# Automated Boiler Control and Water Treatment System Keeps Mill On Line



## Application

When Brush Wellman contacted Opto 22, they were doing it by hand. Boiler start-up and warm-up procedures were performed manually, yielding varying results, depending upon the operating engineer, the weather, and countless other factors. Now the procedure is automatic, consistent, and predictable.

The Opto 22 control system is the primary operating system for our plant steam boiler, deionized water units (50,000 Gal/Day), water softeners (135,000 Gal/Day), plant air compressor, cooling tower fans, and cooling water pumps. "This part of our mill is the backbone of our process. Without the Mistic working properly, we can't run the mill," said Steve Walker, APC Tech at the Brush Wellman mill. "We save operator costs in this area of $98,000 yearly."

Specific problems solved by the Opto 22 system included boiler start-up and warm-up, manual regeneration of deionizers and water softeners, boiler makeup water controls, and labor costs. In making the decision to purchase Opto 22 equipment, low-cost and ease of programming were primary considerations.

"We also have the Mistic controlling a water recovery system that consists of 26 shallow wells, pumping about 180 gpm, 24 hours per day, seven days a week for environmental purposes. This is required by state law and they can fine us if we don't pump this water," said Walker. The Mistic controls all of this process.

The Mistic is being used on the cyclone slime sealing of the tailing pond. "We budgeted for three full-time operators on this system, at a yearly cost of $105,000. The Mistic runs this area without any operators, for a cost savings of $105,000 per year."

All water units are being regenerated with a standard procedure. "Our water quality is better than it has ever been. The Mistic saves us $203,900 yearly in operator

cost reduction." The Mistic system paid for itself in 18 months.

Mr. Walker explained further, "I had no computer experience until we purchased the Mistic system. We used Cyrano to program the Mistic processor, and now I do all the programming. The flowchart programming is great. Very easy to understand and use. The Mistic system is very easy to program."

We do all totalizing for integrator readings on the bricks. We also use some latch features. Our long-term goal is to have the entire mill on the Mistic system.

"We use the Mistic system with Intellution Fix DMACS version 5.5 and we use Win 911 Alarming software."

"We use an alphanumeric paging system to keep operators informed about alarm conditions. In a huge plant like ours, having detailed information about alarms allows our maintenance personnel to operate much more efficiently."