In the finishing process, cold-rolled steel is cleaned to remove impurities through a continuous acid pickling process. After the steel is cleaned in pickling baths, residual liquor is rinsed off through a series of spray bars. An instantaneous supply of hot water is required at a wide range of water flow rates depending on how many spray bars are being operated.

Solution

The Pick 6X150 Variable Flow Heater, sized to handle between 50 – 280 gpm water flow at a 95°F temperature rise was selected. At a maximum steam load requirement of 11,500 lbs./hr., the Pick Heater will maintain 130°F water temperature on demand.

Emissions and gases are collected during various phases of the steel making process through the plant APC ventilation system. Exhaust is treated through a scrubbing and mist eliminator process, removing liquid, soluble solids, scale, oils or other impurities. Hot water rinse cycles are employed to periodically wash the mesh elements within the mist eliminators to maintain filter efficiency. Hot water needs to be made available immediately at optimum temperature as the wash cycles occur.

Solution

The Pick 6X25-3 Constant Flow Heater was selected to provide a quick heat up of 64 gpm at 150°F. The heater quickly comes up to temperature to handle 2 minute rinse cycles at 15 minute intervals.