

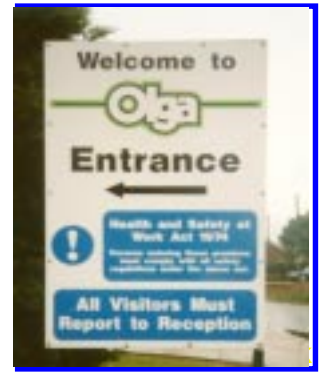
# SlurryICE RAPID COOLING APPLICATIONS

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.

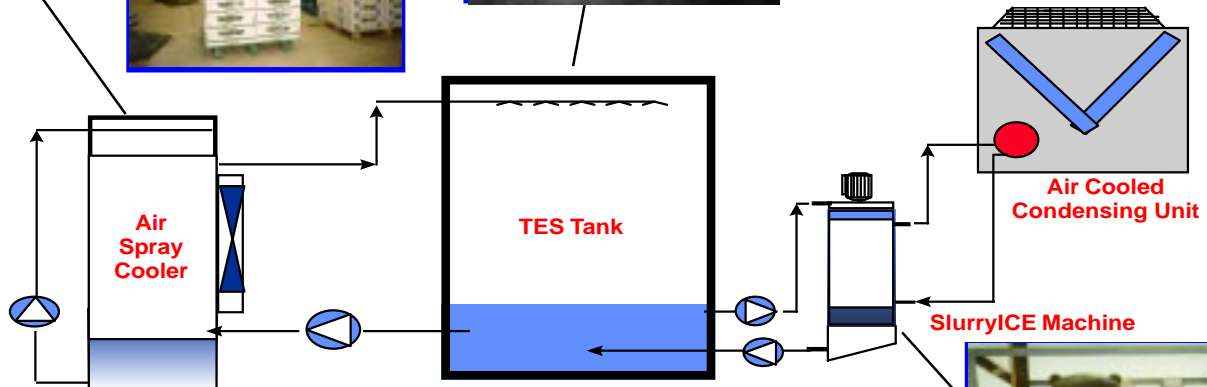
## CASE STUDY ;

Installed system consists of a 88 kW (25TR) remote condensing SlurryICE machine and an associated 10 m<sup>3</sup> ice storage tank to satisfy a peak load of 180 kW. Ice machine is designed to operate until the tank is full or during rapid cooling periods in order to introduce ice into the cooling circuit.

The stored energy over off-peak / low load periods is later utilised to satisfy the short & sharp peak loads. Hence, the installed refrigeration machinery is 1/3 of the equivalent capacity of a conventional direct cooling system.



Harvested fresh vegetables are subject to rapid cooling within the cold storage facility whereby the energy stored during off-peak periods is recovered by circulating solution within the air spray heat exchanger in order to provide 0 ~1 C air off temperatures during the rapid cooling periods.



## BENEFITS;

### COST EFFECTIVE INSTALLATION

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

### 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

uture 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.

### GREEN SOLUTION

Reduced refrigeration machinery leads to reduced refrigerant volume

## 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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