

## Pulp and Paper

### Short-Term Boiler Rentals Provide Cost-Effective Solution to Scheduled Steam Plant Outage

Clearwater Paper, formerly Potlatch Corporation, operates a forest products facility in Lewiston, Idaho. Three divisions make up this facility: Wood Products; Pulp Mill; and Consumer Products. The name of each division well defines its role in lumber milling, pulp production and consumer product manufacturing, respectively. The latter division receives pulp from the Pulp Mill Division and converts it to parent rolls, which it subsequently makes into tissue. The Pulp Mill Division operates a multi-boiler steam plant that provides steam to all three divisions.

Each year, the Pulp Mill Division shuts down all operations for up to five days to perform routine and preventative maintenance on all production equipment. The Consumer Products Division is able to perform its equipment maintenance continuously and thus does not require a five-day shut-down period, but the steam plant that supplies process steam to the Division does. Process steam is needed, however, for the Consumer Products Division to continue production operations. To do so, a suitable temporary steam plant would be required. Any program involving a temporary steam plant would have to be both technically practical and cost effective, assuring a reasonable return on the required investment.

The facility piping was modified, making it possible to install two trailer-mounted boilers: a 70,000 lb/hr, 300 psig, low NOx unit; and a 40,000 lb/hr, 650 psig, low NOx unit. In addition, a trailer with a complete complement of auxiliary equipment was supplied. It included a deaerator, feedwater pumps, water softener, chemical treatment system and blowdown tank.

Because the personnel who operate the boiler in the Pulp Mill Division were fully occupied performing the maintenance on their division's equipment, boiler operators and maintenance technicians were also provided. Similarly, since this temporary installation was essentially a stand-alone steam plant, only fuel, water and electrical service were provided at the facility.



The necessary facility piping modification designs were prepared and the installation completed. The rental equipment was delivered, installed and brought on line. Production operations at the Consumer Products Division continued virtually without interruption when the Pulp Mill Division shut down its steam plant. Even though the temporary steam plant is normally required for only five days each year, return-on-investment calculations show a payout of less than 2.7 years, including all of the one-time facility modification costs.

#### Customer Profile

- Clearwater Paper
- Lewiston, ID
- In operation since 1927
- Manufacturer and supplier of tissue products

#### Supplied Equipment

- 70,000 lb/hr, 300 psig, low NOx boiler
- 40,000 lb/hr, 650 psig, low NOx boiler
- Chemical treatment system
- Deaerator and feedwater pumps
- Water softener
- Blowdown tank