

OSB Manufacturer Saves US\$100,000 Annually on Resin with Automated Spray System



Problem:

An OSB manufacturer using PMDI resin wanted to improve board strength and boost production by decreasing press time. The manufacturer knew the use of a catalyst would help the PMDI resin set more quickly and harder in the press. The catalyst had to be applied in the blender in conjunction with the resin. The catalyst addition required precision – the volume was dependent on the weight of product and resin flow in the blender and uniform flake coverage was required. The OSB manufacturer turned to Spraying Systems Co. to develop an effective, cost-neutral solution.

Solution:

After on-site testing to validate system performance, a dual-channel AutoJet® spray system was installed. Operators set the desired catalyst flow as a percentage of resin flow using the spray controller. Using closed loop control, the system automatically adjusts the flow rates of three PulsaJet® electrically-actuated air atomizing nozzles based on operating conditions to ensure the proper volume of catalyst is dispensed.

PulsaJet electrically-actuated
air atomizing nozzles





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Results:

The OSB manufacturer's goals have been achieved since the purchase of the AutoJet® automated spray system. The use of the catalyst has improved board strength and enabled an increase in production as anticipated. The precise application of the correct volume of catalyst has also reduced resin use in the blenders by 1.5%. The savings on resin consumption more than offset the purchase of the automated spray system and the cost of the catalyst. The decrease in resin use also resulted in a reduction in downtime for blender cleaning. The company reports savings of US\$100,000 annually and a return on investment in less than six months.

A CLOSER LOOK AT THE SYSTEM



AutoJet® Model 2250+ spray controller makes automatic adjustments to the flow rate based on changes in operating conditions to ensure optimal application of the catalyst.



PulsaJet® electrically-actuated air atomizing nozzles produce very small drops and feature a wide turndown ratio to maximize operating flexibility.



Spraying Systems Co.®
Experts in Spray Technology

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