

Title (en)  
Heat exchanger means

Title (de)  
Wärmetauschermittel

Title (fr)  
Dispositif échangeur de chaleur

Publication  
**EP 2738503 A1 20140604 (EN)**

Application  
**EP 12195010 A 20121130**

Priority  
EP 12195010 A 20121130

Abstract (en)  
The present invention relates to heat exchanger means (100) comprising several substantially flat and rigid elongated tubing elements (10), whereby the tubing elements (10) are forming a substantially overall cylindrical structure having a central longitudinal axis (X) and that the tubing elements (10) are spirally curved around the central longitudinal axis (X) and interleaved in the structure, whereby the tubing elements (10) have a plurality of fins (60) on at least one of the outer surfaces (42, 52) of the first side wall (40) and/or of the second side wall (50) and whereby the fins (60) are at least partially covered by covering wall (70, 80), whereby the tubing elements (10) are at least partially tilted and/or sloped and at least partially helically wound and/or twisted so as to form at least a part of a helical structure, whereby preferably the helical structure has an overall cylindrical structure and/or that the helical structure is formed in a cylindrical shape.

IPC 8 full level  
**F28D 1/047** (2006.01); **F28F 1/02** (2006.01)

CPC (source: EP)  
**F28D 1/0473** (2013.01); **F28F 1/022** (2013.01)

Citation (applicant)  
• EP 1840494 A2 20071003 - ERBSLOEH ALUMINIUM GMBH [DE]  
• DE 202008006379 U1 20080717 - ERBSLOEH ALUMINIUM GMBH [DE]  
• DE 2209325 A1 19730913 - NORANDA METAL IND  
• DE 2209329 A1 19720907  
• GB 1390782 A 19750416 - NORANDA METAL IND  
• EP 0640803 A1 19950301 - ELECTRIC POWER RES INST [US]

Citation (search report)  
• [X] JP 2004218954 A 20040805 - TOYO RADIATOR CO LTD  
• [A] DE 3815647 A1 19881222 - SUEDEDEUTSCHE KUEHLER BEHR [DE]  
• [A] US 2007125528 A1 20070607 - FAKHERI AHMAD [US]

Cited by  
CN107062947A; WO2019064067A3

Designated contracting state (EPC)  
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