

STUARTS DRAFT, VIRGINIA



NIBCO's two 600 kW gensets keep the facility operational in the event of an outage.

UNIT:

1200 kW Modular Power System (2 X 600 kW Diesel Gensets in Parallel) with Three Automatic Transfer Switches

JOB:

Providing Standby Power for a Copper Products Foundry

Modular power, maximum flexibility

When your company is one of the premier manufacturers of copper and brass products, keeping the power on is all-important. Today's modern foundry relies upon high capacity electric induction furnaces that need to be kept at operating temperatures twenty-four hours a day, seven days a week. Any kind of power interruption is very disruptive to the metallurgical process and wreaks havoc with production schedules.

Having reliable backup power is essential for NIBCO, Inc. at its copper products foundry in Stuarts Draft, Virginia. To provide redundancy and maximum operating flexibility, NIBCO has invested in a Generac Modular Power System (MPS) consisting of two 600 kW diesel gensets with three automatic transfer switches (ATS).

NIBCO manufactures a variety of copper fittings at the Stuarts Draft facility, including elbows, T's and couplings

ranging in size from one-half to six inches. These items are fabricated from copper that is transformed from ingots and rods to finished goods through an exacting extrusion process. To ensure quality, the purity and temperature of the copper alloy must be properly maintained at every step, from melting to forming to cooling.

The two genset system provides built-in redundancy, and allows the operation of one generator at a time, when desired. The three automatic transfer switches provide additional flexibility and back up different segments of the load, just as NIBCO wanted for this particular site. In addition to automatic startup of the generators, the units can be controlled manually and power can be directed as desired by NIBCO's operating staff. This is not a typical arrangement, but it demonstrates the adaptability of Generac's MPS design, and shows how the system can

be configured to particular requirements.

“Two independent transformers at the substation feed our Stuarts Draft facility,” says Steve Noto, plant services manager. “A failure of either one has a dramatic effect on the plant. An outage of one minute or longer can result in permanent damage to our furnace heating elements. Therefore, critical pieces of equipment are fed through an automatic transfer switch. A power outage recognized at any one of the three switches results in an automatic generator startup and transfer to emergency power. This setup minimizes the outage for all critical components.”

According to Noto, the ability to configure the MPS equipment in a particular manner was a primary consideration. “The system was designed for maximum flexibility. Two generators feed one central distribution panel and when in parallel, the 1200 kW system has enough power to maintain furnace temperatures or continue melting copper during an outage. Should one of the units experience difficulty, the remaining 600 kW generator individually has enough power to maintain the furnaces as well as the critical equipment. By having manual controls, the system also allows us to comfortably and confidently schedule outages for the purpose of preventive maintenance on our electrical distribution equipment.”

NIBCO’s particular Modular Power System is an effective solution to several different requirements, protecting the company’s key equipment and production processes. The Stuarts Draft facility is a showcase of MPS’s outstanding adaptability in a demanding industrial environment.



MPS flexibility was a key factor in the configuration of the NIBCO system.



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