

PROJECT CAPABILITIES



SUPERHEATER CORROSION PREVENTION



Excessive tube metal wastage in recovery and other waste fuel boiler superheaters due to fireside corrosion has often become troublesome as mills attempt to increase boiler firing capacity. Firing boilers at higher rates has, in some cases, led to higher final steam temperature and excessive superheater metal temperatures, which can accelerate corrosive metal loss. JANSEN has developed an engineering analysis approach that helps to predict where corrosion problems may occur and provides the means to design solutions to overcome these problems. The analysis includes collecting boiler operating data, obtaining process samples for chemical analysis, reviewing superheater geometry and metallurgy, and a comprehensive heat transfer analysis.

Scope of Service

- Prediction of tube metal temperatures to identify areas most vulnerable to corrosive attack.
- Identification of process parameters to maintain tube metal temperatures at safe levels, i.e., final steam temperature and pressure, attemperator water flow rates, firing capacity, flue gas conditions, deposit characteristics, etc.
- Allow redesign of superheater tube layout and metallurgy to avoid exposure of tube metal to excessive temperatures and heat fluxes.

Selected References (see next page)

Selected References

Boise Cascade Corporation - Rumford, ME
Georgia-Pacific Corporation - Zachary, LA
Great River Energy - Elk River, MN
Ketchikan Pulp Company - Ketchikan, AK
Kimberly-Clark Forest Products Inc. - Everett, WA
Kimberly-Clark Forest Products Inc. - Terrace Bay, ON
Maine Energy - Biddeford, ME
Mead Paper Corporation - Chillicothe, OH
Montenay Power - Miami, FL
Montenay Power - York, PA
Montenay Inc. - Burnaby, BC
Scott Maritimes Limited - New Glasgow, NS
Visy Pulp & Paper - Tumut, Australia
Westvaco Corporation - Covington, VA
Western Pulp Limited Partnership - Port Alice, BC
Western Pulp Limited Partnership - Squamish, BC
Wheelabrator Energy - Spokane, WA
Willamette Industries - Hawesville, KY