

Title (en)

DESIGN AND ARRANGEMENT OF TUBE SUPPORT BARS FOR REDUCING RADIAL MALDISTRIBUTION IN A COIL WOUND HEAT EXCHANGER

Title (de)

STEGDESIGN - UND ANORDNUNG ZUR VERRINGERUNG EINER RADIALEN FEHLVERTEILUNG IN EINEM GEWICKELTEN WÄRMEÜBERTRAGER

Title (fr)

CONCEPTION ET ARRANGEMENT DE SUPPORT DES TUBES D'UN ÉCHANGEUR DE CHALEUR ENROULÉ POUR ÉVITER UNE MALDISTRIBUTION RADIAL

Publication

EP 3953654 B1 20230426 (DE)

Application

EP 20719938 A 20200331

Priority

- DE 102019002704 A 20190412
- EP 2020025151 W 20200331

Abstract (en)

[origin: WO2020207626A1] The invention relates to a heat exchanger (1) for the indirect transfer of heat between a first and at least one second medium (M, M'), having a jacket space (I) for receiving the first medium (M), a core pipe (20) arranged in the jacket space (I), a pipe bundle (15) arranged in the jacket space (I), which bundle comprises a plurality of pipes (10) which are each wound around the core pipe (20) such that the pipe bundle (15) has a plurality of pipe layers arranged on top of each other (100, 101, 102, 103) which each comprise at least one pipe (10), a pipe bundle gap (200, 201, 202, 203) being present between all the adjacent pipe layers (100, 101; 101, 102;...) and a plurality of spacers (30) being arranged in each pipe bundle gap (200, 201, 202, 203) to support the pipe layers (100, 101, 102, 103). According to the invention, the spacers (30) each have a thickness (D) in the radial direction (R) of the pipe bundle (15), the thicknesses (D) of the spacers (30) of a first pipe bundle gap (200) each being greater than the thicknesses (D) of the spacers of a second pipe bundle gap (203), which lies further to the outside in the radial direction (R) of the pipe bundle (15) than the first pipe bundle gap (200).

IPC 8 full level

F28D 7/02 (2006.01); **F28D 21/00** (2006.01); **F28F 9/013** (2006.01)

CPC (source: EP US)

F28D 7/022 (2013.01 - EP US); **F28D 7/024** (2013.01 - EP US); **F28F 9/0132** (2013.01 - EP US); **F28D 2021/0033** (2013.01 - EP); **F28F 2240/00** (2013.01 - EP US)

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

DOCDB simple family (publication)

WO 2020207626 A1 20201015; DE 102019002704 A1 20201015; EP 3953654 A1 20220216; EP 3953654 B1 20230426; US 2022196331 A1 20220623

DOCDB simple family (application)

EP 2020025151 W 20200331; DE 102019002704 A 20190412; EP 20719938 A 20200331; US 202017594200 A 20200331