



A Rockwell Automation Company

CanAmera Foods Meal Loadout Pellet Mill

The Client:

CanAmera Foods operates a 700 metric tons per day canola crushing plant located in Fort Saskatchewan, AB (10 miles north east of Edmonton). CanAmera's

bulk canola oil and meal is marketed both domestically and internationally.

The Requirement:

The original mill commenced operation in the fall of 1979 with controls implemented by relays, pneumatic controllers, chart recorders, mimic panels, and hardwired pilot devices. This presented a number of operational problems, including:

- difficulty in troubleshooting;
- equipment obsolescence;
- difficulty in obtaining service personnel for the controllers
- limitation in control capabilities.

In addition to resolving the problems identified above, a new control system would provide increased flexibility, management of information, and tighter control of process loops. All of these would aid in providing reduced operational costs, therefore justifying the control upgrade.

The Design Solution:

CanAmera Foods had no existing microprocessor control or color graphics-based systems in operation, eliminating the need to consider existing spares or vendor familiarization. Hinz was commissioned to conduct a study to aid CanAmera Foods in the selection of a preferred control system vendor. A generic configuration was developed for a new control system based on distributed processing principles, where independent processors each control a specific plant area. The specification was searching for a single vendor solution, (PLC or DCS) that could do a good job on both discrete and analog control functions. The cost savings to be achieved by stocking and training for one (1) system only was considered to be extremely important.

A strong preference was being given to vendor equipment with local stocking, service, and support since CanAmera Foods was not in a position to establish their own spares or service facilities. The

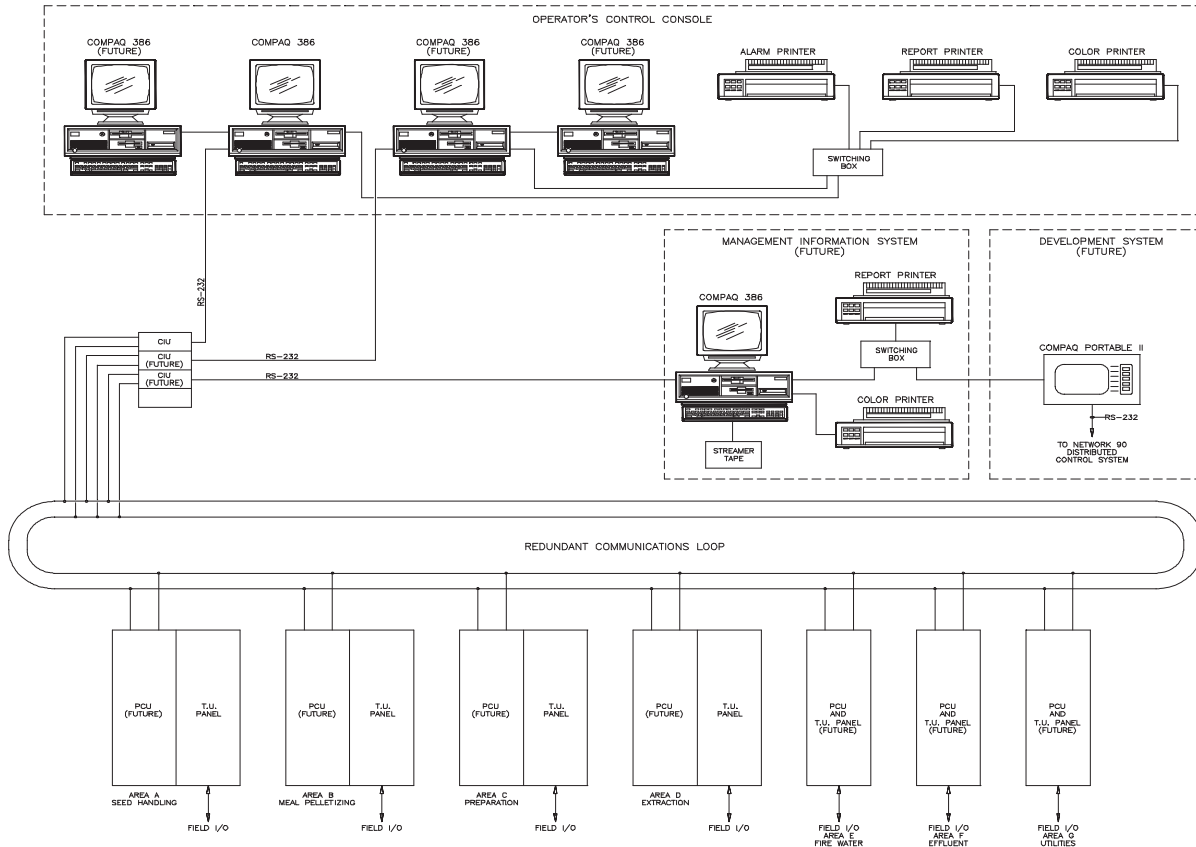
study concluded by defining the most appropriate vendor solution to CanAmera Foods specific application and identified budget figures for approval. The system selected allowed for extensive expansion to include all areas of the plant. Initial budgets, however, only allowed for the acid degumming system to be included in the installation. The Bailey cabinet was installed adjacent to the existing mimic panels in the plant control room. A UPS system was connected to the control system so that operations would be able to monitor the process without interruptions.

The MMI station was situated so that the operators could view the existing mimic panels as well as the new color graphics console. The entire system was commissioned while the plant was running without any downtime due to this project.



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System Specifications:

CanAmera Foods system provides control for the acid degumming portion of the extraction plant. The system includes 16 DO, 48 DI, 14 AO, 15 AI, 8 PI and 8 RTDs related to approximately 16 motors and 14 PID loops.

This Bailey DCS system has control implemented by one (1) MFC04 microprocessor located in the standard Bailey control cabinetry. This MFC04 communicates with the redundant communications loop (super loop operating at 10 Mb). The super

loop network allows communications between future MFC04 microprocessors and the man machine interface (MMI). The MMI provided was a midrange Bailey system called Process Control Window (PCW). It consists of one (1) station with approximately 10 graphics pages ranging from overviews to trending and alarming displays. As the system is added to in the future, a second MMI will be added to provide redundancy.

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

www.hinz.com