

Title (en)
HEAT EXCHANGER AND REFRIGERATION CYCLE DEVICE

Title (de)
WÄRMETAUSCHER UND KÜHLZYKLUSVORRICHTUNG

Title (fr)
ÉCHANGEUR DE CHALEUR ET DISPOSITIF DE CYCLE DE RÉFRIGÉRATION

Publication
EP 3754284 A1 20201223 (EN)

Application
EP 20158255 A 20200219

Priority
JP 2019101916 A 20190531

Abstract (en)
The present invention provides a heat exchanger (32) including: an inner pipe (1); an insertion body (2) inserted into the inner pipe (1); and at least one or more outer pipes (3) provided around an outer periphery of the inner pipe (1) and through which second fluid flows, wherein the insertion body (2) is formed from a shaft (21) and a projection (22) formed on an outer surface of the shaft (21), first fluid flows through a spiral flow path (23) formed from at least an inner surface of the inner pipe (1) and the projection (22), and a plurality of thickness projections (22b) are provided on the spiral flow path (23) at predetermined intervals in a flowing direction of the first fluid, and a flow path area of the spiral flow path (23) is made small at the predetermined intervals in the flowing direction of the first fluid by each of the thickness projections (22b). According to this, the heat exchanger (32) can suppress the local precipitation of scale by simple means and heat exchanging efficiency can be enhanced.

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Citation (applicant)
WO 2017158938 A1 20170921 - MITSUBISHI ELECTRIC CORP [JP]

Citation (search report)
• [A] EP 3290854 A1 20180307 - PANASONIC IP MAN CO LTD [JP]
• [A] EP 2148161 A2 20100127 - DELPHI TECH INC [US]
• [E] EP 3614074 A1 20200226 - VALEO JAPAN CO LTD [JP]

Cited by
CN112944959A

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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

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