**PROCESS**

Four high reversing rolling mill processing ingots into sheets. Material rolled includes depleted Uranium, Tantalum, Niobium and Beryllium Copper. Rolling schedules include up to 70 passes.

**SCOPE**

Replace existing system with new digital drives, controls and roll gap positioning systems. Provide new operator console with HMI, set-up schedule server and a data acquisition and analysis software.

**APPROACH**

Develop PLC based automatic roll gap positioning system. Design ergonomic operator control environment. Develop pass schedule to include 8 parameters for each pass: mill speed, acceleration and deceleration rates, roll gap, entry conveyor lead speed, exist conveyor lead speed, entry and exit conveyor position.

**BENEFITS**

State of the art reversing mill, fully automated, standard hardware, low cost, easy to maintain.
**PLC**
Rockwell ControlLogix with RSLogix 5000, including preemptive multitasking operating system, integrated motion control and modular networking

**Modules:** Servo positioning modules, high speed counters, discrete and analog inputs and outputs

**Networks:** ControlNet, Device Net, Ethernet

**Features:** Mill and conveyors speed control, AGC (automatic roll gap control), tables position control, auxiliaries

**DRIVES**
Eurotherm DC and AC

**Quantity:** 1 @ 700hp, 5 at 5hp

**Features:** Digital drives, regenerative, analog speed reference

**OPERATOR INTERFACE**
User friendly, intuitive touch-screens that provide quick access to main mill functions and controls

**Hardware:** Three PC based stations. Flexible arm supported flat touch-screens

**Software:** RsView, Access 2000, VB

**Network:** ControlNet, Ethernet

**Features:** Mill set-up, mill control, data collection, data analysis, rolled data reporting and archiving

**PROCESS ANALYSIS**
Collect process data per pass, perform rolling analysis and generate reports