

HEAT MEDIUM HEATING-COOLING APPARATUS AND HEAT MEDIUM TEMPERATURE CONTROL METHOD

ABSTRACT

Provided are a heat medium heating-cooling apparatus and a heat medium temperature control method, which can control the heat medium temperature stably and more efficiently. The heat medium heating-cooling apparatus includes a heat medium heating unit (12) as well as a bypass line (19) thereof with switching valves 20a, 20b switching the direction of a flow of the heat medium to the heat medium heating unit or the bypass line. Decisions are made based on the present temperature (PV) in a reactor (11), a preset target temperature (SV), stable temperature range (α) and control switching temperature (β). According to the resulted four decisions of "stable heating", "stable cooling", "inclined heating" and "inclined cooling", the temperature control according to either of the heating control at a heating control unit or the cooling control at a cooling control unit is conducted.

Fig. 1