

4-HIGH REVERSING ROLLING MILL



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

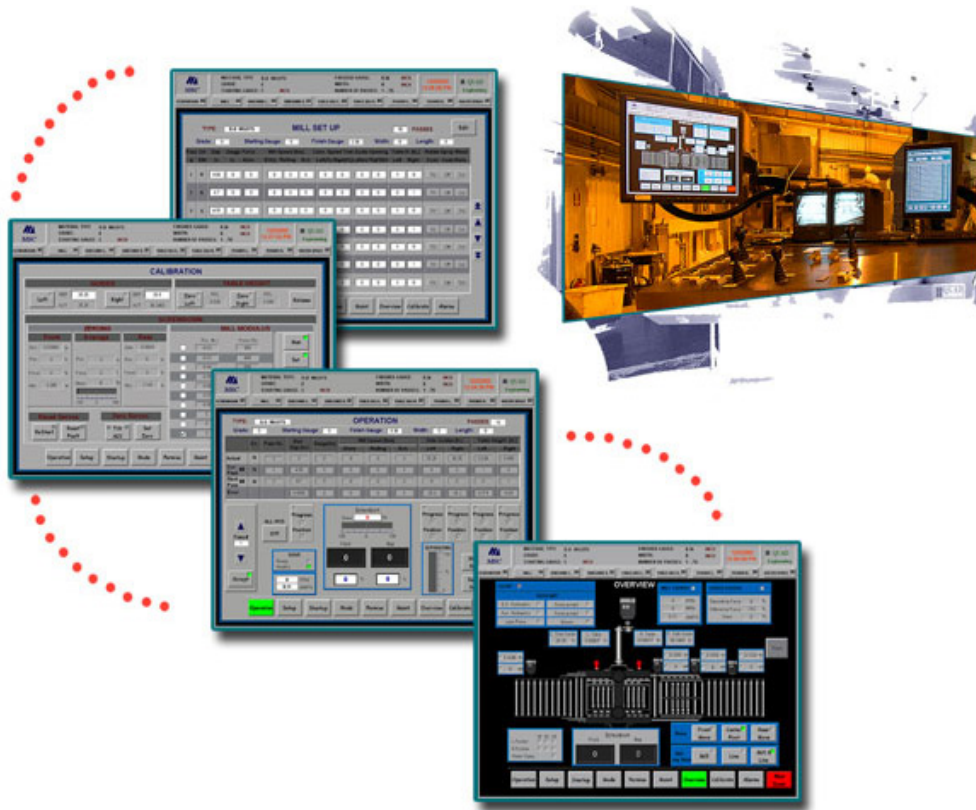
Replace existing system with new digital drives, controls and roll gap positioning systems. Provide new operator console with HMI, set-up schedule server and a data acquisition and analysis software.

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



TECHNICAL DETAILS

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

