



Flaked ice is ultra cool

By Nicola Barnes

Exremely thin flakes of ice (between 1.5mm and 3mm) relative to their surface area, means they can cool fish much faster than slush or other ice products. That is the premise behind the Geneglance range of flake ice systems that is making continuing inroads to the chilled fish market.

Robbie Hunt, general manager for Refrigeration Engineering Co, which custom builds and installs the ice systems, says fish must be chilled as soon as it is caught to 0°C.

"With no break in the cold chain, its shelf life is extended considerably," Robbie says. "Because flake ice always melts at 0°C, it can maintain fresh fish at that temperature without freezing it."



Refrigeration Engineering (Components) has been developing flake ice solutions to fishers and fish processors throughout the Pacific for many years. Part of the Realcold group of companies, it is also a network partner of French-based Geneglance International, the world's largest manufacturer of commercial and industrial ice systems.

Among the advantages of flake ice is that it is slightly sub-cooled. The ice is dry with a high heat absorption capacity.

"Its cooling properties are far superior to a humid melting ice and can keep fish cool, moist and attractive for a longer time.

"The 'ice only' feature also means that the latent heat, the principal source of the cooling energy, is 100 percent available so that the dry flake ice at -6°C works far more effectively than wet ice."

Flake ice production occurs inside a jacketed evaporator pressure vessel, where water is circulated from the sump by means of an electric water circulation pump.

This water runs freely down the inner wall of the evaporator cylinder where it is frozen by the refrigeration effect. A thin coat of ice is then harvested by means of a helical reamer where ice falls through the cylinder either via a hopper or screw conveyor or directly into the ice storage area.

Robbie says the attraction of installing ice machines on board ship is obvious: there is no need to choose ports with ice-making facilities, no loading time, the ice is produced enroute when needed and is always fresh.

Fishers need to make the choice between using seawater or fresh water to generate the ice.

INSULATED PACKAGING SOLUTIONS



crayfish, snapper, filets



oysters, cockles, mussels



30kg-50kg chilled fish

- 1 Latest technology & design for: Smarter, stronger, lighter & cost effective packaging.
- 2 Approvals: NZ Fishing Standards, USA-FDA 21 CFR, Air NZ, Qantas Standards.
- 3 Custom design & moulding.
- 4 Product Mix: Expanded Polystyrene Bins, Plastic trays, Plastic Liners, Leakproof Waxed cartons.
- 5 All packaging one stop ex stock or immediate delivery.

AUCKLAND
139 Roscommon Rd,
Manukau City.
Phone 09-278-7175

WELLINGTON
115 Gracefield Rd, Lower Hutt.
Phone 04-586-0254

STYROBECK PLASTICS

"In general," says Robbie, "seawater flake ice machines are well suited to fishing vessels that provide frozen product, while the fresh water machines are better suited to vessels providing fresh fish."

Geneglace has five different on-board ice machines – three fresh water and two sea water models, ranging in capacity from 1000 to 5500kg per day. They are designed to operate with up to 30° of heeling without the circulated water overflowing. The water reservoir is a deep closed tank with a ball cock.

Robbie says Geneglace ice systems perform to specification even in the harshest conditions.

"While there are other ice generating systems on the market, the Geneglace system is unique in that there are no rotating refrigeration components and therefore no seals that can leak or parts that can cause problems.

For more information about the Geneglace range and flake ice systems, contact Realcold at: tech@realcold.co.nz, phone (09) 526 5700 (technical department). ■

"With no break in the cold chain, [fish] shelf life is extended considerably, Because flake ice always melts at 0°C, it can maintain fresh fish at that temperature without freezing it."



Onboard ice making facilities from Geneglace offer plenty of convenience for fishers.



New Zealand's largest Refrigeration Wholesaler

Providing for the Fishing Industry

- Geneglace Flake Ice Machines – on board and land based models
- Blast Freezers
- On Board Refrigeration Units
- All Commercial and Industrial Refrigeration

REALCOLD



Refrigeration Engineering Co. Ltd.
0800 11 66 90 tech@realcold.co.nz