

KEEPING A LOW PROFILE

A 350-ton capacity Hydra-Slide low profile system was used to change-out a Yankee dryer at a facility in New Brunswick, Canada.

The LP350 was utilized by heavy lifting and specialized rigging business, Irving Equipment. Affiliated company Irving Tissue, a tissue production firm, had a requirement to remove a 55-ton dryer and replace in kind. Both systems were 12 ft. 5 in.-diameter and 13 ft. 4 in.-long cylinders with 4 ft.-long shafts sticking out of either end. Irving was responsible for all movements of the outgoing and incoming units.

Ryan Long, operations manager for southern New Brunswick and Nova Scotia at Irving Equipment, explained that the scope of work presented four standout challenges, namely travel route, second floor location of the dryer, floor strength, and tight confines for blocking up the loads.

In addition to the LP350, Irving employed an Enerpac EVO power pack system and four 50-ton capacity jacks for vertical jacking of the dryer; a pair of 8-ton capacity Broderon carry decks for material handling; and a 250-ton capacity Liebherr LTM1200 all-terrain crane, used to hoist the Yankee off the second-floor temporary mezzanine that the dryer was slid out onto.

Long said: “As the dryer was on the second floor of the plant, in order to get it to ground level a temporary mezzanine was designed and installed outside of the plant at the same elevation as the sliding system, and the back wall of the plant was removed. This allowed us to slide the dryer completely outside of the building and onto the mezzanine before lifting it off with our Liebherr LTM1200.”

It was determined that the concrete floor of the building could not support the loads that would be imposed by the dryer as it travelled along its path. In order to mitigate this, a steel grillage system was engineered and installed to bridge the floor between supporting columns under the floor for the entire route.

The LP350 eliminated the need to remove a roof section and lift out the dryer with a 500-ton capacity class crawler crane, which would have added significant mobilization and crane pad costs. The Hydra-Slide system was compact and easy to use within the tight confines of the plant. The method also facilitated the three required directional changes in 31 ft., 38 ft., and 135 ft. increments, with the aforementioned elevation changes along the way.

Long stressed the importance of training to successful implementation of the LP350, which boasts a total height of less than 1.5 in. (38mm), reduces jacking time, and is ideal for situations where overhead space or clearance is limited, such as inside buildings or within live power stations. Robert Young, director of operations at Hydra-Slide, conducted two visits—once for crew training and then as site support during the moves.



Standout features of the LP350 system include a low-maintenance graphite-steel slide surface, and a ratchet track design, allowing the push cylinders to automatically reset at the end of each stroke.

In brief

Project: Remove and replace a 55-ton Yankee dryer inside a tissue mill.

Equipment used: Hydra-Slide LP350 low profile skidding system.

Travel route: The dryer was embedded deep within the plant; three direction changes were required.

Location: The floor was not strong enough to support the system and load.

Restricted area: Clearances were minimal and access was blocked by existing infrastructure.