

The invention relates to the heating systems, namely for delivery water heating.

The heat pump plant for heat supply system comprises a heat-transfer agent circulation circuit, in the capacity of which being used carbon dioxide, consisting of a compressor (7) joined with two cooling devices (4, 5), an evaporator (11) equipped with a heat-transfer agent pressure control valve (12), the output of which is connected to a heat exchanger for superheating (9), the output of which, in its turn, is connected to the compressor (7). The heat-transfer agent circulation circuit is equipped with a heat exchanger for supercooling (14), the output of which is connected to the input of the evaporator (11) and its input is connected to the output of the cooling devices (4, 5). The plant contains additionally an intermediate heat-transfer agent circulation circuit, for example an antifreezing agent, consisting of a capacity (17) connected in series to a pump with an adjustable speed drive (18), to the evaporator (11) through the intermediate heat-transfer agent circulation circuit, to a second pump with an adjustable speed drive (15) and to a heat exchanger of the intermediate heat-transfer agent (16), connected to the capacity (17). The heat exchanger for superheating (9), the heat exchanger of the intermediate heat-transfer agent (16) and the heat exchanger for supercooling (14) are connected in series in the return water line of the heat supply system.

Claims: 1

Fig.: 1

