

Title (en)
TANK STRUCTURE FOR HEADER-PLATE-LESS HEAT EXCHANGER

Title (de)
TANKSTRUKTUR FÜR EINEN FRONTPLATTENLOSEN WÄRMETAUSCHER

Title (fr)
STRUCTURE DE RÉSERVOIR POUR ÉCHANGEUR DE CHALEUR SANS PLAQUE COLLECTRICE

Publication
EP 3045853 A1 20160720 (EN)

Application
EP 14844912 A 20140905

Priority
• JP 2013190837 A 20130913
• JP 2014074159 W 20140905

Abstract (en)
The objective is to eliminate gaps at the joint part between a tank (4) and a core (3), and thus to ensure air-tightness and liquid-tightness. Flat tubes (2) are formed by pairs of plates (2a, 2b) each of which is formed in a groove shape, the walls on both sides of each plate (2a, 2b) protrude toward the tank (4) from a groove bottom leading edge (1a) of a protruding part (1) to form protruding side walls (10). The outer edges (10a) of the protruding side walls (10) in the protruding direction are aligned so as to be flush with each other on the outer surface of the protruding part (1), and when the flat tubes (2) are stacked, the respective outer edges (10a) of adjacent flat tubes (2) contact each other. Furthermore, on the side opposite the protruding direction, inner edge surfaces (10b) of the protruding side walls (10) of the pair of plates (2a, 2b) forming each flat tube (2) contact each other. In addition, with the front ends of a pair of side plate parts (7) of the tank (4) making contact with the inside of the protruding side walls (10) of each flat tube (2), the various contacting parts are soldered to each other.

IPC 8 full level
F28F 3/10 (2006.01); **F28D 7/16** (2006.01); **F28F 9/02** (2006.01); **F28F 9/18** (2006.01)

CPC (source: EP)
F28D 7/1653 (2013.01); **F28D 7/1684** (2013.01); **F28D 9/0037** (2013.01); **F28F 1/025** (2013.01); **F28F 9/0221** (2013.01); **F28F 2275/04** (2013.01)

Citation (search report)
See references of WO 2015037688A1

Cited by
DE102016210261A1; EP3734211A4

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)
EP 3045853 A1 20160720; JP 2015055459 A 20150323; WO 2015037688 A1 20150319

DOCDB simple family (application)
EP 14844912 A 20140905; JP 2013190837 A 20130913; JP 2014074159 W 20140905