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Valley Lumber

Hackleburg (Marion County)

Valley Lumber was able to stop using natural gas completely, after installing a wood-fired heated-oil system in 2006.

Valley Lumber is a manufacturer of pine lumber and timbers, focused on the farm construction industry. Their manufacturing consists of sawmill, drying kilns, and planer operations.

Valley Lumber operates a 5200 BTU wood-fired heated-oil Sugimat system. This is an indirect heat-transfer system that does not utilize a boiler or steam. Synthetic oil is piped around the firebox to be heated and then routed to the drying kiln in this system. The hot oil radiates its stored heat into the drying chamber, heating the wood charge, before returning to the firebox to be reheated. This system consists of the actual firebox, a fuel silo, automatic fuel metering, an oil overflow tank, a "burp" tank to pull the air out of the heated oil before it travels to the kiln, ash removal system, and above-ground oil lines to the kiln.

The heating system is kept fired at all times, while the kiln only operates five to six days per week. The oil-heating system is operated via computer control, but does not provide remote user access. This requires an operator to be present to monitor the progress of the wood through the drying cycle.

The drying kiln that this system supplies heated oil to, has the capability to dry the weekly production of approximately 60,000 board-feet using about fifteen tons of wood waste. Valley Lumber has been able to stop using their natural gas-fired boiler and kiln completely.

The new biomass system is designed to run off pine sawdust and shavings produced in their planer mills. This sawdust contains approximately twelve percent wet basis moisture content. Valley Lumber actually produces more wood waste than is required by the kiln system, and the excess planer shavings are sold to other companies. The burner is fed by an automatic metering system which triggers a section of conveyor and walking floor movements to pull the feed out of the silo into the metering bin.

The Valley Lumber oil-heat kiln system has been in operation since the beginning of 2007.

It is estimated that by no longer using natural gas, Valley Lumber will save \$62,500 per year