

Title (en)

Externally cooled absorption engine apparatus and method.

Title (de)

Verfahren zum Betrieb und Vorrichtung einer extern gekühlten Absorptionskraftmaschine.

Title (fr)

Procédé de fonctionnement et dispositif d'un moteur à absorption et à refroidissement extérieur.

Publication

EP 0078351 A1 19830511 (EN)

Application

EP 81305181 A 19811030

Priority

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Abstract (en)

An externally cooled, absorption engine apparatus (10) and method, the apparatus including a closed cycle system having a first fluid and a second fluid (50), the first fluid constituting a working fluid and having a relatively lower boiling point while the second fluid constitutes a solvent for the first fluid and has a relatively higher boiling point and a relatively high degree of absorptivity for the first fluid. The apparatus further includes a distillation column (12), a superheater (14), a mechanical expansion engine (16), an externally cooled absorption column (20), and heat exchange apparatus (60). The distillation column (12) separates the first fluid or working fluid from the solvent (50) with heat energy supplied by an external combustion source (38) and the superheater (14) increases the thermal energy thereof prior to passing the working fluid through the mechanical expansion engine (16). The mechanical expansion engine converts thermal energy in the working fluid vapour to mechanical energy. Importantly, the backpressure to the mechanical expansion engine (16) is significantly lowered by absorbing the working fluid with solvent (50) from the distillation column and the efficiency of the same is substantially enhanced by cooling the solvent and also by removing heat of absorption through an external coolant source (84).

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F01K 25/06; F02G 1/04

IPC 8 full level

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CPC (source: EP)

F01K 25/06 (2013.01); **F02G 1/04** (2013.01)

Citation (search report)

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