

Title (en)
HEAT EXCHANGE BLOCK, METHOD FOR MANUFACTURING SAME, HEAT EXCHANGER EQUIPPED WITH SUCH A BLOCK AND METHOD FOR IMPLEMENTING SAME

Title (de)
WÄRMETAUSCHERBLOCK, VERFAHREN ZU SEINER HERSTELLUNG, WÄRMETAUSCHER MIT EINEM SOLCHEN BLOCK UND VERFAHREN ZU SEINER IMPLEMENTIERUNG

Title (fr)
BLOC D'ÉCHANGE DE CHALEUR, SON PROCÉDÉ DE FABRICATION, ÉCHANGEUR DE CHALEUR ÉQUIPÉ D'UN TEL BLOC ET SON PROCÉDÉ DE MISE EN OEUVRE

Publication
EP 4105590 A1 20221221 (EN)

Application
EP 22171766 A 20220505

Priority
EP 21179189 A 20210614

Abstract (en)
This heat exchange block (1) comprises a body (10), longitudinal channels (20) intended to the flow of a process fluid, and transverse channels (60), intended to the flow of a service fluid. According to the invention at least one front face (2), in particular upstream front face delimits a central bowl (3) defining a central surface (S3), a peripheral seat (4) defining a peripheral reference surface (S4) and a transition portion (5), the distance (h4) between peripheral surface (S4) and closest transverse channel (60a) being substantially superior to distance (h3) between central surface (S3) and closest transverse channel (60a). The thermal stress generated on the block of the invention is far lower than in prior art, so that lifetime of both block and heat exchanger is much longer than in prior art.

IPC 8 full level
F28F 7/00 (2006.01); **F28F 7/02** (2006.01); **F28F 21/00** (2006.01); **F28F 21/02** (2006.01)

CPC (source: EP)
F28F 7/02 (2013.01); **F28F 9/0219** (2013.01); **F28F 21/02** (2013.01); **F28F 2275/00** (2013.01)

Citation (applicant)
• EP 0196548 A1 19861008 - GEA WIEGAND GMBH [DE]
• WO 2006081965 A1 20060810 - SGL CARBON AG [DE], et al
• US 3391016 A 19680702 - MCCRARY JR JAMES W, et al
• US 2821369 A 19580128 - ALFRED HILLIARD
• GB 1078868 A 19670809 - DIETRICH SCHWEMANN, et al

Citation (search report)
• [XI] US 3391016 A 19680702 - MCCRARY JR JAMES W, et al
• [X] US 2821369 A 19580128 - ALFRED HILLIARD
• [X] GB 1078868 A 19670809 - DIETRICH SCHWEMANN, et al
• [AD] WO 2006081965 A1 20060810 - SGL CARBON AG [DE], et al

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4105590 A1 20221221; EP 4105589 A1 20221221

DOCDB simple family (application)
EP 22171766 A 20220505; EP 21179189 A 20210614