

ICR0532

ThermoSorber Chiller/Water Heat Pump

Donald C. Erickson, President, Energy Concepts Co., 627 Ridgely Ave., Annapolis, MD 21401
Tel.: 410-266-6521, Fax: 410-266-6539, email: enerconcep@aol.com

ABSTRACT

The ThermoSorber™ produces useful chilling and heat-pumped hot water at the same time. It does this by making use of the high temperature glide capability of the ammonia-water absorption working pair. Low temperature chilling heat in the range of -5°C to $+5^{\circ}\text{C}$ is upgraded to commercial hot water at 55°C to 70°C . The heating COP ranges from 1.5 to 1.7. Thus, for every unit of heat input, 1.6 units of hot water and 0.6 units of chilling are obtained. Capacities range from 100 kW to 2 MW hot water output, and 35 kW to 700 kW chilling output. An initial demonstration plant is described, installed at a food processing facility in California.