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TECHNICAL RELEASE

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TRAILER TARPING SAFETY SOLUTIONS

Safety: transportation *November 2013*

INTRODUCTION: Our program to improve safety support tools for tarping began with a study and industry partners who could test a solution. Chip and fiber fuel residue trucks/vans destined for mills in most states are required by law to tarp the loads before travelling on public highways. Some of vans are equipped with rollover tarps that allow the driver to cover the load with the tarp and remove the tarp from the top of the load while stationed at ground level. However, many vans in the industry are not equipped with this type of system.

Fig. 1: *Fixed tarping station for chips/residue shipping facilities.*

Truck drivers have traditionally accessed the trailer to pull the tarp over the load by climbing a vertical ladder attached either to the front or rear of the trailer. Once on top of the load, the driver may be at risk of falling. International Paper commissioned a safety task team to determine how to improve this safety process with the mission of eliminating the driver's needing to climb onto the loaded trailer. The task team evaluated many alternatives, including: elaborate work platforms, drive-through pits, harnesses, guardrail systems, truck-mounted tarping systems, and mechanical tarp-pulling devices. The task team evaluated alternatives on criteria of (1) delivering a safe solution, (2) capability to handle all truckers delivering to facilities, (3) compliance with OSHA safety regulations, and (4) cost. As a result of these evaluations, the task team identified two solutions and then developed and piloted them: one for locations that load chips or fiber fuel and require the loads to be tarped ("Origins"); and another solution for facilities where chips or fiber fuel are unloaded ("Destinations").

Fig. 2: *Mobile tarping platform/ladder for chip/residue receiving/unloading facilities.*

GENERAL FEATURES:

Solution for "Origins" - The solution for those locations shipping chips or residue was a simple drive-through tarping station eliminating the need for the driver to climb onto the trailer. This tarping station (***Fig. 1***) provides the truck driver safe access to a guarded work platform positioned above the trailer. From this location, the truck driver is able to access a rope or hook connector fastened to

the tarp using a short pole with a hook on the end and attach it to a counterweight shaft mechanism on top of the tarping station. Then the truck-trailer unit is driven slowly through the station while tension on the rope hooked to the counterweight shaft unfurls the tarp. As the tarp reaches full extension, the counterweight shaft rotates 360 degrees, and the rope releases. In the event a problem is encountered with a snarled tarp, a redundant system in the form of a portable safety platform (***Fig. 2***) is available for safe access to the top of the trailer.

Fig. 3: *Tarping station in use.*

Solution for "Destinations" - The solution for facilities that unload these vans was a full cantilevered mobile platform truck tarp access ladder (***Fig. 2***). The portable ladder provides truck drivers safe access to remove the tarp from their truck while standing on an OSHA-compliant cantilever/platform that has a mid-rail at 21 inches and a top rail at 42 inches, as well as a spring-loaded swing gate for safe entry and exit. The ladder units have locking swivel casters in the rear and rigid casters in the front, to enable proper positioning of the ladder between the truck and trailer. All ladder units have a weight capacity limit posted. The capacity can be adjusted to some degree by varying the size of the counterweight installed. These ladders require a hard, smooth, and clean surface such as concrete to enable ease of movement.

COSTS: The tarping structures for the "Origins" were constructed by Waters Industrial Services Inc., out of Kinston, North Carolina (phone 252-523-0039). At the time of implementation, Waters's estimated cost was $7,500 to $10,000 per structure. These estimates did not include the cost for any site work or freight shipment to each facility.

We purchased the portable ladders from Ballymore (Phil Damm - phone 800-762-8327 x175; *pdamm@ballymore.com*) and MSC (*www.MSCdirect.com*; 800-645-7270; go to "Rolling & Wall-Mounted Ladders & Platforms" section). The ladders were specifically redesigned for these applications and the locations for which they were used. The estimated cost range at the time of implementation was $7,000 to $10,500 per unit, with better pricing available with bulk orders. These estimates did not include freight shipments to each facility.

International Paper is committed to reviewing and improving these safety support tools as they are used, but we believe we have taken a strong step in providing safer means to tarp and remove tarps. These safety support tools in no way replace individuals' conscious efforts to watch and be aware of safety factors as they conduct their activities.

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