The Perfect Temperature. Every TIme.

hydro THERMAL®

FLUID HEATING

in the PULP AND PAPER INDUSTRY

The Perfect Temperature for the Pulp and Paper Industry

Hydro-Thermal Corporation is the global leader in Direct Steam Injection (DSI) fluid heating systems for paper production. We harness the power of steam to deliver ultra-precise and dependable heating solutions that optimize temperature control, increase energy efficiency, and minimize maintenance costs. Backed by our 100% performance guarantee, we help you achieve the perfect temperature every time.

Our heating systems operate in pulp and paper mills worldwide to heat everything from water to medium consistency pulp stock. Direct steam injection saves time, space, energy, emissions, and bottom-line dollars—from log deicing to bleaching, to starch cooking and more.

On-Demand De-Icing

» Heat water on demand to de-ice logs on barking drum conveyer

Precise Control of Digester Temperature

» Precisely trim circulating liquor temperatures without scaling or fouling

Hydro-Pulper Efficiency

» Precisely control temperature to enhance efficiency
» Reduce maintenance requirements compared with spargers

Faster Chlorate Unloading of Rail Cars

» Provides fast heat for rail car chemical unloading
» Eliminates scaling, fouling and plugging

Faster Machine Start-up

» Replace slower, inefficient spargers to heat whitewater
» High velocity steam circulates whitewater, eliminating external circulation pumps

Faster Dispersal of Cooking Liquors

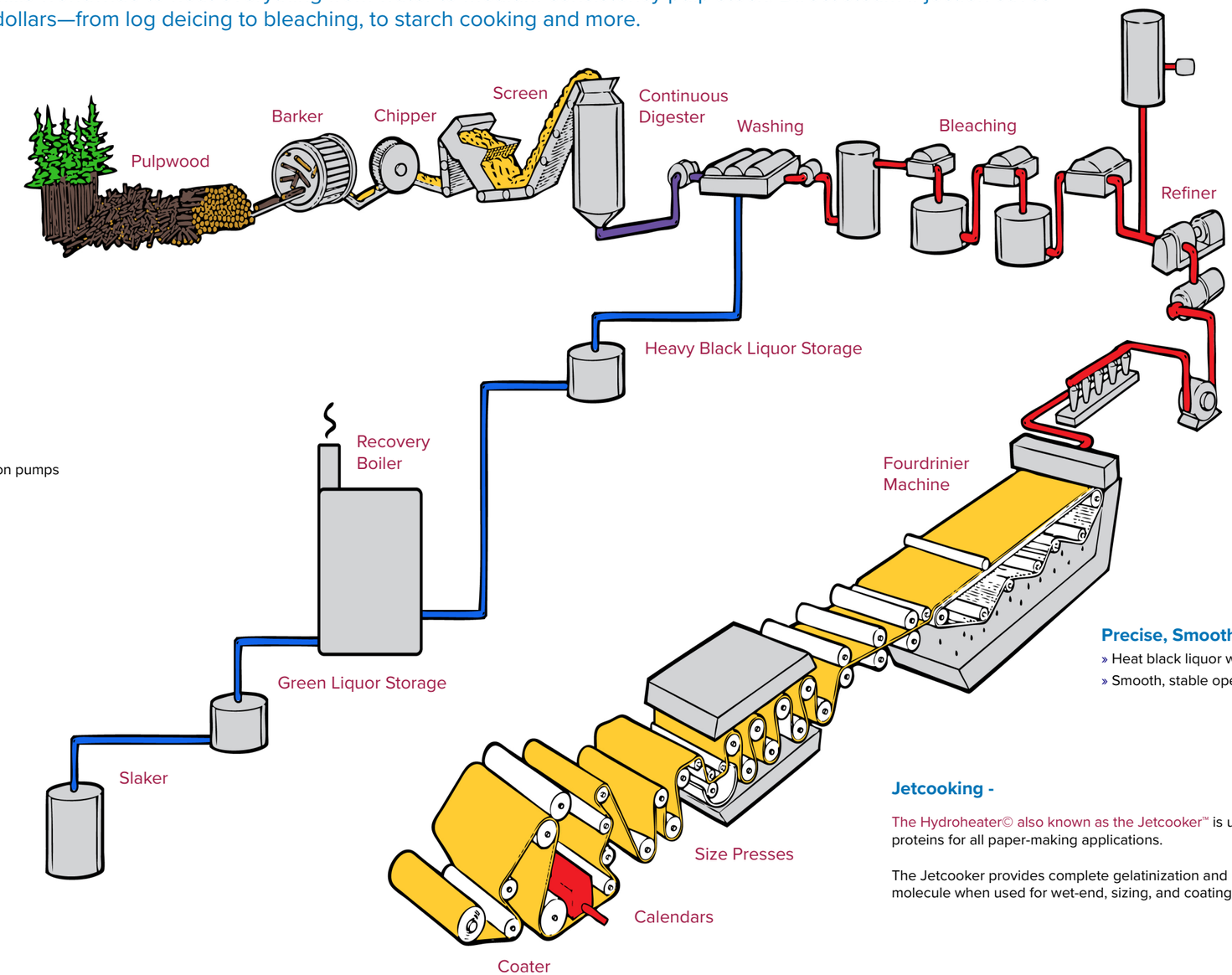
» Optimum temperature control of shower water

Improve Slaker Efficiency

» Precisely control green liquor temperature
» No scaling or fouling
» Minimize maintenance

Whitewater

» Demonstrated energy efficiency
» Temperature accuracy at varying flow rates
» Simplicity and small footprint (use low pressure steam)



Bleaching Effectiveness

» Lower chemical costs and improve brightness by directly heating stock to optimum temperature. 120°F - temperature provides efficient drainage and fiber alignment.

» More effective bleaching is achieved when heated water is used to dilute 15-20%consistency stock prior to the gaseous chlorine stage

» Maintain optimum wash water temperature, increasing the solubility of the chemicals to prevent contamination of succeeding stages

Improve Drainage

» Heat secondary fiber at 6%

» High velocity steam jet helps breakdown and disperse contaminants

» Precisely control whitewater temperature for stock dilution to improve drainage and sheet formation on the Fourdrinier wire

» Increase production rates

» Maintaining precise limits on shower water temperatures ensuring clear wire openings

Precise, Smooth Black Liquor Heating

» Heat black liquor with solids over 70% without fouling or plugging

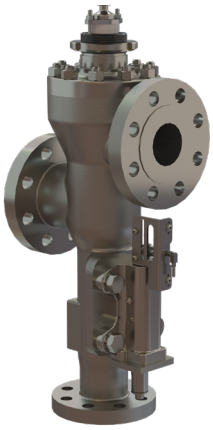
» Smooth, stable operation even at reduced liquor flow during boiler startup

Jetcooking -

The Hydroheater© also known as the Jetcooker™ is used to cook starches and proteins for all paper-making applications.

The Jetcooker provides complete gelatinization and uniform cooking of the starch molecule when used for wet-end, sizing, and coating applications.

Hydro-Thermal Products for Pulp & Paper Production



Solaris

NOH

Jetcooker/Hyrdoheater®

- Light to medium duty applications
- All pulp bleaching sequences (EOP, EO and PO)
- Thorough starch cooking for better sheet formation

EZ Heater®

- Instant hot water on demand
- Central hot water systems

EZ Skid™

- Turn-key system — simply plumb in water, steam and air
- Pre-engineered or made to highly complex specifications

Solaris® and NOH® Heaters

- Ideal for thick stocks up to 13% consistency
- In-line mounting, Straight-through design
- Up to 25,000 GPM [5,678 m^3/h]

Jetcooker/Hydroheater™ Starch Cooking Skid

- From starch makedown through cooked starch storage tanks
- Consistent cook temperature
- Streamline production flow
- Increase output & optimize adjustable shear

Research & Development Testing Facilities

Our on-site testing lab provides the perfect opportunity to evaluate real-world process parameters and conditions for your unique applications. Customers have full access to our lab facilities and skid systems available for trials.

Need more information about Hydro-Thermal products?
Go to www.hydro-thermal.com or
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