

# PULP AND PAPER MACHINERY

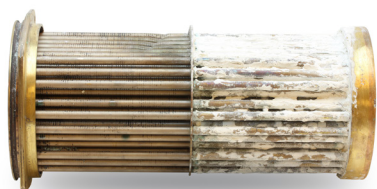
SOLUTIONS TO SCALE BUILDUP.



High tech paper and printing requires optimal performance.



Scale buildup causes efficiency loss and permanent damage.



After cleaning (left) and before cleaning (right).

## ScaleBreak Descaling Solution

Scale deposition occurs in all pulp and paper making processes. It is an unwanted occurrence that causes many operational problems such as plugging of equipment, increased utility costs, lost production due to downtime, corrosion, and product defects. For example, calcium scale deposits on a green liquor line recovery tank at a packaging mill increased so quickly, it effectively reduced a 4-inch diameter line I.D. to a 1-inch line I.D., and brought transfer pumps on the system rated for 260 gal/min down to 60 gal/min. Scale also acts as a major heat insulator and accounts for a 10% loss in efficiency of heat transfer in processes for every 1/16" thickness of calcium carbonate.

The large quantities of water used in the Pulp & Paper processes lead to the formation of scale deposits on mill equipment. This occurs even with the purest water and state-of-the art water treatment.

## “SCALE DEPOSITION OCCURS IN ALL PULP AND PAPER MAKING PROCESSES”

The occurrence and formation of scale deposits in various pulp and paper mill processes are far reaching and include:

- Scrubber Heat Exchangers
- Lime Kiln Scrubbers
- Scale Deposits on Liquid Evaporators
- Deposits in Kraft Digesters
- Kraft Green and White Liquors scaling
- Scale Deposits in Kraft Pulp Bleaching areas
- Scaling of Paper machines in deinking plants
- Scaling of Recovery areas and digesters

Cleaning inorganic scale in pulp and paper mills includes as part of on-going maintenance program the application of inhibited acid descalers such as Goodway's line of ScaleBreak products.