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## **Brown Wood Preserving Company**

Kennedy (Lamar County)

**Brown Wood Preserving installed three Hurst wood-fired boilers in 2004 that used oak shavings to supply steam to three drying kilns.**

Brown Wood Preserving is a manufacturer of wooden poles used in the utility, telecom, and industrial markets. Their Kennedy processing facility trims, shapes, and dries wood poles for chemical treatment at other locations.

Brown Wood Preserving is operating a 500 bhp Hurst wood-fired boiler to supply steam to their three drying kilns. The boiler system consists of the actual boiler, a fuel shed with walking floor feed system and chip screen, automatic fuel metering, a chemical premix and preheat water tank, automatic ash removal system with cyclonic filtering and auto reburn of combustibles, and underground steam lines to the kilns. The boiler is kept fired 24 hours per day, 7 days per week while the kilns are operated 24 hours per day, 6 days per week. Two boiler operators are dedicated to maintaining the boiler system and also have internet access to allow Hurst technical support to monitor the control system if needed.

The Brown Wood Preserving boiler system is supplying steam to the three kilns at varying load rates. The largest kiln requires 12,000-15,000 lbs/hr of steam at peak operation, while the two smaller kilns require 10,000 lbs/hr and 7,000-8,000 lbs/hr at their respective peak loads. The boiler system has a rated capability of providing up to 17,250 lbs/hr of steam and a demonstrated capability of providing up to 21,500 lbs/hr. To eliminate a potential loss of pressure and/or boiler overload due to the kiln steam load requirements, Brown Wood Preserving personnel rotate the loading schedules of the kilns so that the kilns are not experiencing peak steam demands simultaneously.

The Brown Wood Preserving system was originally designed to burn oak sawdust produced in the trimming and shaping processes. This sawdust was measured to contain approximately 40-46% wet basis moisture content. In February 2005, after experiencing less than optimal boiler efficiency, Brown began purchasing oak shavings from Buchanan Hardwoods in Aliceville, Alabama. The purchased oak shavings have an 8% wet basis moisture content and have allowed Brown to utilize their boiler capacity more efficiently. Brown purchases 1-2 truckloads of shavings from Buchanan every 2

weeks. It should be noted that Buchanan Hardwoods is a previous Biomass Energy Program participant.

Overall, Brown Wood Preserving has proven to be a successful implementation of the Biomass Energy Program. The investment provided by the state continues to generate energy savings for the company, and helps this manufacturer remain competitive in the growing global market.