Global Energy Solutions, Inc.

Hurst Boiler Case Study

Seaman Paper Company
Otter River, Massachusetts

Background

Seaman Paper Co. is a 61 year old privately held paper plant located in rural Massachusetts. Under the guidance of George Davenport Jones, III, loyal employees keep this historic facility operating 24/7, 365 days per year. Seaman Paper Co. produces lightweight specialty papers including decorative tissue wraps, crepe streamers, foodservice tissues, SatinWrap, and personalized printed papers.

A Hurst Hybrid S600 wood fired boiler was just one of many elements of a comprehensive energy-saving initiative designed by Mr. Jones and implemented over a ten-year period. Changes in operations, equipment, and fuels have resulted in significant annual reductions in both oil usage (nearly 1.7 million gallons) and electricity (2.6 million kilowatt hours). The annual savings is noteworthy as well: up to $1.5 million per year in operating costs.

Equipment and System Changes

- Steam Reduction—thermo compressors, heat exchanger, recycling of effluent, boiler economizer
- Electricity Reduction—T8 lighting, motion detectors, variable speed drives
- Fuel Substitution—wood fired boiler
- Backpressure Turbine

Hurst Boiler & Welding Co., Inc. — Hybrid Super 600 Wood Fired Boiler at Seaman Paper Co.

The Boiler

A Hurst Hybrid Model Super 600 was selected and equipped with a baghouse and a finned-tube waste heat recovery economizer. Initially, 23,709 barrels of oil were replaced by 15,002 tons of shredded pallet wood.

Net fuel savings=$1,580,000
NO_X reduction = 30%
SO_2 reduction = 95%,
Greenhouse gasses = neutral.

Results

In June, 2008, the Massachusetts Office of Technical Assistance and Technology held a Cleaner Technologies Demonstration Site Event at Seaman Paper Co. The lunch and plant tour gathering was titled: **"Energy Efficiency Success at Seaman Paper"** and was attended to capacity on two different dates by plant managers, corporate executives, and elected officials. The goal was to introduce and explain the methods and benefits of a sustainable manufacturing concern and to highlight the effort and success of Seaman Paper Co.

Gregory W. Smith of Global Energy Solutions, Inc. was introduced as the project developer and fielded technical questions about solid fuel procurement and boiler installations. Mr. Smith, an exclusive solid fuel boiler agent for Hurst Boiler & Welding Co., Inc. was able to share similar success stories of wood-fired boiler systems installed at other manufacturing facilities and institutional campus locations in the Midwest US and elsewhere.

George D. Jones III describes the fuel feed and storage system at Seaman Paper Co., Otter River, MA — June, 2008