HINZ
A Rockwell Automation Company

IPSCO
TN Station

The Client:

IPSCO is a Regina, Saskatchewan, based steel producer with a foundry, rolling mill and pipe making operations. The Regina melt shop is upgrading the controls of many aspects of the steel production process to keep the mill competitive into the 21st Century.

The Requirement:

IPSCO wished to replace the conventional control desk for their TN station with a new state-of-the-art Operator Interface Station . This new station was to contain a computer with a TouchScreen monitor which was to take over most of the control, monitoring and alarming functions previously performed by the pushbuttons, selector switches, and pilot lights of the old desk. The new operator interface had to be impervious to the harsh conditions found in a steel mill. The TN process is critical in that the temperature, time, and injection rates had to be accurately controlled. The new system had to be reliable, accurate, and the feedback had to be fast. The oxygen reheat control also needed to be incorporated into the new TN station control. A further requirement of the new MMI was to display the lab analysis results. These results were previously shown on a VT100 based terminal which was connected via a serial link to the lab PC.

The Design Solution:

Hinz was given the task of designing the new Operator Interface Station, programming the computer software and making the necessary modifications in the PLC control logic. The operator interface station was a desk -type enclosure housing the MMI and scale interfaces. The MMI and scale enclosure had to be sealed to provide a NEMA 4 rating. The MMI was connected to the existing Allen-Bradley PLC 5 via a Data Highway Plus connection. Some additional PLC I/O was required for the increased functionality of the new TN station and the new lance was installed for the Oxygen Reheat System.

The software chosen for this project was Intellution FIX-DMAC's Microsoft Windows based graphic package running on a DeeCo flat panel touchscreen computer. This provides the primary source of control and monitoring for the TN station operator. The MMI software had individual screens and controls for the TN process, CaSi flow control, oxygen reheat control, trending, alarms, and chem lab analysis. A custom 'C' program was written to communicate with the chemistry lab via local modems. This program updated the DMACS database with the results of all chem lab tests. As well the existing TN station PLC program was modified to incorporate the new control system, and Oxygen Reheat control was added.

Once the software was developed and thoroughly tested in the Lab the switchover from the old system to the new system was implemented. Since the TN station is a critical step in IPSCO's production it could not be down for long. Thus, once the plant electricians had pulled out the old desk and wired in the new equipment, the system was completely commissioned in an intensive 36 hour period.

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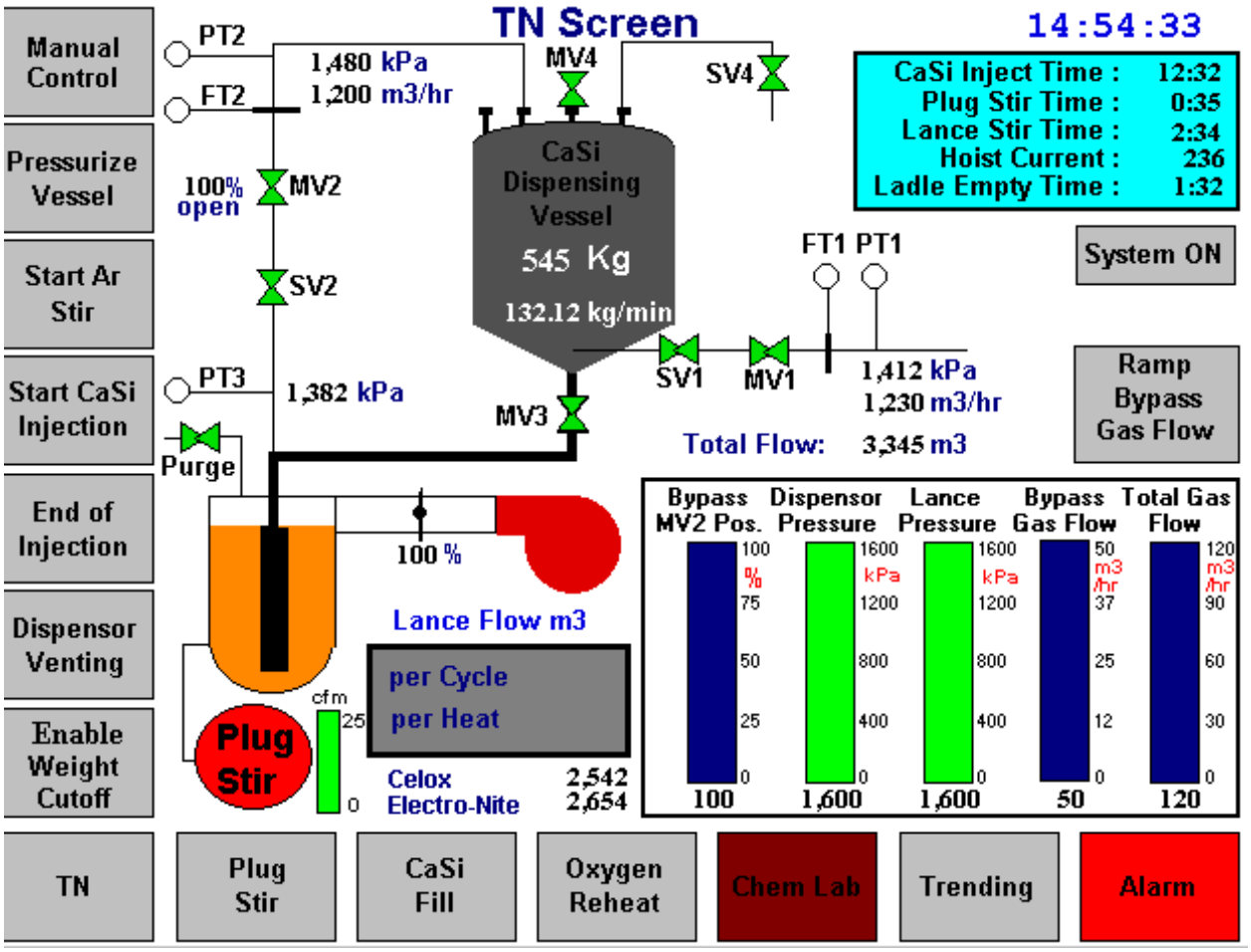

System Specifications:

- DeeCo flat panel TouchScreen 486 computer.
- Local Modems
- Allen-Bradley PLC 5
- Intellution FIX-DMAC's Graphics
  - 7 graphics pages
  - 200 database tags

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com