

Highly Efficient System Based on NH3 and CO2 Refrigerant

Latest Cooling System for Logistics Center

24-hour operation logistics center demonstrating both “safety” and “energy efficiency”.

At the logistics centers of Japanese Consumers' Cooperative Union (CO-OP), the lighting inside all the centers has been replaced with LED and is equipped with a sensor system that turns on and off the lighting automatically.

A latest freezing system based on NH3/CO2 is used in which a small quantity of NH3 is charged, addressing safety concerns.

In addition to the renewal of the cooling system, photovoltaic panels of 600 kW were installed on the entire roof for renewable energy use.



CO-OP

Company: Japanese Consumers' Cooperative Union

Location: 1-190 Minogochi Hongo, Onomichi City, Hiroshima Pref. Japan

Area: 18,118 m² (total floor area)

Facility: 24-hour operation logistics center

Equipment:

(-25 °C) NH3/CO2 cooling system

(+5 °C) NH3/CO2 cooling system

(+5 °C) dehumidifying and floor heating system



Latest logistics center with photovoltaic system

«Energy-saving»

○Energy consumption reduction (converted in electricity)

374,024 kWh/year

«CO2 emission reduction»

○CO2 emission reduction (energy-source CO2)

234.9 tCO2/year (electricity: 0.555 kgCO2/kWh)

This project was MOEJ's model project in FY 2009 for the promotion of the introduction of energy-efficient equipment using natural refrigerants and other alternative refrigerants.