

Title (en)

HEAT EXCHANGER COMPONENT WITH VARYING TWIST ANGLE

Title (de)

WÄRMETAUSCHERKOMPONENTE MIT VERÄNDERLICHEM DRALLWINKEL

Title (fr)

ÉLÉMENT D'ÉCHANGEUR DE CHALEUR À ANGLE DE TORSION VARIABLE

Publication

EP 4073448 A4 20231213 (EN)

Application

EP 20900245 A 20201211

Priority

- US 201962947306 P 20191212
- US 2020064571 W 20201211

Abstract (en)

[origin: US2021180870A1] A component for a heat exchanger can comprise a body including a ceramic and can have a central cavity extending along a length of the body; a plurality of spirals extending around the central cavity; a plurality of interspiral channels disposed between the plurality of spirals; a plurality of intraspical channels contained within the plurality of spirals; wherein a twist angle of each spiral of the plurality of spirals in relation to a length direction of the body is varying. The heat exchanger component can be used for making a heat exchanger having three flow paths and can reach an exceptional efficiency while allowing an economic manufacturing.

IPC 8 full level

F28D 7/02 (2006.01); **F28D 7/12** (2006.01); **F28D 17/00** (2006.01); **F28F 1/36** (2006.01); **F28F 13/08** (2006.01); **F28F 21/04** (2006.01)

CPC (source: EP KR US)

F28D 7/02 (2013.01 - EP); **F28D 7/026** (2013.01 - EP KR); **F28D 7/04** (2013.01 - US); **F28D 21/001** (2013.01 - EP KR); **F28F 21/04** (2013.01 - EP KR US); **F28D 7/12** (2013.01 - EP KR); **F28F 1/36** (2013.01 - EP KR US); **F28F 13/08** (2013.01 - EP); **F28F 2215/04** (2013.01 - EP)

Citation (search report)

- [Y] US 4589844 A 19860520 - LOUKAS PAUL W [CA], et al
- [Y] JP 2018017470 A 20180201 - DAIDO STEEL CO LTD
- [Y] GB 787010 A 19571127 - WELLMAN SMITH OWEN ENG CO LTD, et al
- [Y] JP 2003232502 A 20030822 - KOBE STEEL LTD
- See references of WO 2021119466A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

US 202017119561 A 20201211; EP 20900245 A 20201211; JP 2022535690 A 20201211; KR 20227021630 A 20201211; US 2020064571 W 20201211