

Title (en)
BRAZED PLATE HEAT EXCHANGER

Title (de)
GELÖTETER PLATTENWÄRMETAUSCHER

Title (fr)
ECHANGEUR DE CHALEUR A PLAQUES BRASEES

Publication
EP 4310428 A1 20240124 (EN)

Application
EP 22425032 A 20220722

Priority
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Abstract (en)
A brazed plate heat exchanger (10) comprises a plurality of heat exchanger plates (12A, 12B) which are stacked onto one another. The heat exchanger plates (12A, 12B) are obtained by forming from respective metal sheets and are permanently joined to each other through brazing by means of a braze material, so as to form a plate package (30) provided with first plate interspaces for a first fluid and second plate interspaces for a second fluid. The plate package (30) comprises an alternation between a first heat exchanger plate (12A) and a second heat exchanger plate (12B). Each first heat exchanger plate (12A) and each second heat exchanger plate (12B) are provided with a plurality of portholes (P1, P2, P3, P4) and has a substantially rectangular shape, with two long side edges (26), two short side edges (28) and a longitudinal axis (X) extending parallel to the long side edges (26) and transversely to the short side edges (28). Each first heat exchanger plate (12A) and each second heat exchanger plate (12B) have a corrugation pattern which forms at least one heat transfer area (36, 38; 40), that extends along the longitudinal axis (X) and comprises mutually parallel ridges (32) and grooves (34) arranged in such a manner that the ridges (32) of one of the first heat exchanger plates (12A) abut the grooves (34) of an adjoining one of the second heat exchanger plates (12B), so as to form a plurality of joining areas. Each ridge (32) and each groove (34) of at least one first heat transfer area (36) of each first heat exchanger plate (12A) are inclined with respect of the longitudinal axis (X) by a first angle (α) comprised between 0° and 30° . Each ridge (32) and each groove (34) of at least one heat transfer area (40) of each second heat exchanger plate (12B) are inclined with respect of the longitudinal axis (X) by a second angle (β) comprised between 90° and 45° . At least part of the ridges (32) and at least part of the grooves (34) of at least a first heat transfer area (36) of each first heat exchanger plate (12A) extend without discontinuities between the opposite edges of the respective heat transfer area (36), wherein these opposite edges are parallel to the short side edges (28).

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• [AD] WO 2021154152 A1 20210805 - SWEP INT AB [SE]
• [A] US 2005211421 A1 20050929 - EKELUND ROLF [SE], et al
• [A] US 2019024983 A1 20190124 - ROMLUND JENS [SE]
• [A] JP 2000356483 A 20001226 - NHK SPRING CO LTD

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