

1989 **Title:** **An Overview of Recovery Boiler Performance Evaluations**

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ABSTRACT:

Concerns and problems in the operation of recovery boilers fall into four basic groups: capacity, safety, efficiency, and emissions. With changing economic conditions and enforcement of governmental regulations and restrictions, emphasis on any of these aspects for any particular unit may shift from time to time. Under ideal circumstances, a recovery boiler should meet at least the following conditions:

- Have sufficient capacity and ability to process black liquor so as not to limit pulp production.
- Maximize steam generation.
- Meet all environmental regulations and requirements.
- Present no uncontrollable hazard to life and property.

Those involved with the design, operation, and maintenance of these units know that it can be difficult to meet all of these requirements at the same time and on a continuous basis. Here we describe a number of engineering studies conducted to ensure on-going compliance with all of these objectives. The material presents an overview of typical recent recovery boiler performance evaluations and is selected from projects on studies of 30 recovery units operated in more than 25 different mills in the United States and Canada.