

### Essar Steel Algoma Inc.

*No. 6 Blast Furnace – Rebuild*

#### Overview

**Industry:**  
Industrial

**Focus:**  
Furnace Control  
System Upgrade.

**Country:**  
Canada

Essar Steel Algoma’s No. 6 Blast Furnace underwent a major rebuild that included replacement of the obsolete Control Systems.

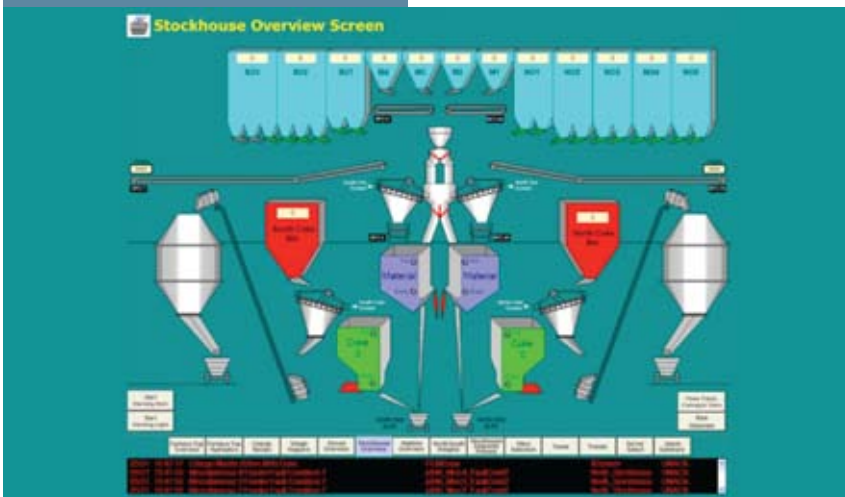
JNE Automation was contracted to design replacement PLC/HMI Controls for the Furnace Top, Stockhouse and Stoves areas that included development of new control system architecture, P&I Diagrams, PLC/Motor Schematics and the electrical installation package.

Programming tasks for the Furnace Top included PLC and HMI development for the Furnace Hydraulics, Equalizing & Relief Valves, Revolving Distributor, Bell Control and the Skip Travel interface.

In the Stockhouse Area, the Automated Material/Coke System was developed to include Bin Selection, Conveyor Sequencing, Material Screening, Weighing and Charge delivery to the Skip Cars.

These two major areas were brought together with a fully automated Charge Master Program that allowed Operator’s to develop, store and execute the charging recipes needed to maintain a correct burden composition.

In the Stoves area, JNE developed the automated Stove System that included Stove Sequencing Modes, interface to the Combustion DCS, a Pilot Burner System and additional Gas Safety Circuits to comply with TSSA Regulations.



In addition to the engineering tasks, JNE provided Commissioning and Training Services to Essar ensuring all systems were tested and Operators trained to allow a safe start-up and continued operation of the refurbished Blast Furnace.

The Furnace was successfully “Blown-in” without incident.

Project Value: \$50M US