

UPM Kajaani uses Double Tower Clamp with AFC as part of award-winning logistics solution.

ON-THE-JOB REPORT



The Company:

UPM (United Paper Mills) is one of the largest paper producers in the world. UPM's plant in Kajaani, Finland specializes in magazine paper, newsprint and special newsprint. The plant's annual production capacity is 605,000 tonnes.

The Challenge:

UPM Kajaani transports most of the paper by train to Rauma, Finland. A part of these reels are automatically loaded and unloaded and shipped to several overseas customers. Each time a roll of paper is handled, the potential for damage is increased. In UPM Kajaani's original logistics model, rolls were being handled an average of eight times. Seeking a solution that would reduce damage throughout this supply chain, UPM Kajaani conducted a two-year study at the mill, headed by Risto Miinin, supervisor of roll wrapping, paper warehouse and logistics at Kajaani's MFS Production Unit. The result was the Veto-Ketju or "Zipper" project, for which UPM won the 2004 Logistikk Prize of Finland. Using the new "Zipper" system loading concept, UPM Kajaani reduced the number of times each roll is handled from eight to one or two.



Right:
Risto Miinin (LH side),
supervisor of roll wrap-
ping, paper warehouse
and logistics at Kajaani's
News and MFS
Production Unit.

The Solution:

Today, an integral part of UPM Kajaani's winning "Zipper" solution is to use the Cascade Double Tower Clamp. Double Tower Clamps load rolls onto a conveyor that automatically loads onto special railway wagons. The rolls are transported by rail to Rauma, where they are then shipped to several overseas customers. The Double Tower Clamp handles up to eight rolls at one time, reducing the forklift traffic in the loading zones, meaning higher working safety and lower operating costs.

Right:
Risto Miinin and Cascade's
Tommy Abrahamsson
discuss supply chain
challenges
Far Right: Double Tower
clamp with Adaptive Force
Control, installed on truck



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“We don't want any ‘riding rolls’, where rolls sit atop other rolls without being held by the clamp,” Miinin explains. Riding rolls are extremely dangerous because they can fall. “We like Cascade’s Double Tower Clamp because it holds each roll securely.”

The "Zipper" system has also been supplemented by use of Cascade's SmartClamp Technology, using an Adaptive Force Control (AFC). While the Double Tower Clamp increases the number of rolls a lift truck can move at one time, AFC ensures that each roll is clamped with the correct amount of force. AFC is an automatic system, transparent to the driver, that integrates a Cascade roll clamp with the lift



truck's hydraulic system and automatically controls the right clamp force applied to the roll. Miinin is pleased with the AFC technology. “The lift truck is a major part of this supply chain, and AFC has reduced our damage significantly,” he says. “Our drivers are confident that they're handling each roll with the right amount of force, so they can concentrate on getting the product out the door.” Tommy Abrahamsson, paper industry manager at Cascade Europe, says being a part of UPM Kajaani's award-winning loading concept keeps Cascade's product development team on their toes.

AFC Reduces Damage, Increases Driver Confidence

With conventional roll clamp trucks, the driver manually estimates and applies the clamp force. Each time the driver engages a roll they must achieve a delicate balance between over- and under-clamping. Overclamping distorts the roll, making it difficult or impossible to use on high-speed paper converting machines. Underclamping may allow the roll to slip out of the clamp, causing damage to both the outer layers and the roll's edge. AFC is just one of many components of Cascade's Smartclamp Technology. The line also includes Tilt Control, Rotational Control, and other damage reduction products.

With AFC, drivers can work faster because they are confident that the clamp is applying the correct amount of clamp force to each roll.

Flexipad conforms to the roll's surface

Each Double Tower Clamp on the UPM Kajaani line is fitted with Flexipads, which are designed to flex around each roll, no matter what the diameter. The flexipad conforms to each roll, maximizing pad contact and minimizing the amount of clamp force required to lift the roll securely. With the combination of Cascade's Flexipad and AFC, drivers at UPM Kajaani know each roll will be handled with the optimal clamp force.



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