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(54) Title: LIQUID-COOLED HEAT EXCHANGER IN A VAPOR COMPRESSION REFRIGERATION SYSTEM

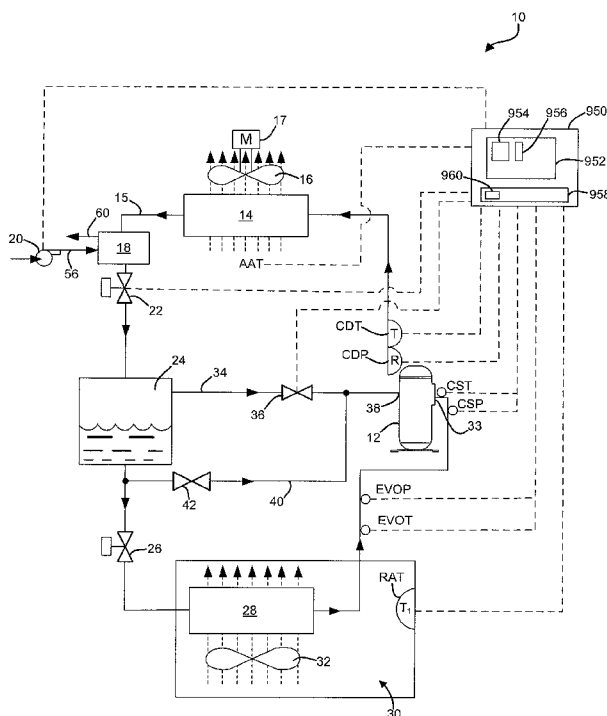


FIG. 1

(57) Abstract: A refrigerant vapor compression system includes a compressor having a suction port and a discharge port, an air-cooled heat exchanger operatively coupled to the discharge port, a liquid-cooled heat exchanger operatively coupled to the air-cooled heat exchanger, a coolant pump operatively coupled to a liquid coolant inlet conduit of the liquid-cooled heat exchanger, an evaporator heat exchanger unit operatively coupled to the liquid-cooled heat exchanger and the suction port, a coolant pump operatively coupled to the liquid coolant inlet conduit for pumping a liquid coolant, and a controller operatively associated with the liquid coolant inlet conduit for controlling the flow of liquid coolant into the liquid-cooled heat exchanger. In one embodiment, the liquid-cooled heat exchanger comprises a low-profile enclosure defining an interior volume. The enclosure has a liquid coolant inlet port and a liquid coolant discharge port fluidly coupled to the interior volume, and a continuous refrigerant tube sealingly disposed within the enclosure. The refrigerant tube is fluidly isolated from and in heat exchange relationship with the interior volume in which the liquid coolant flows.

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