

Title (en)
HEAT EXCHANGER

Title (de)
WÄRMETAUSCHER

Title (fr)
ECHANGEUR DE CHALEUR

Publication
EP 1520147 A1 20050406 (EN)

Application
EP 03737806 A 20030618

Priority

- EP 03737806 A 20030618
- CH 0300395 W 20030618
- EP 02405521 A 20020624

Abstract (en)
[origin: EP1376038A1] The present invention provides a fluid-to-fluid through-the-wall heat exchanger for condensation of a vapour in a primary fluid stream, characterised in that the flow path (5) of the primary fluid stream is defined by an inner cylinder (1), an outer cylinder (2) arranged concentrically to and surrounding the inner cylinder, and a helical space holder (3) arranged between the inner and the outer cylinder. This condenser is easily coated such that all wetted materials are corrosion resistant. Compared to other condensers with identical ratings, this heat exchanger shows a smaller flow resistance, resulting in a smaller power demand of the blower or pumps. It is therefore particularly suitable for fuel cell systems where the condensed water has to be recirculated in the system and where purity demands are high and parasitic blower power should be minimal. The manufacturing of such a double envelope cylindrical heat exchanger is particularly simple and cost effective. <IMAGE>

IPC 1-7
F28D 7/02; F28D 7/10; H01M 8/04

IPC 8 full level
F28F 1/40 (2006.01); **F28B 1/06** (2006.01); **F28D 1/02** (2006.01); **F28D 1/04** (2006.01); **F28D 1/047** (2006.01); **F28D 7/02** (2006.01);
F28D 7/10 (2006.01); **F28F 21/06** (2006.01); **H01M 8/04** (2006.01); **H01M 8/10** (2006.01)

CPC (source: EP US)
F28D 1/0233 (2013.01 - EP US); **F28D 1/04** (2013.01 - EP US); **F28D 7/026** (2013.01 - EP US); **F28D 7/106** (2013.01 - EP US);
H01M 8/04164 (2013.01 - EP US); **F28D 2001/0273** (2013.01 - EP US); **F28F 2240/00** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP);
Y02P 70/50 (2015.11 - EP US)

Citation (search report)
See references of WO 2004001313A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 1376038 A1 20040102; AU 2003246078 A1 20040106; AU 2003246078 A8 20040106; EP 1520147 A1 20050406;
JP 2005536706 A 20051202; US 2005150643 A1 20050714; WO 2004001313 A1 20031231

DOCDB simple family (application)
EP 02405521 A 20020624; AU 2003246078 A 20030618; CH 0300395 W 20030618; EP 03737806 A 20030618; JP 2004514500 A 20030618;
US 51295604 A 20041215