



A Rockwell Automation Company

Northwood Panelboard Green End Modernization

The Client:

Northwood Panelboard Company is jointly owned by Toronto based Nexfor and Mead Corporation of Dayton, Ohio. The mill is managed by Norbord Industries, a subsidiary of Nexfor. When the mill opened in June of 1981 it was one of the largest OSB mills of its kind. Technological improvements have

been implemented over the years so that it is still one of the largest and most efficient OSB plants in North America with current annual production exceeding 400 million square feet 3/8" basis.

The Requirement:

Northwood started experiencing a "bottleneck" in the log handling area, after the new conveyor dryer was added in 1996. The plant was experiencing some process upsets due to voltage sags when the waferizers were restarted after the knife change.

In order to maintain their competitive position in the market place, Northwood concluded that it needed to address the waferizer starting problems and increase the throughput of the log handling system. This involved adding the third flaker line, increasing the length of the log infeed jack ladder arrangement,

splitting the debarker infeed and outfeed conveyors, increasing the motor horsepower of some existing systems, and adding some variable speed conveyors.

Since the log handling modification at Northwood, three waferizers have been running around the clock and the voltage sags during re-starts are non-existent. The throughput has increased to an optimum level.

The Design Solution:

As a result of our involvement with the Nexfor-Tupelo Greenfield OSB Plant and the Northwood-Bemidji Conveyor Dryer Project, Hinz was asked to assist Northwood Panelboard with the design of power and control systems for the log handling upgrade project.

The design of the electrical system included: equipment layouts for the new electrical room to accommodate the new 4.16kV MCC line-up and the PLC control equipment, reduced voltage auto-transformer starters for the existing waferizers and the new waferizer to prevent voltage sags during waferizer start cycles, new PLC cabinets, modifying and adding new sections to the existing 480V MCCs, lighting and control power transformer/panels, checking the fill in the existing conduits and pull boxes, new control

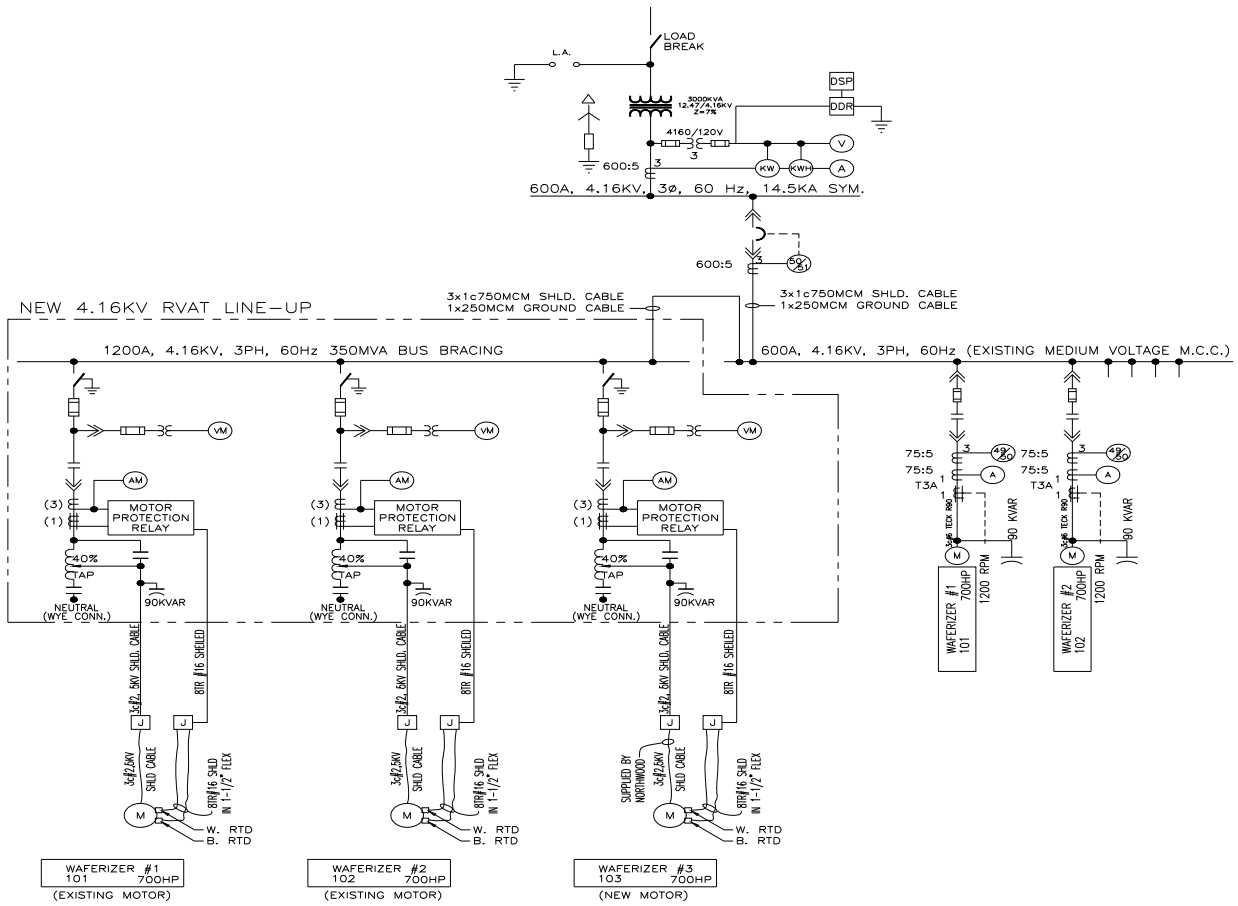
console for the three waferizers and infeed/outfeed system.

The following documentation was provided for construction: power distribution (single line diagram), electrical room layouts, lighting layout, existing 4.16kV switchgear cable top connector details, MCC modifications and additions layout, motor locations layout and motor list table, device locations layout, conduit modification layout, power and control interconnection block diagrams, individual PLC Module schematics, PLC cabinet components layout, motor schematics, and waferizer control console layout.



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System Specifications:

- New 4.16kV MCC Line-Up Complete with:
 - 3 Reduced Voltage Auto Transformers
 - Multilin 269 Motor Protection Relays
 - Vacuum Contactors for Run & Bypass Mode
- 1 New and Two Existing 90 KVAR, 4.16kV Capacitor
- 1 New and Two Existing 700 HP, 4.16kV Waferizer Motors
- New 200 HP Load at 480V
- New 480 MCC Sections Added
- 1 New PLC Cabinet Added

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

www.hinz.com