

ITT PumpSmart® Helps Aluminum Recycler Toss High Energy and Repair Costs into the Recycling Bin

High maintenance costs and frequent breakdowns associated with a water pump here were eating into the bottom line at Scepter, an aluminum recycler. Through the installation of a pump equipped with PumpSmart from ITT's Goulds Pumps unit, life-cycle costs are lower and cost savings have gone way up.

Over 100 billion aluminum cans are produced annually in the U.S.A. Did you ever wonder where all of those aluminum cans wind up after they are used? The aluminum can is the most recycled item in this country. Over 60% of them are recycled. Many of them find their way back to Scepter Inc.

Scepter Inc. of New Johnsonville, TN is a company that recycles scrap aluminum. It produces reprocessed, cast aluminum ingots that are used by beverage manufacturers in making aluminum cans for their products. At the Scepter plant, two furnaces are utilized for melting the scrap aluminum. Each furnace is capable of processing thousands of cans. As the melted aluminum leaves the furnaces it is poured into molds and cast into ingots. These ingots are then cooled down by water pumped from a cement pit and circulated back to a cooling tower. After the cooling liquid leaves the furnace area, the temperature of the liquid can reach over 200°F.

Continuous Stop-Start Caused Motor Problems

Scepters' problems started with the pump used to circulate the cooling liquid. The pump was a 6" 88 HP submersible pump that had its motor submerged in the pit. Keeping a constant flow of liquid to the furnace meant that the pump was working overtime. High cycle rates caused the pump to start and stop continually. This continuous starting and stopping caused the pump's motor to fail. The motor failure happened three times over a one-year period. The repairs cost Scepter between \$10,000 and \$13,000 for each



ITT's PumpSmart PS200 control system was instrumental in eliminating pump breakdowns in an important application at a refiner of aluminum.

breakdown, not including plant downtime. These high maintenance costs were coupled with high-energy consumption from the old existing pump. The combination of high maintenance and low efficiency meant that Scepter faced some serious cost and downtime problems that were eating into the company's profits and productivity.

Wayne Keith, the plant manager of Scepter, was looking for solutions to help him eliminate the high energy and repair costs. He found help when Steve Green, a sales engineer for Tencarva Machinery Company of Nashville, TN called on him. Green suggested replacing the old submersible pumping system with an ITT Goulds Pumps brand 30 HP VIT model vertical turbine pump equipped with a PumpSmart PS200 unit, coupled with a liquid level controller. Green explained that the PumpSmart PS200 could be the answer to the costly pumping problems that Scepter was experiencing. He went on to explain how PumpSmart could easily save Scepter at least 30% in energy savings alone.

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For more information: www.gouldspumps.com

PumpSmart-Equipped Pump Reduces Total Life Cycle Costs

ITT's PumpSmart system provides advanced pump control, protection, and optimization. In industrial applications, PumpSmart will assist in reducing and/or preventing pump failures that result from process upsets or inadvertent operator error. In hundreds of industrial installations, PumpSmart reduces overall pump operating costs through energy savings and reduced maintenance costs. The system also improves process control and awareness through advanced control options and automatic pump diagnostics.

In Scepter's case PumpSmart's continuous monitoring and reaction to the pump performance conditions meant greater reliability and longer life. The plant manager was sold and the new PumpSmart PS200 system was installed. The VIT had a TEFC motor that was mounted on a structural steel frame 10 feet below grade.

The new ITT PumpSmart system immediately eliminated the submersible pump failures due to high temperature and continuous cycle rates. Additionally, by reducing the horsepower requirements by 65%, savings in energy alone are estimated at \$7,000 to \$10,000 per year. The PumpSmart-equipped pump also eliminated the constant repair bills to repair the old motors-- a total estimated saving to Scepter is \$49,000 per year!

For Scepter, PumpSmart has proved to lower overall pump life cycle costs with an immediate impact on the recycler's bottom line. In the last thirty years, over 14 million tons of aluminum has been recycled in America. That's a lot of solid waste eliminated from landfills. Continuing cost effective recycling makes good business sense for the environment and "dollars and cents" for the recycler.

ITT's Goulds Pumps brand is a world leader in the manufacture of pump systems and accessories for industrial applications including chemical processing, pulp and paper, power generation, oil refining, gas processing, mining and mineral processing and general industry.



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