

Title (en)
HEAT ENGINE WHICH OPERATES ON THE STIRLING PRINCIPLE

Title (de)
NACH DEM STIRLING-PRINZIP ARBEITENDE WÄRMEKRAFTMASCHINE

Title (fr)
MOTEUR THERMIQUE FONCTIONNANT SELON LE PRINCIPE DE STERLING

Publication
EP 0817907 A1 19980114 (DE)

Application
EP 96909137 A 19960327

Priority

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Abstract (en)
[origin: WO9630638A1] Disclosed is a heat engine (10) which operates on the Stirling principle, with a working gas circulation (12) in which the working gas as a drive agent is strongly heated in a first heat exchanger to make it capable of doing work, and with a heat-carrying circuit (14) with a second heat exchanger in which spent working gas is cooled. The first and second heat exchangers are designed as zeolite heat accumulators (16, 18), working gas from a working gas expansion machine (11) being alternately supplied to and drawn from the latter by a switch control (67); the zeolite heat accumulator (16, 18) can be brought into heat-exchanging connection with the heat carrying circuit (14) by the switch control (67). The heat engine (10) operates with a considerably better thermal energy balance than conventional Stirling engines since it is hardly affected by thermal wastage. When working gas is adsorbed in one zeolite heat accumulator, heat is transferred to the heat carrier; when working gas is desorbed from the zeolite of the other heat accumulator, the heat transferred to the heat carrier is re-used. The heat engine (10) can be used advantageously in a block heating power plant.

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