

REFRIGERATION APPARATUS AND
TEMPERATURE REGULATION SYSTEM

ABSTRACT

5 A refrigeration apparatus 10 comprises a high-
temperature-side refrigeration circuit 20 and a low-temperature-
side refrigeration circuit 30. A water cooler 38 is provided
between a compressor and a condenser of the low-temperature-
side refrigeration circuit 30. The refrigeration apparatus 10
10 performs an operation in such a manner that the following
relationships are satisfied, " $0.25 \times (CL+PA) \leq CW \leq 0.4 \times$
 $(CL+PA)$, and $0.6 \times (CL+PA) \leq CH \leq 0.75 \times (CL+PA)$, and $0.5 \times$
 $PA \leq CW$, and $F1 \leq F2$ ", wherein CL (Kw) represents a
refrigeration capacity of an evaporator of the low-temperature-
15 side refrigeration circuit 30, PA (Kw) represents compression
power of a compressor of the low-temperature-side refrigeration
circuit 30, CW (Kw) represents a cooling capacity of the water
cooler 38, CH (Kw) represents a refrigeration capacity of an
evaporator of the high-temperature-side refrigeration circuit 20,
20 F1 (Kg/hour) represents a refrigerant circulation rate of the high-
temperature-side refrigeration circuit 20, and F2 (Kg/hour)
represents a refrigerant circulation rate of the low-temperature-
side refrigeration circuit 30.

Fig. 1