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## Seafood Market – Industrial Gas Applications

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With increasing worldwide demand for seafood, both fish farms and wild-caught producers are facing greater challenges. Managing growth cycle, obtaining high yields, maintaining quality and yield through-out post-harvest processing, packaging, and shipping (all while driving down costs and increasing efficiency) are of great concern.

Linde has worked with the seafood industry providing a broad variety of industrial gas based technologies to address these many issues. As a trusted partner, Linde works hand in hand with operations, quality assurance and product development teams to provide solutions to specific challenges. Linde has developed expert knowledge of how industrial gases can: reduce fish mortality; increase production yield; speed up cycle time; improve water quality; and lower overall production and distribution costs.

Linde technologies are used to:

- Manage oxygen levels in water to reduce fish mortality
- Quickly freeze to control finished product quality and reduce yield loss
- Provide manufacturing flexibility
- Extend shelf life
- Reduce overall shipping weight and transportation cost
- Improve the quality of waste water

Linde can help you improve your bottom line and deliver the highest quality possible.

### All this with our Total System Approach

Linde's Total System Approach underscores our commitment to customers. We harness the power of Linde's diverse resources while delivering personalized service through a dedicated project lead. We start with an in-depth assessment of your facilities which allows us to better understand your specific challenges. Experienced engineers then develop customized solutions to address your needs. Linde designed equipment, sourced directly from Linde operated and authorized manufacturers, can be installed and tested by Linde personnel. By involving all Linde Food Technologies' resources under the guidance of a single point of reference, you get timely updates, access to resources such as the Linde Food Laboratory, quality engineering, technical support, reliable installation and trouble-free start-up of your new system.

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- Aquaculture Oxygenation Systems** → A broad range of system offerings to deliver precise quantities of oxygen to support production in hatcheries to inland fish farms to off shore holding pens.
- Food Freezing Equipment** → A variety of cryogenic equipment that can chill or fully freeze fish products quickly for the best product quality.
- Cryogenic Mixers** → Whether you are making surimi or burgers, cryogenic injection in your mixer can provide improved yield and throughput.
- Modified Atmospheres** → MAPAX® gas mixtures improve shelf life.
- Dry Ice** → Dry ice for transportation and storage maintains temperature and can reduce shipping weight.
- Waste Water Treatment Systems** → Systems for direct oxygen injection can reduce odors, reduce space requirements and improve the operation of your waste water treatment plant.  
→ Carbon dioxide can be used to manage pH.
- Cryogenic Transport Refrigeration** → Nitrogen and carbon dioxide provide alternative refrigeration systems that can eliminate noise, and diesel emissions.