It was great having Robert onsite.”



AME personnel keep a close eye on the path of the boiler during the slide.