

Title (en)

FLUID MACHINE

Title (de)

STRÖMUNGSMASCHINE

Title (fr)

MACHINE DE FLUIDE

Publication

**EP 2351907 A4 20120905 (EN)**

Application

**EP 09816302 A 20090924**

Priority

- JP 2009067133 W 20090924
- JP 2008244228 A 20080924

Abstract (en)

[origin: EP2351907A1] A fluid machine which can be compact and produced at reduced costs and which can increase the amount of heat added to a refrigerant circulating in a Rankine cycle and thus greatly increase the efficiency of the Rankine cycle. A fluid machine (1) comprising a pump mechanism (46) incorporated in a Rankine cycle to force a working fluid to circulate in the Rankin cycle to recover waste heat from a heat source, and an expansion mechanism (48) rotationally driven by expansion of the working fluid having been forced out by the pump mechanism (46) and then superheated, the pump mechanism and the expansion mechanism being linked by a shared drive shaft (50), wherein a pump mechanism exit section (76a) through which the refrigerant flows out of the pump mechanism (46) and an expansion mechanism exit section (76b) through which the refrigerant flows out of the expansion mechanism (48) are open outward in the same direction.

IPC 8 full level

**F01C 21/18** (2006.01); **F01C 1/02** (2006.01); **F01C 13/04** (2006.01); **F01K 25/08** (2006.01); **F04C 23/02** (2006.01); **F04C 29/12** (2006.01)

CPC (source: EP US)

**F01K 23/06** (2013.01 - EP US); **F04C 18/0207** (2013.01 - EP US); **F04C 23/006** (2013.01 - EP US); **F04C 29/04** (2013.01 - EP US);  
**F04C 29/12** (2013.01 - EP US); **F04C 23/02** (2013.01 - EP US); **F04C 2250/102** (2013.01 - EP US)

Citation (search report)

- [X] US 4357800 A 19821109 - HECKER WALTER G
- [X] US 5758501 A 19980602 - JIRNOV OLGA [US], et al
- [A] US 4366674 A 19830104 - EAKMAN LARRY A
- [A] JP 2004346759 A 20041209 - SANDEN CORP
- [A] JP 2003314464 A 20031106 - ANEST IWATA CORP
- [A] FR 2013617 A1 19700403 - HELIX DEVICES LTD
- [A] US 2005235670 A1 20051027 - TAKEUCHI YASUHIRO [JP], et al
- [A] US 2007237665 A1 20071011 - HOLTZAPPLE MARK T [US], et al
- [A] EP 1422378 A1 20040526 - TEXAS A & M UNIV SYS [US]

Cited by

FR3046632A1

Designated contracting state (EPC)

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DOCDB simple family (application)

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