



1997 **Title:** **How to Detect and Eliminate Limitations in Recovery Boiler Capacity**

Authors: Allan R. Walsh, Ph.D., John F. La Fond, P.E. and Arie Verloop, P.E.

Presented: 1997 SCP Symposium, Ružomberok, Slovakia
1999 International Seminar on Recovery Boilers, Ružomberok, Slovakia

Ref. No.: TP1997C

ABSTRACT:

The maximum useable capacity of a recovery boiler is determined by the water wash frequency, corrosion rates, water circulation, char bed control, pollutant emissions, and the auxiliary equipment. Increases in recovery boiler firing capacity can often be accomplished through improved combustion.

Methods for accomplishing improved liquor combustion in recovery boilers include providing sufficient air to the lower furnace, using three levels of air injection, air jets that produce rapid mixing of fuel and air, and delivering coarse liquor sprays that are distributed evenly in the boiler.

These increases can be achieved without extensive modification of the convective sections of the boiler. Other benefits, such as reduced water wash frequency, reduced TRS emissions, and higher reduction efficiency, are also possible through combustion improvements.