

Title (en)

HEAT EXCHANGE ELEMENT WITH MICROSTRUCTURED COATING AND PROCESS FOR PRODUCTION

Title (de)

WÄRMEAUSTAUSCHELEMENT MIT MIKROSTRUKTURIERTER BESCHICHTUNG UND HERSTELLUNGSVERFAHREN

Title (fr)

ÉLÉMENT D'ÉCHANGE DE CHALEUR DOTÉ D'UN REVÊTEMENT MICROSTRUCTURÉ ET PROCÉDÉ DE PRODUCTION

Publication

EP 3658840 A1 20200603 (EN)

Application

EP 18752236 A 20180727

Priority

- GB 201712103 A 20170727
- GB 201712104 A 20170727
- GB 2018052125 W 20180727

Abstract (en)

[origin: WO2019021016A1] The invention provides a heat exchange element comprising a substrate and a coating, wherein the coating is present on at least a part of a flow path defined by the heat exchange element. The coating comprises a metal and has a structure comprising spikes having a length of up to 100 µm; the average length of the spikes varies throughout the coating. The invention also provides a method of transferring heat to or from a fluid which comprises providing the fluid to a flow path of the heat exchange element of the invention. The invention further provides a process for producing a heat exchange element of the invention, wherein the process comprises providing an electroless deposition solution to a surface of a substrate. The invention further provides a flow process for producing a heat exchange element and a heat exchange element obtained or obtainable by that process.

IPC 8 full level

F28F 13/18 (2006.01); **C23C 18/16** (2006.01)

CPC (source: EP KR US)

C23C 18/1616 (2013.01 - EP KR US); **C23C 18/1669** (2013.01 - EP KR US); **C23C 18/1844** (2013.01 - EP KR US);
C23C 18/1893 (2013.01 - EP KR); **C23C 18/32** (2013.01 - EP KR); **C23C 18/38** (2013.01 - EP KR US); **F28F 13/185** (2013.01 - US);
F28F 13/187 (2013.01 - EP KR US); **F28F 21/089** (2013.01 - US); **F28F 2215/04** (2013.01 - EP KR); **F28F 2245/00** (2013.01 - US)

Citation (examination)

US 2014238646 A1 20140828 - ENRIGHT RYAN M [IE]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2019021016 A1 20190131; AU 2018307582 A1 20200102; BR 112020001450 A2 20200728; CA 3069884 A1 20190131;
CN 110998217 A 20200410; CN 110998217 B 20211228; EP 3658840 A1 20200603; JP 2020528536 A 20200924;
KR 20200036891 A 20200407; MX 2020000757 A 20200817; US 2020166299 A1 20200528

DOCDB simple family (application)

GB 2018052125 W 20180727; AU 2018307582 A 20180727; BR 112020001450 A 20180727; CA 3069884 A 20180727;
CN 201880049621 A 20180727; EP 18752236 A 20180727; JP 2020504379 A 20180727; KR 20207005524 A 20180727;
MX 2020000757 A 20180727; US 201816633309 A 20180727