

1989 Title: **Capacity Upgrade of a 1965 B&W Recovery Boiler Through the Installation of a New Overbed Air System**

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ABSTRACT:

Skeena Cellulose, Inc. in Prince Rupert, B.C., operates two kraft recovery boilers to burn the black liquor solids generated from the production of an average of 1,285 bone dry (bd) tones of pulp per day (td). No. 5 Recovery Boiler is a Babcock & Wilcox (B&W) unit, installed in 1965, with a design solids burning capacity of 1.50 million kg of dry solids (ds) per day. No. 6 Recovery Boiler is a Combustion Engineering (CE) unit, put in service in 1978 with a design burning rate of 1.18 million kg ds/d. Both units were used close to the design capacities, with no room left for additional solids burning.

In a two-year project, Skeena Cellulose is planning to increase pulp production to an average of 1,500 bdt/d. The expansion includes additional digester, bleaching and machine capacity, and modifications to the liquor cycle and recovery boilers to handle the increased liquor flows.

The mill's target was to achieve burning of 1.63 million kg ds/d in No. 5 Recovery Boiler for 1989, with possible modifications to No. 6 unit in a later phase.

CES Jansen Engineering Ltd. was requested to assist the mill in achieving the increased capacity for the No. 5 Recovery Boiler. A plan was developed that included the following steps:

- Field test and performance evaluation.
- Definition of conceptual boiler modifications.
- Detail engineering.
- Boiler shutdown and construction.
- Start-up
- Upgrade evaluation.