

ABSTRACT OF THE DISCLOSURE

HEAT-TRANSFER-MEDIUM HEATING AND COOLING APPARATUS

Disclosed is a heat-transfer-medium heating and cooling apparatus in which a pump which pumps out a heat transfer medium, a heat exchanger which cools the heat transfer medium, a reactor whose temperature is controlled by the heat transfer medium, and a heating unit which heats the heat transfer medium are disposed in a recirculation path. A reserve path which branches upward from a pump-suction-side path extending from the heating unit to the pump and connects to a liquid phase portion of an expansion vessel is provided in the pump-suction-side path.

Fig. 1