

# SlurryICE SEA FOOD 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.



Isle of Harris  
Scotland

## CASE STUDY ;

The installed **Prawn Cooling 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 **47 kW**. The ice machine is designed to operate until the tank is full. The energy stored over off-peak periods is later utilised to satisfy the peak loads. Hence, the installed refrigeration machinery is less than 1/4 of an equivalent capacity of a conventional direct cooling system.

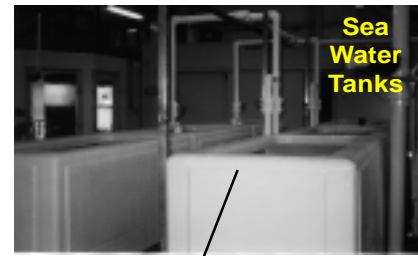


SlurryICE Storage Tank

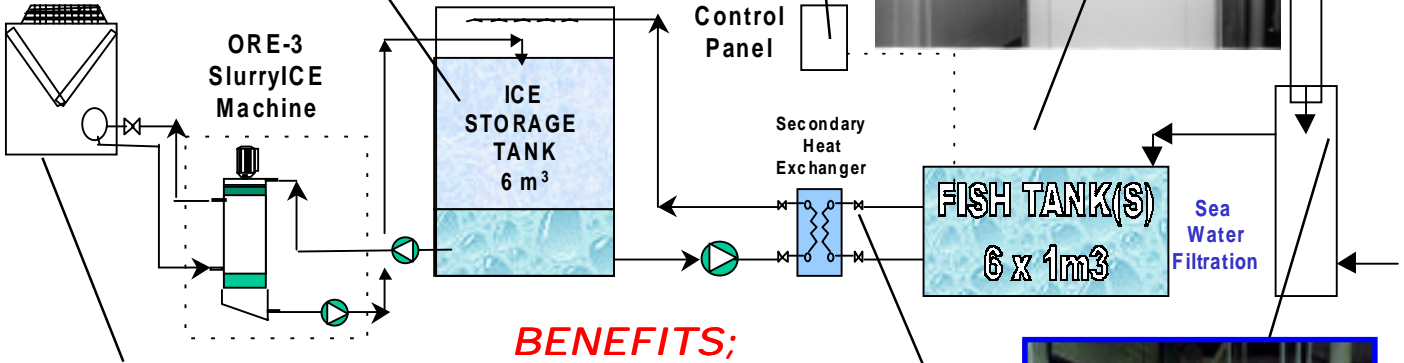
Large chilled water volumes are required to maintain the quality of live prawns in sea water holding tanks and the stored energy is utilised to bring the tank temperature rapidly down to 8 C initially via a plate heat exchanger. A special control system brings down the sea water temperature in a step by step fashion down to 4 C. This close control is vital to maintain the quality of the catch.



Control Panel



Sea Water Tanks



## 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 initial cooling loads can be handled without compromising the product quality.

### 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.



SlurryICE Machine & Sea Water Filtration



5HP Condensing Unit

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



EPS 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.

Unit 18, The Business Village,  
Wexham Road, Slough, Berkshire,  
SL2 5HF, UNITED KINGDOM  
Tel. :+44-(0)1753-692212  
Fax. :+44-(0)1753-692457