

NEWS RELEASE

Heat-Activated Heat Pump Boosts Pulp Mill Energy Efficiency

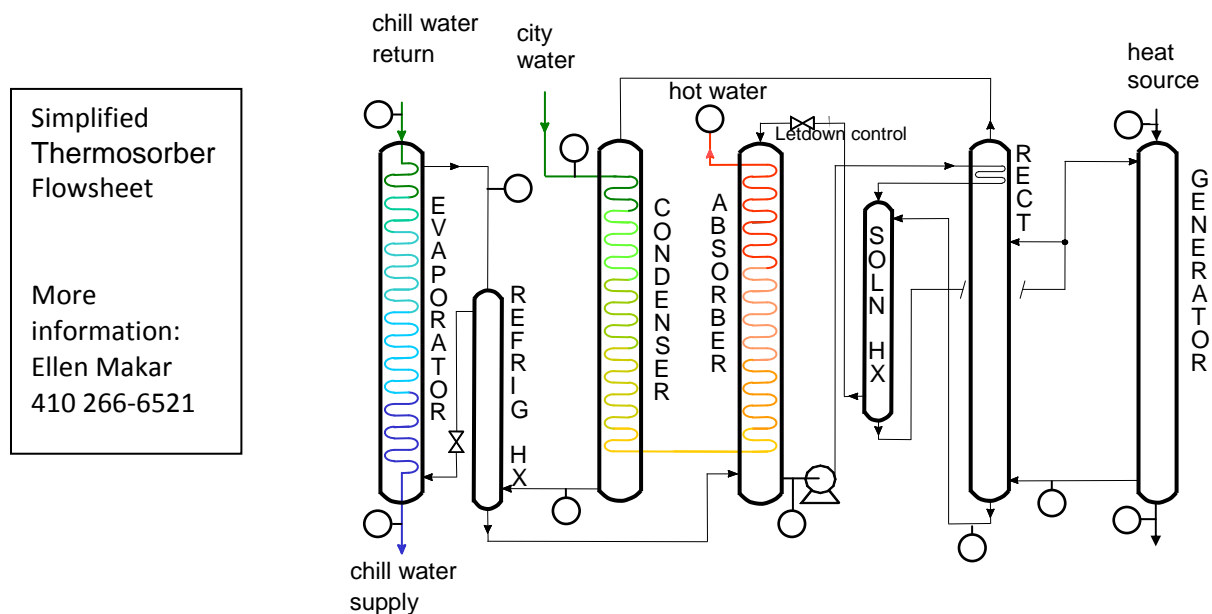
Annapolis, Maryland - Energy Concepts Company has commissioned a Thermosorber heat-activated heat pump/chiller at the Domtar Pulp and Paper Mill in Rothschild, Wisconsin.

This Thermosorber provides 150 tons of refrigeration to chill 180 gpm of 55°F water down to 35°F. The cold water is used as chilled process water in the mill. Simultaneously the Thermosorber heats 320 gpm of 95°F water to 130°F, for use as heated process water in the mill. The Thermosorber is powered by 4,000 lb/hour of 38 psig steam that is extracted from a steam turbine.

Wisconsin's Focus on Energy program provided financing for the project. The project was funded through Focus's Emerging Technology program using a capital lease structure and a grant. Domtar will pay for the project through actual measured energy savings.

The Thermosorber saves both electricity and natural gas. There is a 150 kW reduction in refrigeration compressor demand, minus the 12 kW demand of the Thermosorber, for net 138 kW electric savings. On the heating side, the Thermosorber supplies 5.2 million BTU/hour of hot water heating, including 1.8 million BTU/hour from heat pumping. That equates to a reduction of 22 therms per hour of supplemental natural gas firing to the steam boiler. The heating efficiency is over 150% (steam heat to hot water heat).

The Thermosorber provides major energy savings in any application that requires simultaneous heating (below 160°F) and chilling. It has been demonstrated at poultry processing plants and a meat packing plant. Other promising applications include industrial laundries, beverage plants, dairies, textiles, industrial dryers, hospitals, hotels, swimming pools, ice rinks, and space heating.



THERMOSORBER AT DOMTAR MILLS

