

HEAVY LIQUOR HEATER



FEATURES

- Long run times between washes allow them to be matched with boiler washings
- Liquor recirculation is used to minimize scaling
- Enhanced flow patterns for minimal power requirements
- Excellent turndown
- No additional pressure drop on the existing pumps

CONTACT

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BENEFITS

Heavy liquor heaters provide indirect heating of kraft black liquor prior to combustion in the recovery boiler. By using indirect heating rather than the direct addition of steam, the liquor is not diluted with the steam condensate. As a result, the mill may be able to reduce capacity on an overloaded concentrator, or may increase steam production in the recovery boiler due to the higher heating value of the higher solids liquor. Furthermore, the system provides more precise temperature control, providing a constant viscosity to the liquor guns.

Lundberg pioneered the design and use of heaters for the indirect heating of the liquor prior to introduction into the recovery boiler. Originally these systems included two separate heaters; one heater was in service with the other on wash. Our experience has shown that a spare heater is normally not necessary. If a reliable backup, typically in the form of the existing direct steam heater, is available for the short wash period, a spare heater is not required.

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

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
- Systems
- Steam Generation

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
- 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