

Title (en)  
TUBE STRUCTURES FOR HEAT EXCHANGER

Title (de)  
RÖHRENSTRUKTUREN FÜR EINEN WÄRMETAUSCHER

Title (fr)  
STRUCTURES DE TUYAU POUR ÉCHANGEUR DE CHALEUR

Publication  
**EP 2959251 A1 20151230 (EN)**

Application  
**EP 14706746 A 20140210**

Priority  
• US 201361767506 P 20130221  
• US 2014015550 W 20140210

Abstract (en)  
[origin: WO2014130281A1] A heat exchanger includes a plurality of fins and a plurality of tubes passing a fluid therethrough, extending through the plurality of fins and radially expanded into an interference fit therewith. At least one tube of the plurality of tubes includes an outer diameter, an inner diameter, and a plurality of ridges extending from the inner diameter inwardly into an interior of the tube. A tube internal surface area per unit of length of the tube multiplied by the ratio of the outer diameter and tube wall thickness is equal to or greater than about 30.0.

IPC 8 full level  
**F28F 1/40** (2006.01); **F28F 1/32** (2006.01); **F28F 13/18** (2006.01)

CPC (source: EP US)  
**F28F 1/32** (2013.01 - EP US); **F28F 1/40** (2013.01 - EP US); **F28F 13/187** (2013.01 - EP US); **F28D 2021/0068** (2013.01 - EP US)

Citation (search report)  
See references of WO 2014130281A1

Designated contracting state (EPC)  
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Designated extension state (EPC)  
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DOCDB simple family (publication)  
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**US 2014015550 W 20140210**; CN 201480009651 A 20140210; EP 14706746 A 20140210; ES 14706746 T 20140210; PL 14706746 T 20140210; US 201414769503 A 20140210