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(54) Title: AIR CONDITIONING SYSTEM

(57) Abstract

An energy conserving air conditioning system having a superior dehumidification capacity has been developed, by raising the processing temperature of regeneration air for regenerating a desiccant material in a desiccant-assisted air conditioning system. The air conditioning system comprises: a process air passage (A) for flowing process air; a regeneration air passage (B) for flowing regeneration air; a desiccant device (103) which can be selectively communicated with either the process air passage or the regeneration air passage; and a heat pump device for supplying a heating heat for regenerating the desiccant device (103) to the regeneration air. The heat pump device has a compressor (260) and

workable on process air as a low temperature heat source and regeneration air as a high temperature heat source. Superheated vapor of a compressed refrigerant flowing out from the compressor (260) is used to heat a portion of regeneration air in the regeneration air passage upstream of the desiccant device (103).

