

Title (en)
BINARY COMPRESSION HEAT PUMP WITH SOLUTION CIRCUIT

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EP 0314719 B1 19900523 (DE)

Application
EP 88903782 A 19880408

Priority
DE 3716642 A 19870518

Abstract (en)
[origin: WO8809468A1] A binary compression heat pump or refrigerating machine comprises a degasser (12) connected in a solution circuit to a resorber (20) through a branch line (18) with at least one incorporated solution pump (36) and a second branch line (30) with an incorporated restrictor (32). Between the two branch lines (18, 30), heat from the hot solution flowing from the resorber (20) to the degasser (12) is transferred by means of a heat-exchanger (38) to the cool solution flowing from the degasser (12) to the resorber (20). In addition, the heat contained in the hot solution leaving the heat-exchanger is used to further degas the cool solution entering the heat-exchanger. The gaseous components of the working fluid expelled from the hot solution in the degasser are conveyed through a compressor (24) under higher pressure to the resorber where they are reabsorbed in the cool solution. At least two pumps (36a; 36b) which increase the pressure in the cool solution in stages to the resorber pressure are incorporated in the first branch line (18) of the solution circuit which conveys the solution from the degasser (12) to the resorber (20). The auxiliary degasser for further degassing the cool solution is arranged in the section of the first branch line (18) between the two pumps at an intermediate pressure and in the section of the second branch line (30) between the heat-exchanger (38) and the restrictor (32). The additional gaseous working medium components expelled from the weak solution in the auxiliary degasser (40) at the intermediate pressure are conveyed to the resorber (20) through a separate compressor or by feeding into middle pressure stage of the multistage compressor (24) which conveys the gaseous working medium components from the main degasser to the resorber.

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