

# SlurryICE PROCESS COOLING APPLICATIONS

Slurry-ICE is a crystallised water-based ice solution which can be pumped and offers a secondary cooling medium for thermal energy storage while remaining fluid enough to pump. It flows like conventional chilled water whilst providing 5 ~ 6 times the cooling capacity.

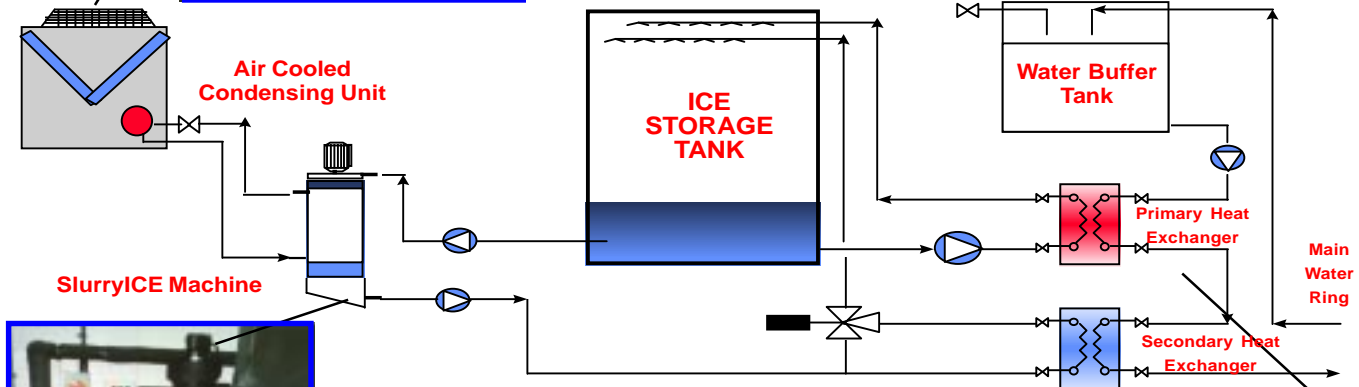


## CASE STUDY ;

Installed system consists of a 10 kW (3TR) remote condenser SlurryICE machine and an associated 6 m<sup>3</sup> ice storage tank to satisfy a peak load of 20 kW. Ice machine is designed to operate until the tank is full. The energy stored over off-peak / low load periods is later utilised to satisfy the peak loads. Hence, the installed refrigeration machinery is 1/2 of an equivalent capacity of a conventional direct cooling system.



Large chilled water volumes are required to maintain the quality of food processing / washing and the stored energy during production periods is recovered by circulating solution within the primary plate heat exchanger and the control system also diverts SlurryICE to the secondary plate heat exchanger in order to provide 0 ~ 1 C water leaving temperatures.



## BENEFITS;

### COST EFFECTIVE INSTALLATION

Smaller pipework, flexible storage tank coupled with smaller pump sizes result in lower initial installation cost.

### GREEN SOLUTION

Reduced refrigeration machinery leads to reduced refrigerant volume.

### REDUCED RUNNING COST

Reduced refrigeration machinery results in reduced maximum demand and availability charges coupled with night time low ambient and off-peak electricity prices offers unmatched overall running cost savings

### QUICK RESPONSE

Fine ice crystals offers unmatched heat transfer efficiency. Hence, large peak loads can be handled without effecting the system leaving temperatures.

### FLEXIBLE SYSTEM

Any future capacity or change of operational patterns can be easily handled without the need for additional refrigeration machinery.

### FULL STAND-BY CAPABILITY

The stored energy can be used to operate the process in case of break down or regular maintenance shut downs.



**TECHNICAL SUPPORT** [www.epsltd.co.uk](http://www.epsltd.co.uk)



PS offers full system design support to assist in proper selection and integration into existing or new installations as part of our customer commitment. Please consult our technical sales team for your specific application.

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