

Highly Efficient, Energy-Saving Food Freezing System

Food Freezing System Using the Natural Refrigerants, CO₂/NH₃, in Food Processing Factory

A freezing system that uses NH₃, whose GWP is 0, as the refrigerant was selected to freeze cooked foods in the construction of a food processing factory.

NH₃, existing naturally, neither destroys the ozone layer nor has climate impact. The use of CFC, HCFC, or HFC was avoided and energy-saving was achieved by reducing electricity consumption through the use of a highly energy-efficient freezing facility.

In the food product area, odorless and harmless CO₂ is used as the secondary refrigerant, achieving a safe, highly efficient system based completely on natural refrigerants.



AQLI FOODS Yubari Factory



Company: AQLI Foods Yubari Factory

Location: 510-11 Numanosawa, Yubari City, Hokkaido Pref., Japan

Manufacturer: Toyo Engineering Works, Ltd.

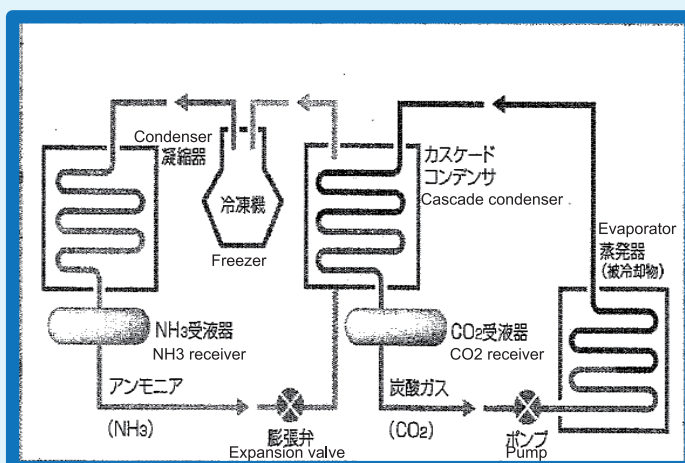
Equipment: CO₂/NH₃-based freezing system

Use: Freezing of cooked foods

Installation cost: 189.3 million JPY

Annual electricity consumption: 536,643 kWh

Freezing capacity : 229.48 kW



Schematic Plan

《Energy-saving》

- Energy consumption reduction (converted in electricity)
246,343 kWh/year (204.7 tCO₂/year)



NH₃ Cooling Machine

This project was MOEJ's model project in FY 2007 for the promotion of the introduction of energy-efficient equipment using natural refrigerants and other alternative refrigerants.