



A Rockwell Automation Company

Martco Limited Partnership Greenfield OSB Project (Power)

The Client:

Roy O. Martin Lumber Management, L.L.C. (ROM), located in Alexandria, LA, is the result of a vision set in motion generations ago. Beginning in 1923, it is now one of the largest independently owned lumber companies in the southern USA. Today, ROM has a

land base of nearly 600,000 acres of prime southern pine and fine hardwoods throughout Louisiana. The Martco Limited Partnership OSB plant is located in Oakdale, Louisiana.

The Requirement:

Martco Limited Partnership selected Hinz as their electrical and controls consulting partner. Hinz was responsible for providing the electrical and controls engineering services for the construction and commissioning of a green field Orientated Strand Board plant. The new plant is designed to produce 750 million square feet of 3/8" OSB per year.

Hinz' scope of work involved the project management of all aspects of the electrical and controls system, and

the hardware and software design. Included within the scope was the co-ordination of equipment vendors who were supplying their own PLC programs and HMI graphics. Hinz was responsible for programming the following process areas: Wood room, Energy System, Dryers, Wax & Resin, Finishing, and Pollution Control.

The Design Solution:

Hinz provided complete electrical and controls engineering services. The design phase included working with the client to select major electrical and controls hardware, power and electrical design, instrumentation design, specification and supervision of control systems provided by others, HMI configuration, programming of PLC systems, and complete documentation.

This plant has over 830 motors with a connected load of 42,000HP. The incoming 130 kV power supply was transformed to 25kV with a 15 MVA transformer. The 25kV was distributed to 9 - 2.5 MVA 25kV / 600V transformers and two 10 MVA 25kV / 4160V transformers. The Medium Voltage MCC contained two 1500 HP RVAT starters and 11 FVNR starters. There are 47 low voltage MCCs with a total of 410 vertical sections. All the VFDs and motor starters with the MCCs were pre-wired and configured at the MCC factory. This task reduced wiring errors and expedited the installation process.

The control system configuration incorporated an individual PLC for each process area. Plant control for each area was achieved using Allen-Bradley ControlLogix processors. Communications between PLC and HMI was accomplished by using an Ethernet network with a one Gigabit fiber-optic backbone. A dedicated ControlNet network was used for PLC to PLC communication. Each PLC system had a ControlNet network that was used for remote I/O communications. A dedicated DeviceNet network was designed to interface the PLC system with VFDs and motor starters in the MCCs.

The Human Machine Interface (HMI) is based on Wonderware's InTouch software for Windows. The plant was controlled and monitored from a central control room.

The construction phase included dedicated onsite construction supervision and commissioning services.



A Rockwell Automation Company

Martco Limited Partnership Greenfield OSB Project (Power)



System Specifications:

- 42,000 HP Connected Load
- Two 10 MVA 25KV/4.16 KV Substations
- Nine 2.5 MVA 25KV/600 V Substations
- Two Medium Voltage MCCs c/w two 1500 HP RVATs ,9 FVNRs and two MV VFDs.
- Nine 600 V , 3200 Amp PDCs
- Forty seven 600 V MCCs c/w VFDs and FVNR starters
- One 1000 KW Generator

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

www.hinz.com