Steel Processor Eliminates Oil Waste and Saves US$30,000 Annually with New Spray System

**Problem:**
A steel processor was applying oil to sheets of steel to prevent rust and optimize future processing. A spray header equipped with flat spray nozzles was used to apply the oil. The spray covered the full width of the conveyor, which proved problematic when narrower sheets were run. The excess oil was wasteful, required significant maintenance time for clean up and created worker safety issues. The processor tried applying the oil with handheld spray guns but found the manual application inconsistent. Over-application created the same problems as the spray header and under-application created problems for customers during processing.

**Solution:**
The solution is an AutoJet® 1550+ spray control panel, PulsaJet® electrically-actuated spray nozzles and an AutoJet Zone Control Panel. The system uses Precision Spray Control (PSC) to ensure the precise volume of oil is applied uniformly across strip even when line speed changes. When narrower strips are run, operators turn off nozzles as needed with a simple flip of a switch.
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Results:

The use of the AutoJet® Spray System has yielded many benefits for the steel processor. Excessive oil use and overspray have been eliminated through the use of Precision Spray Control and zoning of spray nozzles. Oil use has decreased by 30%. The daily labor required – five hours – to remove the excess oil has also been eliminated along with the associated water and use cleaning supplies. No quality problems due to over- or under-application of oil have been reported since the installation of the system. The steel processor estimates a savings of US$30,000 annually and a return on investment in less than seven months.

A CLOSER LOOK AT THE SYSTEM

PulsaJet® electrically-actuated nozzles provide uniform application of the oil across the width of the strip. Nozzles can be activated individually with the AutoJet zone control panel.

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

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