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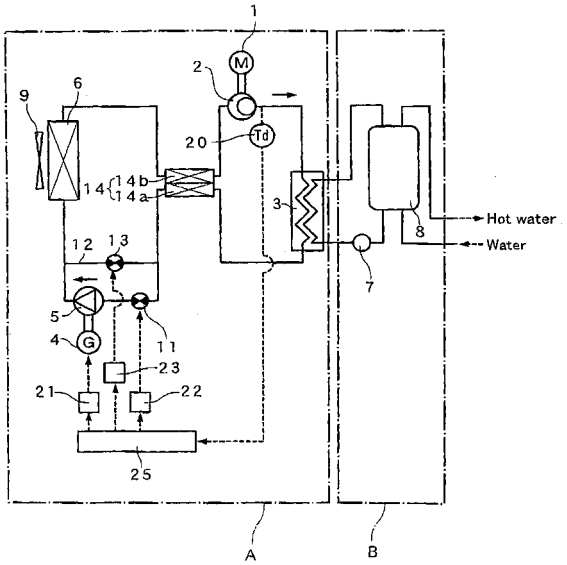
(54) Refrigeration cycle apparatus

(57) In a refrigeration cycle apparatus having an expansion mechanism whose number of revolutions can be changed independently from the number of revolutions of a compressing mechanism, it is an object of the invention to adjust a circulation amount of a refrigerant flowing into the expansion mechanism in a wider range without deteriorating the reliability of the expansion mechanism, and to operate the refrigeration cycle apparatus efficiently. The refrigeration cycle apparatus comprises a compressing mechanism 2, a heat source-side heat exchanger 6, an expansion mechanism 5 which collects power and has the number of revolutions that can be changed independently from the number of revolutions of the compressing mechanism 2, a utilizing-side heat exchanger 3, and a pre-expansion valve 11 for decompressing a refrigerant flowing into the expansion mechanism 5. With this refrigeration cycle apparatus, when the high pressure-side pressure can not be adjusted to a preferable pressure without bringing the number of revolutions of the expansion mechanism 5 out from its using range, the high pressure-side pressure can be adjusted by operating an opening of the pre-decompressor. Therefore, the refrigeration cycle apparatus can be operated efficiently without deteriorating the reliability of the expansion mechanism.

Fig. 1



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EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
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