SIEMENS

Demand Management System

Cookware manufacturer

Power Distribution Solutions

Challenge

Faced with an increase in their kilowatt demand charges, a 100 year old cookware manufacturer decided it was time to monitor the furnaces used to melt and mold the raw materials into pots and pans. They were looking at an increase of $10 to $12 thousand dollars per month in demand charges based on the new contract from the utility company. Just by preventing their KW from exceeding utility imposed limits they would be able to pay for the system in as little as 6 months. On top of this cost savings the utility was also offering an incentive for customers who could reduce their demand on a moments notice. By understanding what their loads were drawing and how much each load was using, they were able to more efficiently cut the necessary loading.

Solution

Siemens met with the customer for over a year to understand what loads needed to be monitored and map out an implementation strategy. With no single line drawings to aid in sizing the necessary current and voltage transformers, Siemens had to hand record each of the monitoring points, as well as their wiring configuration. This was not always easy, especially in a facility with a long history. Once the metering points were identified and the necessary hardware specified, Siemens was able to work with their services group to schedule the install.

Again coordination was key, especially with the busy holiday season approaching and shut down time at a premium. Siemens used PAC 3200 meters in fully prepared NEMA 12 enclosures with split core current transformers. The customer supplied the Ethernet backbone, and once the meters were powered up and configured the devices communicated back to the WinPM.Net software.

The real key to success was to be the demand monitoring station. A wireless pulse counter was utilized to record pulses from a utility meter, which was 600 feet away. These pulses were used to trigger an indicating light which would let the operators know if they were approaching a critical stage in the usage of demand. With this information they could decide whether to start another furnace or wait till the load dropped. A green indicator would tell them it was OK to start. A yellow indicator would tell them to maintain or adjust the temperature down. Along with a local display, the results were logged remotely from the WinPM.Net workstation. With this information engineers can verify equipment operation on weekends and after hours and plan maintenance in accordance with operating hours, as well as ensure the equipment is being operated within its limits.

Results

The new Siemens system has allowed the company to not only save on their demand charges, but to optimize their equipment and resources as well.

Siemens Solution for Industrial

Siemens is the world's leader in providing totally integrated solutions to enhance safety, reliability and flexibility in the industrial plants. Integrated power and factory automation solutions improve productivity and, ultimately, the competitiveness of your organization in the global market.

Smart devices of power distribution make plant wide integration easy resulting in the timely and efficient diagnosis of problems before a plant or process shut down. Additionally, Siemens products share a common global technology platform, which enable organizations to operate and implement branches worldwide.

Reliable and precise monitoring of electrical power systems

Siemens Power Distribution Solutions recognizes that high performance facilities make for high performance business. Energy is the lifeline of your business, and better efficiency and sustainability can have a large positive impact on your bottom line.

The Energy Management and Control Systems from Siemens provide a complete enterprise solution that can help you manage the energy costs and availability of your business. With our advanced meters and controls, you can be sure to use only the energy you need, when you need it.

Siemens Power Distribution Solutions can also contribute toward achieving LEED® certification and provides the needed energy metering data for federal/local government energy reductions programs.

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