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(54) Title: HEAT PUMPS

(57) Abstract

A rotary heat pump (10) comprises a vapour generator (20), a condenser (24/34), an evaporator (42) and an absorber (40) interconnected to provide cyclic fluid flow paths for a volatile fluid component and an absorbent fluid therefor. To allow operation of the pump close to the crystallisation boundary the pump includes crystallisation control means which cause the temperature of the fluid in the region prone to crystallisation to be raised when the onset of crystallisation is detected. For example the pressure increase upstream of a crystallisation site may cause warm fluid to be diverted directly or indirectly to increase the fluid temperature at the crystallisation site. The specification also describes features for controlling the absorbent mixture flow rate; for controlling the concentration thereof; for damping a scoop pump; for assuaging flow onto the generator face; for pressure relief and extended operation of the pump; to novel heat exchangers; to metal compositions for the heat pump, and to hydrogen getters for use in heat pumps.

