

OSB Manufacturer Increases Production by 5% and Improves Quality with Mat Moistening System



Problem:

An oriented strand board manufacturer needed better control over the addition of moisture to the OSB mat surface just before it entered the press. Adding the right amount of water enables the OSB to cure more quickly and evenly, ensuring consistent board quality with minimum press time.

The previous spray system was manually controlled and was unable to adjust flow rate to compensate for variations in line speed. Too much or too little moisture was often added, making product quality less predictable and sometimes extending press times.

Solution:

A PanelSpray®-MS system utilizing Precision Spray Control (PSC) has eliminated the manufacturer's production problems. The system precisely adds from 0.0008 to 0.002 gal./sq. ft. (0.033 to 0.081 liters/m²) of water to the mat and makes automatic adjustments for line speeds that vary from 40 to 140 ft/min (12.2 to 42.7 m/min).

The PanelSpray-MS system uses an AutoJet® Model 2250+ spray controller to automatically increase or decrease the flow of water through five PulsaJet® spray nozzles based on line speed. Controlling the flow using PSC rather than by adjusting liquid pressure allows the nozzles to maintain optimal spray angle and ensures uniform coverage of the water across the entire width of the mat.





OSB Manufacturer Increases Production by 5% and Improves Quality with Mat Moistening System – Continued

Results:

Consistent surface moisture addition enabled the OSB producer to reduce press time while maintaining board strength and product quality. In addition to boosting production by more than 5%, the reduced press time also saved an estimated 10% of the energy used per press cycle. Together, these factors generated a payback period of approximately six months for the system.

A CLOSER LOOK AT THE SYSTEM



PulsaJet® Spray Header

is fabricated to meet press specifications. Header length, placement and nozzle placement on the header are customized to ensure accurate distribution across mats, belts or cauls

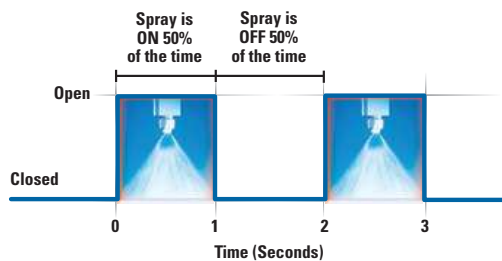


PanelSpray®-MS System

uses an AutoJet Model 2250+ spray controller to automatically adjust the amount of moisture applied to the mat based on line speed



PulsaJet® Hydraulic Nozzles are used in the PanelSpray and PanelSpray-MS systems and provide precise application of moisture



Precision Spray Control (PSC) involves turning nozzles on and off very quickly to control flow rate. This cycling is so fast that the flow often appears to be constant. With traditional nozzles, flow rate adjustments require a change in liquid pressure, which also changes the nozzle's spray angle/coverage and drop size. With PSC, pressure remains constant enabling flow rate changes without changes in spray performance. PSC requires the use of electrically-actuated spray nozzles and an AutoJet spray controller.

For more information about Precision Spray Control, visit spray.com/psc



Spraying Systems Co.®

Experts in Spray Technology

North Avenue and Schmale Road, P.O. Box 7900, Wheaton, IL 60187-7901 USA

Tel: 1.800.95.SPRAY Intl. Tel: 1.630.665.5000

Fax: 1.888.95.SPRAY Intl. Fax: 1.630.260.0842

www.spray.com



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