



HURST HIGH PERFORMANCE BOILERS

Hurst Boiler Case Study National Distiller Lexington, KY



Background

A large national distilling company came to Hurst and GES initially to replace their existing coal-fired boilers with new upgraded Hurst coal-fired boilers. Hurst, with the assistance of GES, examined alternate biomass fuels to reduce costs and provide a sustainable green system alternative. Hurst and GES were able to put the manufacturer in contact with another local company that needed help disposing of unused biomass. Ultimately, the local company sold waste biomass to the distiller for less than 1/3 the cost of coal fuel, and the manufacturer was able to create a cost effective, sustainable, and carbon neutral biomass-fired process steam generation system.



Local Biomass Fuel Supply



Equipment

- Two (2) wood/biomass fired Hybrid boilers each with a capacity of 51,750 pounds per hour at 150 PSI pressure saturated steam
- One (1) natural gas fired packaged steam boiler of the same 51,750 pounds per hour boiler to be used as a back-up boiler in case of emergencies, etc.



Reciprocating Step Grate Stoker

The boilers replace old and outdated coal fired boilers that no longer meet strict emissions standards. The new Hurst boilers have been specially designed with a very flexible grate system that has the ability to burn a wide variety of fuels with a primary and secondary emission system that allows for meeting the strictest emissions requirements. The owner originally requested replacement coal boilers because they could not find a source of biomass fuels. Hurst and GES were successful in locating the full source of biomass supply from more than one source. The optimal source came from a large industrial company within 25 miles of the distiller's site, that produced sufficient waste biomass they were paying to send to a local landfill. This turned out to be a win-win situation for all, and certainly the best overall solution for the local community and the environment.



Complete With Optional Gas Fired (Winter-Fail-Safe) Back-Up System

On the left foreground is a gas/oil fired steam boiler used for reserve. It is available for service when either of the two solid fuel boilers needs to come off line.

The base system is comprised of the two (2) BIOMASS-FIRED steam boilers, shown in the center.

Each of the three (3) boilers has a steam capacity of 55,000 pounds per hour at 150 PSIG design saturated steam pressure.