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## Cooling system nets 25% energy savings



Star Refrigeration has designed a bespoke multi-temperature refrigeration plant for seafood processor Braehead

A Scottish seafood processor has cut over 25% from its annual energy bill by investing in a high efficiency cooling system from **Star Refrigeration**.

**Braehead** (SFO Enterprises), a seafood processing company run by the **Scottish Fishermens Organisation** (SFO), produces high quality whole, fresh or frozen Scottish langoustine. It was looking for an energy efficient and environmentally conscious cooling system to replace ageing refrigeration plant, which operated on R22 gas, at its langoustine processing facility in Fraserburgh.

Star designed a bespoke multi-temperature refrigeration plant, which supplies a total of 460kW of cooling to three cold store chambers, an in-line freezing tunnel and a blast freezer. Star handled the removal of the existing R22 plant and installed a single stage economised pumped circulation cooling system, with two Star compressors and a surge drum/economiser package, all operating on natural ammonia refrigerant. The plant provides 270kW of cooling for the three cold store chambers (-25°C), 190kW for the freezing tunnel (-40°C) and 65kW of cooling for the blast freezer (-35°C).

## Reciprocating retorts installed

**Allpax** Products' Gentle Motion reciprocating retorts have been installed for the first time in a food plant in Europe.

Being used on shelf-stable soup products packed in flexible containers, the reciprocating agitation process at the new installation reduces processing time on average from five to 40% and consequently increases plant capacity. Reduced cook time also improves a shelf-stable product's taste, texture, and appearance.

Gentle Motion agitation is a high capacity retort process designed for pouches and bowls that are oriented horizontally in a retort rather than vertically as are cans,

bottles, and jars. The back-and-forth reciprocating motion of the retort baskets in a Gentle Motion retort produce waves of heat flowing longitudinally through the package. This process is ideal for soups and sauces that have low-to-moderate viscosity and moderate-to-high liquid and particulate content. Each Gentle Motion retort can have up to six full-sized baskets and can be loaded and unloaded via an automated system.

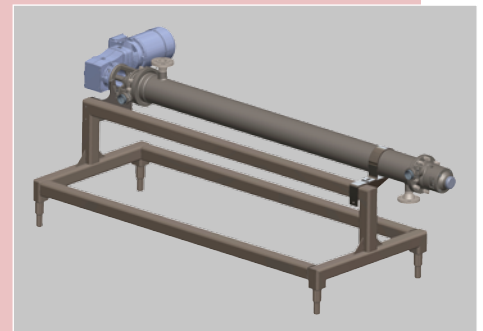
Recently, Allpax researched the impact of Gentle Motion agitation on 15 foods packaged in various microwaveable pouches and bowls (see FBI October 2013 p39).

## New scraped surface heat exchanger

**SPX** has developed a new light duty scraped surface heat exchanger (SSHE) designed for high reliability, efficient performance and economic operation for a wide range of SSHE applications from thin fluids, through acidic juices, shelf-stable dressings and crystallization products.

stainless steel frame and is easily extendable for up to six cylinders to match changing process needs. A wide range of options for shafts and blades are also available to suit applications across the dairy and other food and beverage industries.

The standard model operates at up to 20 bar and an optional model which operates at 25 bar is also available. The unit is available in vertical and horizontal configuration. The vertical unit has a rotatable cylinder for compact design and easy maintenance. The horizontal unit offers a rigid



SPX's new scraped surface heat exchanger suits light duties

## Dehydrofrozen vegetables agreement

**EnWave** Corporation has granted **Bonduelle** the exclusive global rights to develop and produce dehydrofrozen (DHF) vegetables using the company's Radiant Energy Vacuum (REV) technology.

DHF vegetables are partially dehydrated and then quickly frozen. The purpose of this process is to retain the nutritional content, colour, flavour and most importantly texture when cooked from the frozen state. When perfected, DHF vegetables can yield product qualities that are similar to fresh product. The

lower moisture levels inherent in DHF products reduce the amount of 'weeping' that typically occurs when cooking frozen vegetables.

Among other developments in the agreement, EnWave and Bonduelle will collaborate on the design of a commercial-scale quantaREV machine for DHF vegetable applications with a target capacity in the range of 3-4 tonnes finished product per hour.

