



"Cold Storage For Export Commodity" used for freezing and storage tuna fish from the sea. Temperature inside room of cold storage conditioned -40°C and relative humidity 95%. Capacity of cold storage planned can freezing and storage 100 Ton tuna fish with dimension of room is (20 m x 20 m x 7 m)

Room of Cold Storage use 2 unit machine refrigeration as main unit and 1 unit as preparation unit. Every unit machine refrigeration can condition cold storage room on -40°C with cooling load is 220,915 kW.

Construction of cold storage made from sheets that connected between other to the other. That's sheet made from aluminum on the out side sheet and polyurethane on the inside sheet. Cold storage room use ducting for supply and return air from evaporator to room and the opposite.

Refrigeration system use steam compression system with flash intercooler and refrigerant use PETROZON Rossy 22 as working fluid. According, calculation of refrigeration cycle we get rate work of compressor low pressure is 34 hp, compressor high pressure is 75 hp, heat rejected condenser is 300.846 kW and COP system is 2.8388.

In the planning cold storage, evaporator use direct expansion with forced convection and construction is finned evaporator. Condenser use shell and tube heat exchanger with water cooler. Compressor use piston semihermetic and expansion valve use expansion thermostatic valve and use the other component as support component.