
CASE STUDY: ENGINEERED SINTERED COMPONENTS

Location:	Troutman, N.C. (Iredell County)
Industry:	Manufacturer of powdered metal products
Pollution Prevention Application:	HVAC condensate water reuse in production
Annual Savings:	10 % or greater city and well water during summer
Payback Period:	Not applicable
Contact:	Mr. Greg Lathrop (704) 508-7510

Background

Engineered Sintered Components is a manufacturer of powdered metal products. Using powdered metal technology this plant makes sintered metal parts for the automotive industry. The plant operates 24 hours a day 7 days a week, with more than 550 employees. Its primary manufacturing activities include: blending, compacting, sintering, heat-treating, steam heating, machining and packaging. The plant gets its water from the city and an onsite well. On an average month the plant pays for about 240,000 gallons of water.

Water Reuse Activities

Water Reuse

To help with water efficiency initiatives required by the Town of Troutman, Engineered Sintered Components installed several temporary and permanent water saving reductions. One of the most effective reductions was to divert air conditioning unit condensate water into the plant processes. On hot, humid days the plant air conditioning units will discharge many thousands of gallons of water condensate. Even in winter, noticeable amounts of condensate water from the air units can be used plant processes.

Piping from the plants air units captures the condensate water and sends it to the plant's chillers as makeup water. The chillers supply a closed loop water system of cooling jackets to cool various plant machines and hot metal product. These include cooling zones for 10 furnaces, keeping nine hydraulic units cool, and sometimes as many as a dozen part dies cooled for better production control.

Annual Savings

Depending on the month the Engineered Sintered Components plant can collect as much or more than 19,000 gallons of condensate water a month from its air units. This is a savings of almost 13 percent over the purchasing or pumping the average of 240,000 gallons a month. During the winter months, the condensate collection slows. As water and electric bills increase any free condensate water saves the plant money.