

Title (en)

HEAT EXCHANGER WITH IMPROVED TUBES

Title (de)

WÄRMETAUSCHER MIT VERBESSERTEN ROHREN

Title (fr)

ECHANGEUR DE CHALEUR À TUBES AMÉLIORÉS

Publication

**EP 3314190 B1 20190703 (FR)**

Application

**EP 16730428 A 20160622**

Priority

- FR 1555800 A 20150624
- EP 2016064341 W 20160622

Abstract (en)

[origin: WO2016207178A1] The invention relates to a heat exchanger (10) comprising at least one tube (12) and at least one fin (14), the tube (12) being connected to the fin (14) by the clamping of this tube (12) in a collar formed in the fin (14). The tube comprises a material (22) in contact with the collar, referred to as ductile, and means (23) of reinforcing the tube (12). The ductile material (22) is plastically deformed on contact with the collar, unlike the reinforcing means (23).

IPC 8 full level

**F28F 1/32** (2006.01); **B21D 39/06** (2006.01); **B21D 53/08** (2006.01)

CPC (source: EP)

**F28F 1/32** (2013.01); **F28F 2275/125** (2013.01); **F28F 2280/08** (2013.01)

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)

**FR 3038039 A1 20161230**; **FR 3038039 B1 20170721**; EP 3314190 A1 20180502; EP 3314190 B1 20190703; WO 2016207178 A1 20161229

DOCDB simple family (application)

**FR 1555800 A 20150624**; EP 16730428 A 20160622; EP 2016064341 W 20160622