Gates Rubber Company Installs Alar Auto-Vac® Filter For Waste Treatment & Realizes Savings Immediately

It is common knowledge that higher prices, more competition, and tighter government regulations are facing any company involved in the Surface Finishing Industry. These factors are making it harder for all large plating, and small job shops to process parts and keep production costs down while meeting the local and federal regulations. With the new federal MP&M regulations looming in the near future, the following is how one small-town manufacturer increased production while decreasing their manufacturing and waste treatment costs.

The manufacturing branch of Gates Rubber Company, located in the small town of Versailles, Missouri, has a zinc plating and chromating process. This branch of Gates Rubber is involved in the manufacturing, cleaning and plating of industrial hose fittings and couplings used on the company's main commercial product line of industrial high-pressure rubber hoses.

In 1999, Gates was looking at expanding the production capabilities at the Versailles location by adding an additional barrel plating line. Although the new production line would increase the plant output capabilities, the company would have to face what every plating company faces when new chemicals and manufacturing technologies are introduced. The current waste treatment system being utilized in the plant was a conventional chrome reduction, pH metal hydroxide precipitation, a settling clarifier, and a filter press for the settled solids with a sand filter to handle the clarifier effluent. This commonly used system was sized for the current plant production volumes. The addition of the new manufacturing line would exceed the system capabilities. The current system required constant supervision and maintenance to maintain the ever-shrinking industrial pre-treatment discharge limits. This inadequate system would create a bottleneck in the waste treatment section, and limit the manufacturing capabilities of the whole plant. Before any increased production or new manufacturing could be done, a solution to the waste treatment bottleneck had to be found.

In June of 1999, Gates visited the yearly AESF Sur/Fin Trade Show looking for new technology that might increase production and decrease operational costs. The show promotes the newest and latest technology in the surface finishing industry. Manufacturers often demonstrate their products and how they might improve plant operation while reducing costs. It was a this show that they first saw a company by the name of Alar Engineering Corporation, and a filtration system called the Auto-Vac® filter.

Alar Engineering Corporation is a full service-manufacturing firm located in Mokena, IL, and has been involved in the waste treatment industry since 1970. The company engineers, designs, and manufactures waste treatment and filtration systems in their 65,000-ft^2 production facility. Alar specializes in the manufacturing of custom engineered industrial wastewater filtration systems designed specifically to their customer's application. Alar was also at the Sur/Fin Trade Show promoting their Auto-Vac® filtration system with an actual working unit at the show filtering iron hydroxide sludge. After witnessing the show demonstration and speaking with the sales representatives, Gates decided to investigate Alar and the Auto-Vac® filtration system a little more.

Through extensive testing and direct communication between Gates and Alar, it was determined that the Auto-Vac filtration unit could and would meet the industrial pre-treatment requirements. Gates found that one Auto-Vac® filtration unit would process their wastewater in half of the time and with less equipment. The Auto-Vac® filter removed virtually all of the precipitated metal hydroxides and

produced a 50% dry solid cake. This eliminated the need for a filter press, sand filter, sludge dryer, and air scrubber. Gates, with the help of Alar, was able to utilize most of their existing equipment, eliminating only the parts of the treatment process that were no longer needed and currently causing their production bottleneck. This reduced the cost of installation, increased the usable life span of the existing equipment, and at the same time made it possible to increase the plant production capabilities.

After the easy installation of the skid mounted, pre-wired and pre-piped Auto-Vac® filter, Gates immediately noticed several cost and labor savings. Since the Auto-Vac® filter was designed to process the 25 gpm of wastewater that they produced, they were able to eliminate the polymer flocculation step needed for settling of the solids in the clarifier. Gates removed their existing filter press and sand filter, thus creating more room. They also reduced the maintenance time down to approximately 2 hours per day. The sludge dryer was removed resulting in substantial energy savings, and also eliminated the need for the air scrubber.

Gates concluded that the Auto-Vac® filter beat the conventional system hands down. The filter utilized their current chemical treatment, with their first month's effluent results averaging 0.37 ppm for Zinc, and 0.01ppm for Chrome without the use of ferrous sulfate. They are confident that if MP&M becomes a reality, they will be able to get even better results with ferrous sulfate. The filter produced a 50% dry solid cake. They are saving $9,000 per year in energy costs for the dryer. The operators are able to monitor and maintain the waste treatment system with ¼ of the time needed before. The results enabled Gates to increase waste treatment production, and reduce costs at the same time.

As it has done for more than a quarter of a century, Alar has assisted a customer in the search of a better solution. In doing so, two companies have joined together as partners in progress. Together they turn to meet higher prices, greater competition, and tighter restrictions of the 21st Century.

For more information, please contact Alar Engineering at 708/479-6100, email at info@alarcorp.com or visit our website at www.alarcorp.com.

ALAR has the PERFECT MATCH SOLUTION for your wastewater!

Alar's Perfect Match Solution program is designed to solve your wastewater problems. At Alar, we don't just sell wastewater treatment equipment. Our comprehensive program involves a two-step approach to finding the proper solution to your wastewater problem. After thorough analysis of your wastewater, we will determine what type of equipment you need and what type of chemistry will solve your problem...and we will explain the entire problem and solution to you.

- We will consider the following chemical choices to solve your wastewater problem: pH adjustment, polymer or Alar 101™ chemical.

- After analysis of your wastewater, we will recommend the best equipment for your needs. At Alar we offer Gravity Separator, Alar's Auto-Vac®, Micro-Klean™ and all ancillary equipment including DAF, Clarifiers, Strainers, Conveyors and Bag Breakers/Dust Collectors.