



A Rockwell Automation Company

Gerdau MRM Steel Joslyn Installation

The Client:

Gerdau MRM Steel operates an integrated steel rolling mill in Selkirk, Manitoba, that is a world class producer of specialty steel products. Products manufactured include merchant bar shapes, grader blades and cutting edges, elevator guide rails, truck

trailer beams, and rebar. Annual shipments total approximately 291,000 tons of steel and sales total nearly \$180 million.

The Requirement:

Gerdau MRM was using a metal clad air breaker to disconnect the 13.8kV source to their 2000 amp Eccentric Bottom Tapping Furnace. This breaker was being operated ten to thirty times a day and maintenance on the breaker was becoming too costly.

As an alternative interrupting method, MRM chose to install Joslyn Transmaster Vacuum Breakers (VBT) to eliminate the opening and closing of the air breaker on a regular basis. The vacuum breaker will be installed

after the air breaker, which is retained as a back-up interrupting means.

The Design Solution:

Hinz was contracted to design and procure a complete system, including mounting details, power connections, grounding and controls.

Control interfacing consisted of a combination of hard-wired relays and switches, protection relays and an Allen-Bradley PLC 5.

The system consisted of six 15kV 3000 amp Joslyn Vacuum Breakers per phase with a synchronizing control panel.

A cabinet with ground cables will be constructed adjacent to the chain-link fenced enclosure housing the breakers. Kirk key locks on the gate to the enclosure, the grounding panel, and the back-up breaker will ensure personnel safety.

The operator controls the VBT via a trip/close switch

in the control room. When maintenance is required on the vacuum breakers, they can be locally operated via a local/remote switch and trip/close buttons on the control panel.

The control panel for the Joslyns regulates the opening and closing of the breakers. The breakers are open and closed during a zero crossing to reduce wear on the breaker contacts and limit magnetizing current to the transformer.

