



A Rockwell Automation Company

## Slocan Forest Products Fort Nelson OSB Plant

### The Client:

Slocan Forest Products is a publicly traded Canadian company headquartered in Vancouver, BC, that specializes in the sawmill industry. They made their

debut into the engineered wood business with their first OSB plant located in Fort Nelson, BC.

### The Requirement:

The Fort Nelson plant has a design capacity of 466 million square feet annually. The process uses a 12 x 24 foot - 10 opening press and produces North American and Japanese panel sizes. Hinz was selected as the electrical/controls consultant based on our single discipline specialty nature and extensive OSB design experience.

Hinz' responsibility included the design and supervision of design of the electrical and control systems for all areas of the plant. The design standards developed had

to be flexible enough to accommodate multiple OEM vendors but also stringent enough to achieve a reasonable level of consistency in drawing reference, numbering philosophies and overall control system design. Communication is an important criteria to project success since several of the large process equipment vendors were from Germany.

### The Design Solution:

Hinz provided complete electrical/control engineering and project supervision/management for the electrical construction of the plant. Responsibilities included selection of major electrical and control hardware, electrical design, instrumentation design, control system design, supervision of control system design by others, documentation, installation supervision, training, and plant start-up.

The control system configuration was structured on the philosophy of implementing individual PLCs in stand-alone process areas. Plant control was distributed into seven individual process areas with each area having an Allen-Bradley PLC 5/40 or 5/60 to implement the process control. The design and supply of the control systems for these process areas was split between Hinz and the equipment vendors because of the concern over performance guarantees. Hinz was responsible for the Log Handling, Waste system, EFB system, Dust system, and supervision of the control system design supplied by the main process vendors. Communication between the PLCs and HMIs was achieved with three separate data highways. Two highways are dedicated to communications between the PLCs and HMIs. Highway #1 data exchange is comprised of Log Handling, Waferizing, Pollution Control, Dust Collection, Blending, Energy System, Finishing Line, and Drying Information. Highway #2 is used exclusively by Schenck/Dieffenbacher for

Forming and Press PLC/HMI communications. The third highway is dedicated to inter-PLC communications and PLC programming.

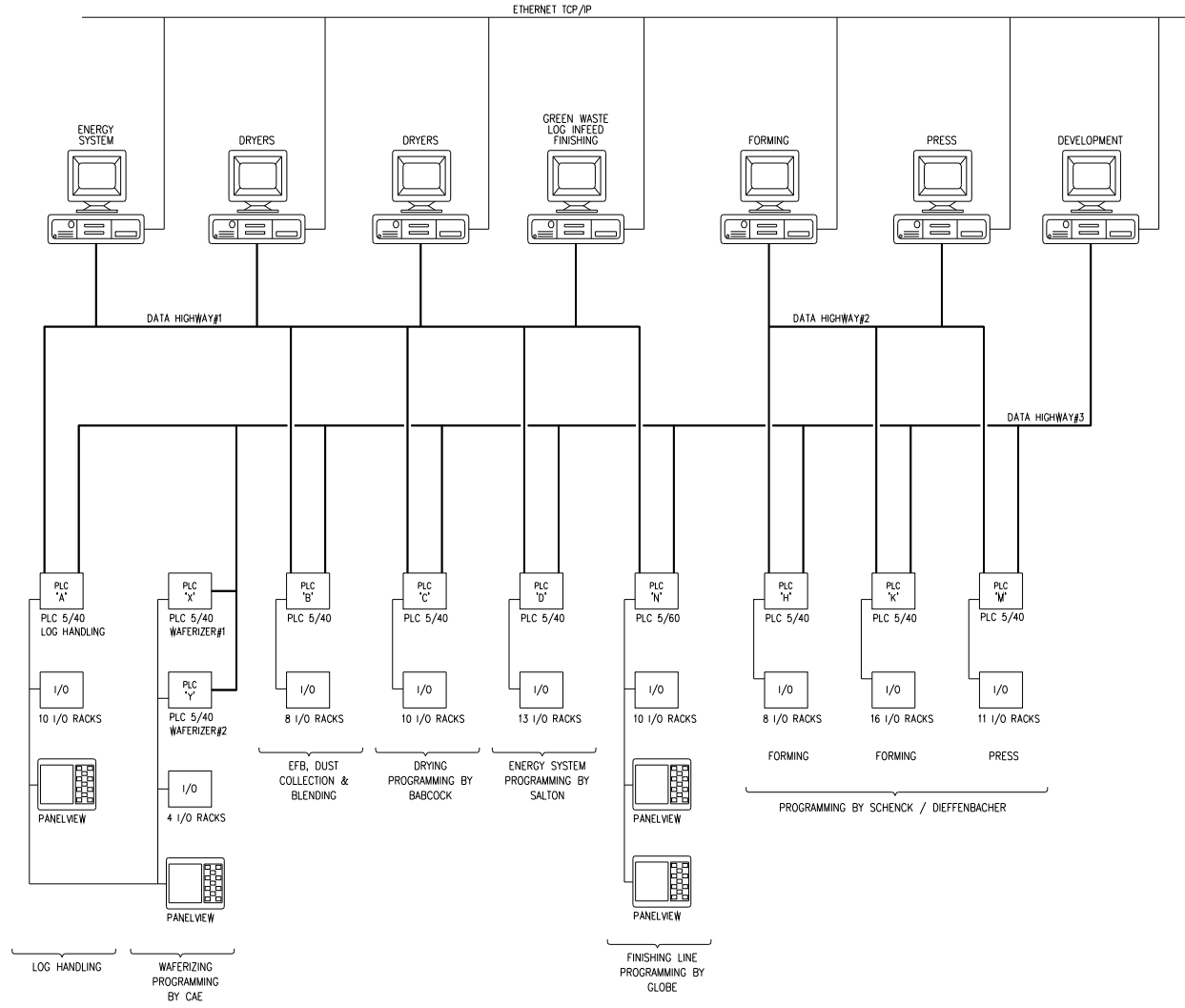
The HMI system implemented is InTouch (by Wonderware) for Windows. It is running on Texas Micro 486 industrial computers. A total of six stations are provided in the control room with the following distribution: two stations provide redundant control for the Forming and Pressing Systems provided by Schenck/Dieffenbacher; two stations provided redundant control for the Dryers provided by Babcock; one station is dedicated to the Energy System; and one station is used for Log Handling and Finishing.

The plant has over 680 motors with a total connected horsepower of 17,000. The main plant distribution is 5kV with 5kV/600V unit substations distributed throughout the plant to provide feeders to motor loads. The electrical rooms were distributed throughout the plant according to process areas. This approach allowed for the check-out and start-up of process areas in a sequential fashion. All motor control I/O was installed and pre-wired within the MCCs by the MCC manufacturer to minimize errors and expedite the installation and commissioning process. Field I/O were enclosed in remote I/O cabinets and distributed throughout the plant as required.



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### System Specifications:

- 680 Motors, 17,000 HP Connected
- 6 Wonderware Stations
- Log Handling, EFB, & Dust Collection Stations By Hinz
- 10 Allen-Bradley PLC 5's
- 3 Allen-Bradley Data Highways
- Ethernet LAN for HMI Communications

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

[www.hinz.com](http://www.hinz.com)