

# Project Description



*Power Boiler Superheater Replacement  
Kimberly-Clark  
Everett, Washington*

## **Project Scope**

In 2004, Jansen Combustion and Boiler Technologies Inc. (JANSEN) was awarded the contract to design a secondary superheater (SSH) upgrade on the No. 14 Power Boiler that burns biomass fuel with natural gas as auxiliary fuel. The purpose of the upgrade was to minimize the rapid rate of erosion/corrosion that caused frequent unplanned outages. Steam temperature control during upset conditions was also a project goal.

The SSH configuration was changed to reduce the flue gas velocities and minimize erosion. In addition, the SSH tube material was upgraded to Type 310 stainless steel to better withstand the corrosion flue gases. The SSH is a horizontal arrangement with flue gas flowing vertically down through the unit. The design of the superheater had to take into account very restrictive construction access.

JANSEN was the prime contractor and provided project management, design, engineering, materials procurement, fabrication, delivery and installation. Installation of the superheater modification took place during the boiler outage in October, 2004.

## **Results**

The upgraded superheater has been in operation since its installation without tube failures that had plagued the original unit. The upgraded SSH met all its performance guarantees.

