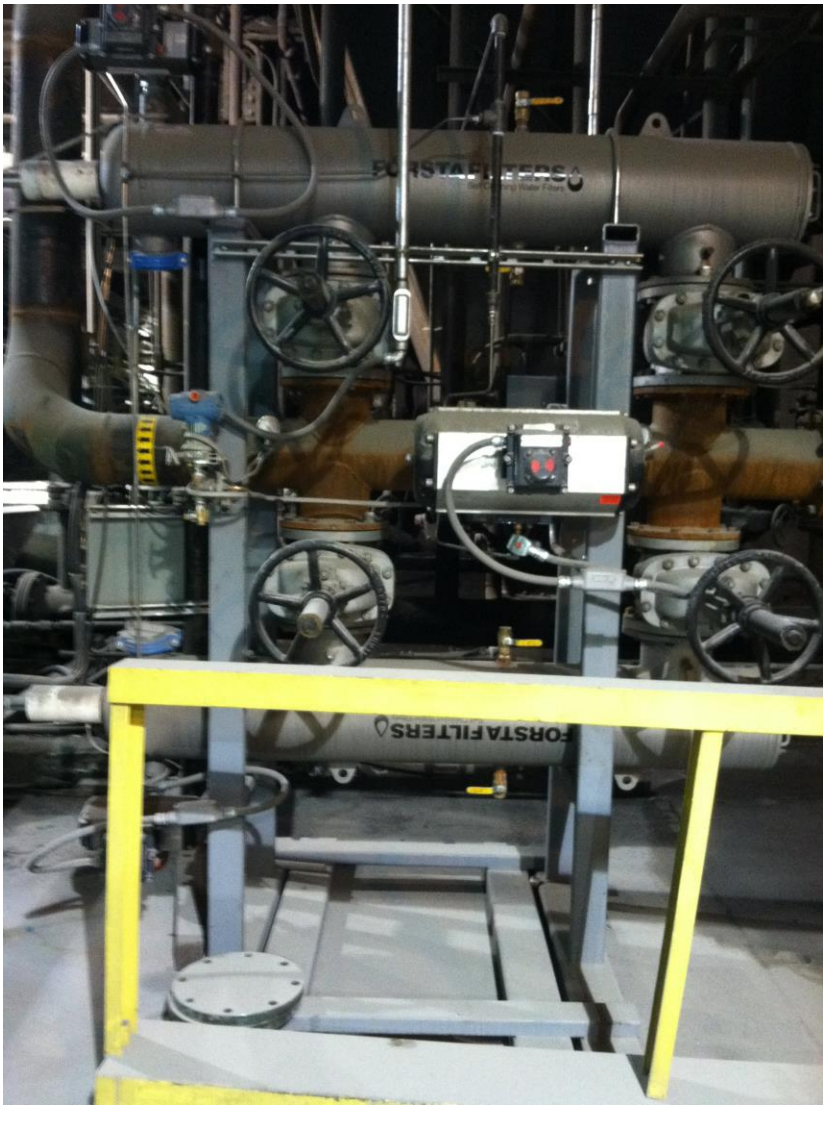
FORSTA FILTERS
Self Cleaning Water Filters

## FORSTA FILTERS CASE STUDY: RG STEEL, WARREN, OH

Mark A. Presley, Maintenance & Environmental Engineer at RG Steel needed a solution for protecting spray nozzles. River water screened to 1200 micron constituted the spray water being used for cooling in the steel making process. The river water coming into the system was causing the spray nozzles to become plugged. This ultimately required that they be punched out of the system – a big and costly job.




In selecting a filter too improve the system's performance, Presley had to consider the variability of the incoming river water quality, and the price and maintenance required from a new piece of equipment. After reviewing the available technologies and their costs, RG Steel decided on a Forsta Self-Cleaning Screen Filter for the job.

Based on the technical data, Forsta engineers recommended the D 8-180 Series model for this application. The fully automatic filter made from stainless steel 304L, was sized with 8" flanges for the inlet and outlet, designed to operate at pressures from 40-150pssi and at a maximum temperature off 210 F. A high porosity stainless steel 316L screen was selected for the filter with 50 micron openings and 9.25sgq ft. of screen area. Two identical D8-1880 filters installed in parallel were slated to accommodate the 1200gpm flow at two locations in the mill.

Forsta Design Engineer Daniel Stenberg commented that, "The significant variable in sizing the filter and selecting a screen for this application, was the quality of the incoming river water. With their 1200 micron prescreen, we knew they could still expect to see variability in the inlet water based on the conditions of the river due to weather etc. I wanted to provide RG Steel with a solution that would stand up to the fluctuations in the water quality and not create an environment where the filter became overwhelmed. At the same time, it was

important to provide a fine enough screen to provide adequate protection for the spray nozzles – the main reason for adding our filter. Based on the data, a 50 micron screen was chosen for their application."

Since the filter's installation, Presley explained that it operates for a 20 minute heat once every hour. During operation he typically sees thee filter go through one cleaning cycle. Depending on river conditions, this may vary slightly, but the filter is easily handling the particle load variation. Presley said that the new equipment has prevented spray nozzles from plugging and also has allowed them to better control their emissions unit. They are satisfied with their purchase and would recommend Forsta self-cleaning filters to others with similar applications.