

Title (en)  
TUBE STRUCTURES FOR HEAT EXCHANGER

Title (de)  
RÖHRENSTRUKTUREN FÜR EINEN WÄRMETAUSCHER

Title (fr)  
STRUCTURES DE TUYAU DESTINÉES À UN ÉCHANGEUR DE CHALEUR

Publication  
**EP 2668460 A1 20131204 (EN)**

Application  
**EP 12702387 A 20120126**

Priority  
• US 201161437427 P 20110128  
• US 2012022641 W 20120126

Abstract (en)  
[origin: WO2012103278A1] A fluid-carrying tube for a heat exchanger includes an outer perimeter, an inner perimeter, and a plurality of ridges extending from the inner perimeter inwardly into an interior of the tube. Each ridge includes a ridge height, a base width and a tip width. A ratio of the ridge height to the base width is between about 0.2 and about 4.0, and a ratio of the tip width to the base width is between about 0.015 and about 0.965.

IPC 8 full level  
**F28F 1/32** (2006.01); **F28F 1/40** (2006.01); **F28F 21/08** (2006.01)

CPC (source: EP US)  
**F28F 1/12** (2013.01 - US); **F28F 1/32** (2013.01 - EP US); **F28F 1/40** (2013.01 - EP US); **F28F 21/08** (2013.01 - EP US)

Citation (search report)  
See references of WO 2012103278A1

Citation (examination)  
WO 0192806 A1 20011206 - MITSUBISHI SHINDO KK [JP], et al

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 2012103278 A1 20120802**; CN 103339460 A 20131002; CN 103339460 B 20170118; EP 2668460 A1 20131204;  
US 2013306288 A1 20131121

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**US 2012022641 W 20120126**; CN 201280006657 A 20120126; EP 12702387 A 20120126; US 201213981364 A 20120126