



A Rockwell Automation Company

Tolko Industries Slave Lake Greenfield OSB Plant Network

The Client:

Tolko Industries Ltd. is a private Canadian-owned forest products company based in Vernon, British Columbia, that manufactures and markets specialty forest products to world markets. With manufacturing operations across Western Canada, Tolko is a major producer and marketer

of lumber, plywood, veneer, oriented strand board, and kraft papers. The company's woodlands operations in British Columbia, Alberta, Saskatchewan, and Manitoba have received third-party certification of their sustainable forest management systems.

The Requirement:

Tolko selected Hinz as their electrical and control consulting partner. Hinz was responsible for providing the electrical/controls engineering services for the construction and commissioning of a Greenfield Orientated Strand Board plant. The new plant is designed to produce 750 million square feet of 3/8" OSB per year. The process consists of two log ponds, two drum debarker lines, two stranders, two green bins, two hot oil energy systems, two drum dryers, three dry bins, one wax & resin system, two drum blenders, one OSB forming line, continuous press & finishing line, and one plant-wide pneumatic dust system.

Tolko required an integrated plant-wide and video Ethernet network that would:

- Provide a fully scalable and reliable network for the process control PLC to HMI data acquisition system
- Provide a high-speed backbone for automatic data acquisition of the vital process and test lab information
- Equip the business with a plant-wide network to integrate the financial, stores, woodlands and management functions
- Provide an Ethernet based video camera system for monitoring the process
- Provide a diagnostic and management interface to the network for troubleshooting

The Design Solution:

Hinz provided a complete detailed design of the network, wiring layouts and cabinet requirements. The design phase included working with the client to select the overall network architecture, equipment selection and purchase, cabling design, installation standards and specifications. The equipment was purchased and the system was staged in the Hinz office prior to shipment and installation at site. The construction phase included the equipment installation, cabling supervision and testing, network commissioning and end-user training. The system configuration incorporated an individual, manageable HP Procurve network switch for each functional area of the plant, linked back to the main control room by dual gigabit Ethernet trunks over fiber-optic. The central control room was equipped with a redundant cluster of core HP Procurve network switches and embedded routers to accommodate the HMI workstations, MIS servers and Wonderware Archestra

System. All network endpoints throughout the plant were equipped with dual, live RJ45 jack connections ensuring adequate connectivity. In total 120 x 2 network endpoints were provided for PLCs, workstations, servers, cameras, printers and programming test-points. The gigabit trunks were load balanced for optimization of both networks traffic, together with fail-over routing controlling software, ensuring optimal uptime.

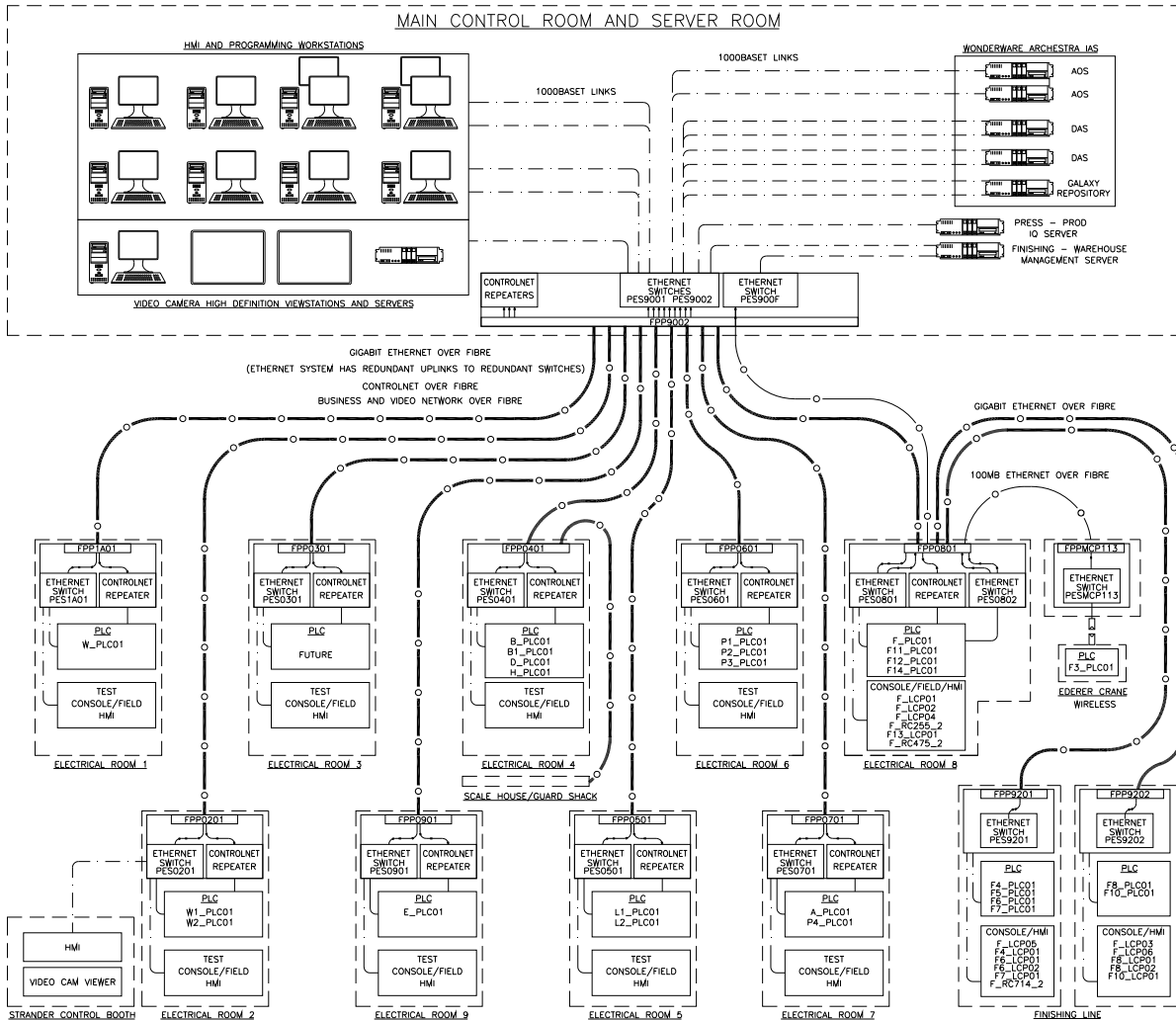
The multimode fiber-optic cable backbone accommodates:

- The plant wide Process Control Network
- The plant wide PLC ControlNet communications
- The plant-wide Business and Process cameras system.



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System Specifications:

- 11 HP Procurve Model 2600 Gigabit-Uplink Ethernet Switches
- 2 HP Procurve model 5406ZL head node Gigabit Ethernet Switches with Routing Software
- 27 Sony IP Network Video Cameras
- 12 Metrobility LANCAST Fiber-Optic to Ethernet Media Converters
- HP Procurve Network Management Software
- 240 x CAT6 Gigabit tested copper cabling endpoints
- 50/125 Multimode Fiber-Optic Plant-Wide Backbone
- ONSSI NETDMS NVR System

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

www.hinz.com