



A Rockwell Automation Company

Mitchell's Gourmet Foods Hog Blast PLC and HMI Replacement

The Client:

Mitchell's Gourmet Foods (formerly Intercontinental Packers (1997) Ltd.) is one of Canada's leading value-added pork processors. Headquartered in Saskatoon, Saskatchewan, Canada, the company markets and sells

it products to more than 8,000 wholesale and retail customers across Canada and in many American states.

The Requirement:

Mitchell's Gourmet Foods has many different areas and processes in their plant. One of the processes is the Hog Blast Area. In the Hog Blast area, hogs are moved through the hog coolers until they are fully frozen. Due to the low temperatures, the pumps, valves, and liquid pipes must be defrosted daily. The complete Hog Blast process is controlled by a PLC and is monitored by an operator interface.

Mitchell's Gourmet Foods was searching for a replacement system for their aging G.E. Series 6 PLC and Nematron package that controlled their Hog Blast

area. The two Nematron HMIs were failing regularly and were not dependable, while the Series 6 PLC was becoming increasingly difficult to get replacement parts for. The decision was made to replace the Series 6 with an Allen-Bradley SLC, which would be similar to the other SLC units in use in other areas of the plant. Allen-Bradley PanelView 600 color TouchScreens were chosen to replace the Nematron units, providing much greater control capability, crisper and neater graphics, as well as improved reliability.

The Design Solution:

The existing Hog Blast control equipment, located in the Hog Blast electrical room, was replaced with a SLC 5/05 and two 10-slot racks. These racks contain both discrete and analog I/O and are connected via a rack interconnection cable. Some improvements to the adapted Series 6 program were implemented to enhance control and monitoring of certain I/O, as well as provide proper interface and alarming to the new PanelView unit.

The I/O from the Series 6 PLC was examined to determine what was actually in use, and what could be demolished. Based on this evaluation, the program was adapted to run in the SLC PLC. Rather than installing a new SLC 5/03 processor, it was decided to run the new 13 slot rack as a remote I/O rack off of the existing Pork Cut/Pack Processor. The required programming was patched into the existing Pork Cut/Pack program, and a Remote I/O scanner module was added into the Pork Cut/Pack chassis to communicate with the new

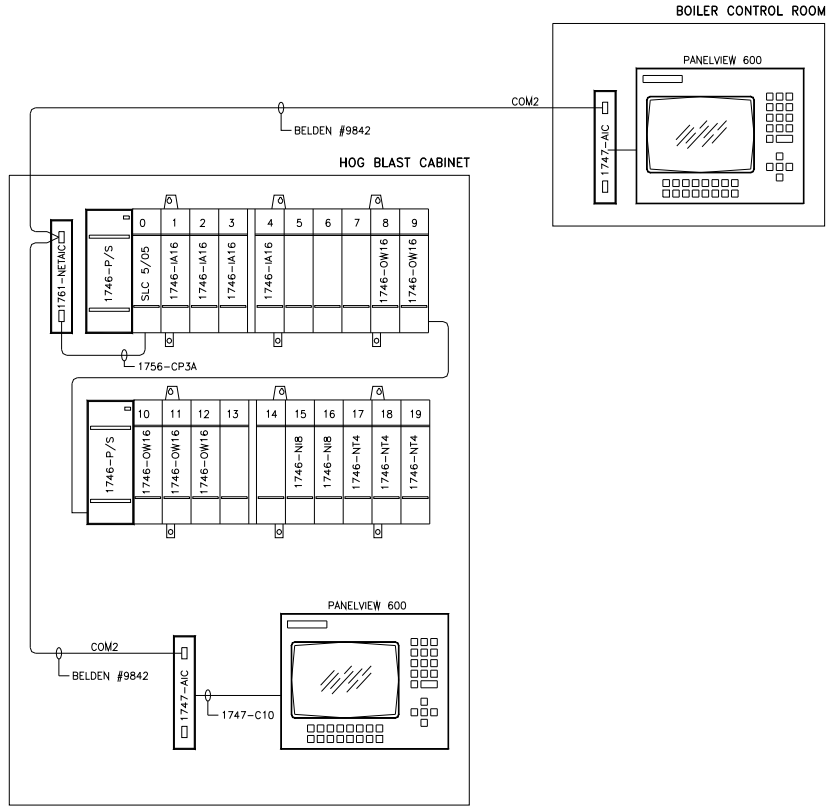
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Two, color TouchScreen Allen-Bradley PanelView 600's replaced the existing Nematron operator interface located in the Hog Blast electrical room and the inoperative Nematron operator interface located in the boiler house control room. The new PanelView 600 application consisted of 14 screens and 26 alarms. The new screens were created to have similar screen control as the Nematron unit, but graphics and ease of control were improved considerably. Since this is only a fraction of the PanelView's capacity, plenty of room has been left for future expansion. The PanelViews communicate with the SLC 5/05 via an Allen-Bradley DH-485 network.



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System Specifications:

- 2 – 10 slot SLC racks
- 1 – 36” Rack Interconnection Cable
- 2 – Isolated Link Couplers
- 1 – Advanced Interface Connector
- 2 – Processor to Peripheral prog/comm cables
- 1 – RS232 Cable
- 2 – PanelView 600 Color Touch-screen
- HMI
- 2 – 120/240VAC Chassis Power Supply
- 2 – 8 Pt. Analog Input Modules
- 3 – 4 Pt. Thermocouple Input Modules
- 4 – 16 Pt. AC Input Modules
- 5 – 16 Pt. AC Output Modules

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