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Abstract

Disclosed is a condensing system which can selectively provide cooperative operation of an air cooling condenser with
5 a water cooling condenser or an evaporative condenser according to variation of ambient air temperature, coolant pressure and condensing load. The water cooling condenser is disposed between a compressor and the air cooling condenser, and includes a coolant pipe, a water passage for enabling water to flow
10 therethrough to have heat exchange with coolant in the coolant pipe, an inlet pipe and an outlet pipe connected with the water passage of the water cooling condenser for automatically feeding and discharging water in a direction reverse to a flowing direction of coolant and a control valve installed in the inlet
15 side of the inlet pipe for automatically controlling water feed to the water passage according to ambient air temperature, coolant pressure and condensing load. Alternatively, the evaporative condenser is disposed between the compressor and the air cooling condenser, in which the evaporative condenser
20 is placed in the air discharge side of the air cooling condenser to evaporate moisture via air forcibly introduced by a condenser fan and coolant so that coolant can be condensed via latent heat of vaporization. Otherwise, a water pipe is selected from a middle one of chambers of coolant pipes, the coolant pipes are
25 folded and fins are interposed between folded regions of the coolant pipes.