Title (en)

HEAT TRANSFER COMPONENTS FOR STIRLING-CYCLE, RECIPROCATING, THERMAL MACHINES.

Title (de)

KOMPONENTEN FÜR DIE WÄRMEÜBERTRAGUNG BEI STIRLINGMOTOREN.

Title (fr)

COMPOSANTS DE TRANSFERT DE CHALEUR POUR MACHINES THERMIQUES, A MOUVEMENT DE VA-ET-VIENT, A CYCLE DE STIRLING.

Publication

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Application

EP 82902018 A 19820514

Priority

US 26369181 A 19810514

Abstract (en)

[origin: WO8204101A1] Advantageous specific applications of copper matrix composites, manganese-copper alloys, and structural ceramics to the design and construction of improved Stirling-cycle, reciprocating, thermal machines are disclosed which provide both high temperature strength and high or low thermal conductivity in components with matched thermal expansion coefficients. In the preferred embodiment (figure 3) the heater assembly (23) is made from material with a high thermal conductively such as GLIDCOP while the expansion block (28) is made of a material of low thermal conductivity, such as a manganese copper eutectic alloy.

Abstract (fr)

Applications specifiques avantageuses de composites de matrices de cuivre, d'alliages de manganese-cuivre, et materiaux ceramiques de structure a la conception et la construction de machines thermiques ameliorees, a mouvement de va-et-vient, a cycle Stirling, permettant d'obtenir des composants resistant aux temperatures elevees et de conductivite thermique elevee ou faible avec des coefficients d'expansion thermique correspondants. Dans le mode preferentiel de realisation (Fig. 3), l'unite de chauffage (23) est fabriquee avec un materiau ayant une conductivite thermique elevee tel que 'du GLIDCOP', tandis que le bloc d'expansion (28) est fabrique avec un materiau de faible conductivite thermique, tel qu'un alliage eutectique de manganese-cuivre.

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