

Steam Engineering, Inc.



A
Northwest-Based
Company

Providing Steam-Related Engineering, Full Service Water Treatment, and Tech Support

International Paper Company Gains More Drying Capacity Using Less Fuel

International Paper Company in New Boston, Texas, operates a lumber mill with two high-temperature, double track dry kilns. They wanted to install an additional multizone single track dry kiln to increase the plant drying capacity. The existing boiler was challenged to provide the required steam for two dry kilns, and **Steam Engineering** was hired to design steam system improvements to bring the facility to full production with the addition of the third dry kiln.

The Design

To obtain additional steam capacity without over-firing the existing boiler, we needed to identify and capture all of the wasted heat in the boiler and steam system. **Steam Engineering** modified the combustion air distribution system to increase combustion efficiency, installed blow-down heat recovery, added a feedwater economizer, and installed a high temperature feedwater system that used the heat in the high temperature dry kiln condensate to heat feedwater.

Steam Engineering increased the boiler operating pressure to 175 psig. A steam load management system that includes a pressure-reducing station at the dry kilns was added, and the dry kiln steam pressure was reduced to 125 psig. Finally, we collect the dry kiln condensate in a flash tank that is operated at 60 psig.

The Result

The plant manager and the boiler and dry kiln supervisor reported the following results: The water softener regeneration has been extended to 22 days from 10 days, the chemical treatment consumption has been reduced by 50%, and they are able to sell as many as five truck loads per day of excess hog fuel.

Before the improvements, the company was buying some hog fuel. Because they increased production while reducing the amount of hog fuel burned in the boiler, the source test results were better than anyone had expected.

The facility is drying more lumber and burning less fuel. The techniques used at New Boston have been implemented by **Steam Engineering** for many years on various process steam systems. We have enjoyed similar success in corrugated box, plywood, food processing, and particle board facilities.

Find out how your company can qualify for a **FREE Fuel Savings Analysis** for your specific operation.

Reduce Operating Costs & Increase Profits:

◆ Reduce Fuel Use

- Optimize Combustion Control
- Stop Steam & Condensate Leaks
- Increase Condensate Return
- Recover Blowdown & Flash Steam Heat
- Recover Boiler Stack Waste Heat

◆ Reduce Boiler & Cooling Tower Chemical Use

- Pretreat Makeup Water
- Reduce Chemical Use
- Automate Boiler Chemical Treatment

◆ Reduce Repair & Maintenance

◆ Improve Environmental Compliance

<http://www.steamengineering.com>

204 NE 117th Avenue
Vancouver, WA 98684
800-346-6152
360-260-8655

Fax: 360-260-3820
info@steamengineering.com

Let our team of specialists help you solve steam-related challenges.