

Automated Spray System Saves Building Products Manufacturer More Than US\$35,000 Annually

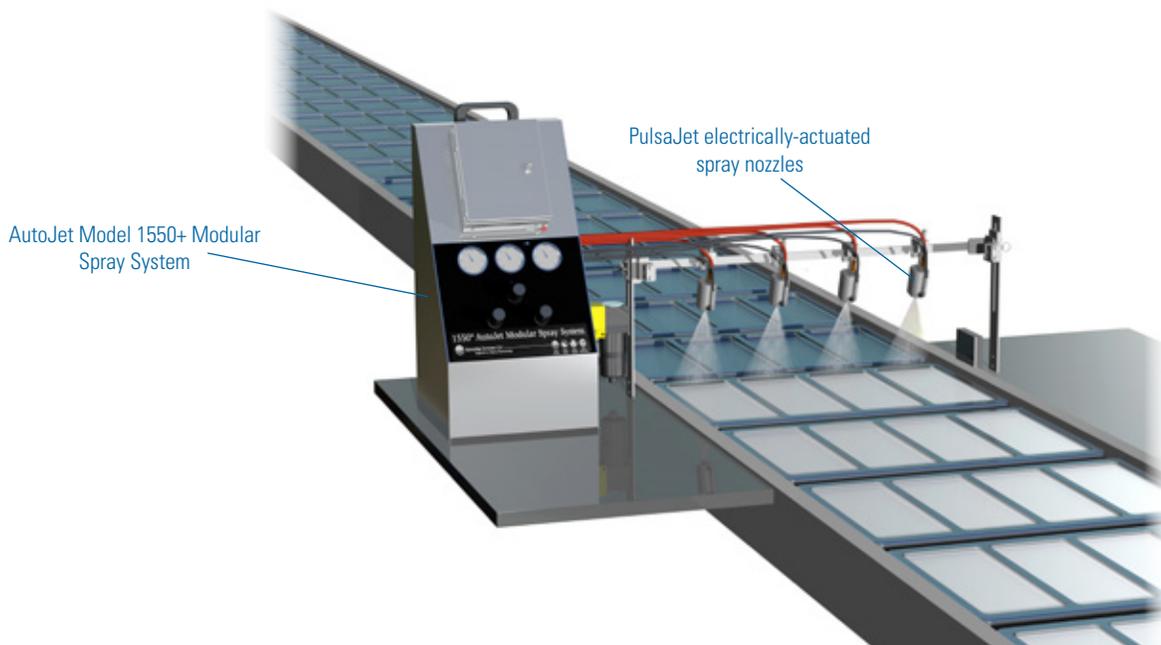


Problem:

Air atomizing nozzles were being used to apply a release agent to molds during the roof shake manufacturing process. The manufacturer was experiencing several problems. The release agent wasn't applied uniformly on the molds. To compensate, the manufacturer increased the volume of release agent applied to ensure complete coverage. The nozzles sprayed continuously during production, which meant the areas between the molds were coated with release agent as well as the molds. Compressed air use was high and resulted in misting and worker safety issues. The manufacturer contacted Spraying Systems Co. to help improve the efficiency of the coating process, improve the work environment and reduce operating costs.

Solution:

An AutoJet® automated spray system now applies the release agent. The system, controlled by an AutoJet Model 1550+ Modular Spray System, uses electrically-actuated hydraulic PulsaJet® nozzles to precisely apply the proper volume of release agent on each mold. Precision Spray Control (PSC) is used to adjust the flow rate based on operating conditions such as changing line speed. The system also uses sensors to detect the presence of the molds, ensuring the system only sprays when molds are present.





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Results:

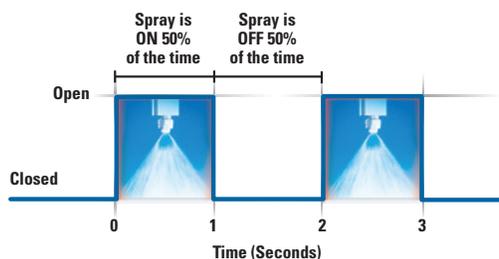
The AutoJet® automated spray system ensures precision application of the release agent on the molds. Over- and under-application problems have been eliminated and the release agent consumption has decreased by 25%. Costly compressed air and associated misting have also been eliminated resulting in lower operating costs, improved worker safety and a 40% reduction in maintenance time. The system exceeded the manufacturer's expectation with a monthly savings of US\$3,000 and a three-month return on investment.

A CLOSER LOOK AT THE SYSTEM



Pulsajet® electrically-actuated spray nozzles provide high transfer efficiency to minimize waste and messy overspray. Cycle speeds up to 25,000 cycles per minute are possible to keep pace with fast line speeds. Pulsajet nozzles can be used with a variety of spray tips to ensure the performance matches the application requirements.

AutoJet Model 1550+ Modular Spray System provides complete automated spray control of nozzles to ensure precise and accurate placement of release agent with minimal waste. The system ensures proper flow, drop size and consistent release agent application.



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.®
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