

Installation of Automated Spray System Saves Materials Manufacturer Over US\$1.4 Million a Year

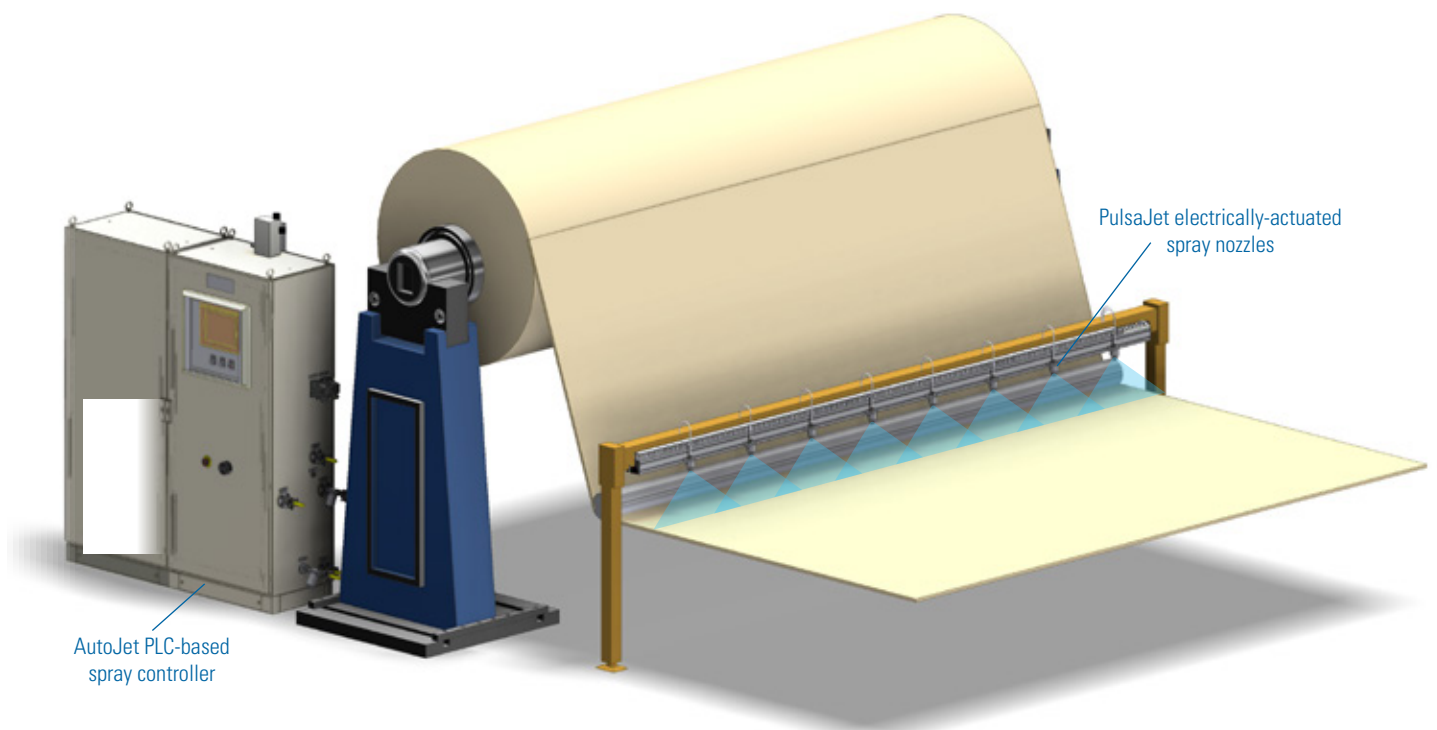


Problem:

A prominent high-purity fiber producer needed to optimize the spray system used to manufacture fluff pulp. During processing, a surfactant mixture is applied to the fiber-based material used in diapers and personal hygiene products. The system oversaturated sections of the fluff pulp during start-up and slow-down and continued to spray during sheet breaks. These inefficiencies wasted costly surfactant, created a dangerous work environment and caused maintenance issues.

Solution:

The fiber producer now uses an AutoJet® PLC-based spray system. A spray header, equipped with eight PulaJet® nozzles, applies the surfactant mixture to the top side of the fluff pulp rolls. The controller automatically adjusts the application rate with line speed increases or decreases to ensure the proper volume of surfactant is applied. The controller also turns the nozzles off when sheet breaks are detected.





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Results:

The system, which includes four spray headers and treats two rolls simultaneously, has dramatically reduced operating costs and waste for the fiber producer. Surfactant use per roll has decreased by 15% since system installation. The savings on chemicals alone are US\$1.4 million annually. In addition, the producer has reduced fluff pulp scrap due to over-saturation. The system cost was recouped in just two months.

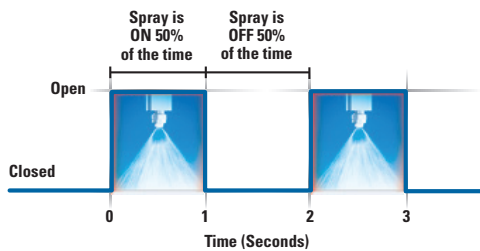
A CLOSER LOOK AT THE SYSTEM



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® PLC-based spray system provides easy control of spray nozzles and makes automatic flow rate adjustments based on operating conditions.



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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