

WASTE HEAT PRE-EVAPORATION



FEATURES

- Removes 99% of the volatile TRS compounds from the black liquor
- Strips in excess of 85% of the methanol from the black liquor
- Virtually 100% turndown
- Minimal operator attention
- Forgiving during swings in production rates
- Tubular falling film or LTV technology is available

BENEFITS

The growing challenges for pulp mills in the years ahead are highlighted by concerns for reduced energy consumption and improved effluent control. This is often compounded with the difficulty of low grade waste heat utilization. Lundberg's Pre-Evaporation system is designed to meet this challenge.

The Pre-Evaporator can be incorporated in heat recovery systems for either continuous or batch digesters, concentrator systems, condensate stripping systems, or any other system with unused low grade heat. This heat is converted to additional evaporation capacity to help debottleneck an overloaded evaporator or make available another cost effective alternative for capacity increases.

Processing 100% of the mill's weak black liquor inventory in the pre-evaporation system removes most of the volatile TRS and methanol. This allows the process condensates from the multiple effect evaporators to be reused without the need for treatment.

CONTACT

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LUNDBERG'S AREAS OF EXPERTISE

BY-PRODUCT RECOVERY

- Tall Oil Soap
- Turpentine
- Acidulation
- Condensing
- Storage
- Storage

CHEMICAL HANDLING AND STORAGE

- Sulfur
- Caustic
- Acids
- Sulfur Dioxide
- Storage
- Vaporization

CHEMICAL GENERATION

- Sulfur Dioxide
- NSSC Pulping Liquor
- Sulfite/Bisulfite Pulping Liquor

EVAPORATORS FOR PULPING LIQUOR

- Multiple-Effect
- Strong Liquor Concentrators
- Pre-Evaporation
- Falling Film
- Vapor Recompression
- Crystallizer
- REX Technology

FOAM CONTROL

- Washer Filtrate
- Weak Liquor Storage
- Soap Skimming
- Foambreaker for Light Foam
- Soap Concentrator for Heavy Foam and Soap

HEAT RECOVERY AND UTILIZATION

- Blow Heat
- Pre-Evaporation
- Digester Heaters and Circulation
- Direct Contact Gas Coolers
- TMP
- Heavy Liquor Heaters
- Waste Heat Boilers
- Condensers
- Hot Water
- Steam Generation
- Systems

LUNDBERG CUSTOM EQUIPMENT

- Pressure/Vacuum Relief Valves (PVRV)
- Flame Arresters
- Jacketed Valves
- Lundberg Soap Separator/Soap Skimming Rake
- Heat Exchangers
- SO₂ Gas Fans
- Heavy Liquor Heaters

POLLUTION CONTROL

- Black Liquor Oxidation
- Condensate Stripping
- Noncondensable Gas
- Direct Fired Oxidizer (DFO)
- Plywood Industry
- Regenerative Thermal Oxidizer (RTO)
- Wet Electrostatic Precipitator (ESP)
- Weak
- Steam
- TRS
- Collection
- Strong
- Heat Exchangers
- Strong
- Air
- MeOH / BOD
- Incineration
- Dilute
- Strong
- Air
- COD
- Scrubbers
- SOG
- Steam Tunnel Condensate Evaporator
- Regenerative Catalytic Oxidizer (RCO)

SPECIAL SYSTEMS

- White Liquor Oxidation
- Sulfur Addition – Kraft Liquor
- Reausticizing – White Liquor
- Ash Treatment Systems – Saltcake
- Air
- Molecular Oxygen

TURNKEY

- Engineering
- Complete EPC