Title (en)

COUNTERCURRENT-TYPE DIRECT HEATING HEAT EXCHANGER

Title (de)

GEGENSTROMARTIGER DIREKTWÄRMENDER WÄRMETAUSCHER

Title (fr)

ÉCHANGEUR DE CHALEUR À CHAUFFAGE DIRECT DU TYPE À CONTRE-COURANT

Publication

EP 3431910 A1 20190123 (EN)

Application

EP 17766831 A 20170317

Priority

- JP 2016054629 A 20160318
- JP 2017010832 W 20170317

Abstract (en)

To provide a countercurrent direct-heating heat exchanger capable of suppressing wear of a container caused by a heating target fluid. A countercurrent direct-heating heat exchanger A includes: a container 10; a flow guide 40 connected to an inlet 12 for a heating target fluid 1 and guiding the heating target fluid 1 to flow in a vertically downward direction; and an umbrella-shape distribution plate 20 having a top arranged vertically below the flow guide 40. The flow guide 40 can suppress deflection of the heating target fluid 1. Thus, the heating target fluid 1 flows down to the top or the vicinity of the top of the umbrella-shape distribution plate 20 and is distributed uniformly in all directions of the umbrella-shape distribution plate 20. The amount of the heating target fluid 1 to contact the side wall of the container 10 is not increased locally to allow suppression of the wear of the container 10 caused by the heating target fluid 1.

IPC 8 full level

F28C 1/06 (2006.01); **C22B 1/00** (2006.01); **F28C 3/08** (2006.01); **F28C 3/14** (2006.01)

CPC (source: EP)

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Designated contracting state (EPC)

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Designated extension state (EPC)

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DOCDB simple family (publication)

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