

Title (en)
Heat Exchanger.

Title (de)
Wärmetauscher.

Title (fr)
Echangeur thermique.

Publication
EP 0273073 A1 19880706 (EN)

Application
EP 86310212 A 19861230

Priority
EP 86310212 A 19861230

Abstract (en)
A heat exchanger having annular construction for a constant operation at high temperatures and pressures. A series of heating walls 17,21,23,24, at high temperature surround the fluid to which heat is desired to be transferred in annular spaces. Counterbalancing pressures in areas filled with high pressure fluid and insulating gases (14,34,36) allow use of thinwall construction for the heating (17,21,23,24) walls to reduce cost and increase heat transfer. Spacers (31,32,33) that are placed under compression are provided to maintain dimensional stability and transmit forces. Embodiments describing the use of the device as a heater or cooler and operation in either direction are illustrated. A second embodiment illustrates a heater with single sided heating of the fluid desired to be heated.

IPC 1-7
F02G 1/055

IPC 8 full level
F02G 1/055 (2006.01)

CPC (source: EP)
F02G 1/055 (2013.01); **F28D 7/103** (2013.01); **F28D 15/02** (2013.01); **F28D 15/04** (2013.01); **F28F 7/02** (2013.01); **F28F 21/04** (2013.01); **F02G 2255/00** (2013.01); **F02G 2258/10** (2013.01)

Citation (search report)

- [A] FR 971467 A 19510117 - PHILIPS NV
- [A] DE 2713174 A1 19771013 - FORD WERKE AG
- [A] US 4052854 A 19771011 - DU PRE FRITS K, et al
- [A] GB 689484 A 19530325 - PHILIPS NV
- [A] US 4446698 A 19840508 - BENSON GLENDON M [US]
- [A] GB 619277 A 19490307 - PHILIPS NV
- [A] FR 2038152 A1 19710108 - UNITED AIRCRAFT CORP
- [A] FR 2306342 A1 19761029 - PHILIPS NV [NL]
- [A] US 3717993 A 19730227 - POTTER R
- [A] PATENT ABSTRACTS OF JAPAN, vol. 9, no. 73 (M-368)[1796], 3rd April 1985; & JP-A-59 203 854 (ASAHI GLASS K.K.) 19-11-1984

Cited by
GB2494342A; GB2494342B; US8944155B2; WO2012006743A1

Designated contracting state (EPC)
DE FR GB IT NL SE

DOCDB simple family (publication)
EP 0273073 A1 19880706

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