

Title (en)  
BOWED FIN FOR HEAT EXCHANGER

Title (de)  
GEKRÜMMTE RIPPE FÜR WÄRMETAUSCHER

Title (fr)  
AILETTE POUR ÉCHANGEUR DE CHALEUR COURBÉ

Publication  
**EP 3045852 A1 20160720 (EN)**

Application  
**EP 16151720 A 20160118**

Priority  
US 201514599798 A 20150119

Abstract (en)  
A heat exchanger includes a plurality of first fluid passages 45 configured to receive a first stream and a plurality of second fluid passages 43 each formed between two first fluid passages. Each first fluid passage includes a first plate and a second plate 46 parallel to the first plate. The first plate and second plate are connected by two closure bars. The first fluid passage also includes a fin pack 60 having a plurality of fins connected to the first and second plate, and configured for the first stream to flow around the fins. The fins have a cross-sectional profile that is bowed at non-operational temperatures and is configured to flex under a thermal load without exceeding the tensile or fatigue strength of the fin. Each second fluid passage is configured to receive a second stream and is configured to allow heat to indirectly exchange between the first stream and the second stream.

IPC 8 full level  
**F28F 3/02** (2006.01); **F28D 9/00** (2006.01)

CPC (source: EP US)  
**F28D 9/0062** (2013.01 - EP US); **F28F 1/12** (2013.01 - US); **F28F 3/025** (2013.01 - EP US); **F28F 2265/26** (2013.01 - EP US)

Citation (search report)  
• [X] DE 10040645 A1 20020613 - XCELLSIS GMBH [DE]  
• [X] US 5564496 A 19961015 - BLUM BERNARD S [US], et al  
• [X] DE 202011052186 U1 20130306 - AUTOKUEHLER GMBH & CO KG [DE]  
• [X] FR 2270543 A2 19751205 - CHAUSSON USINES SA [FR]  
• [X] BE 750222 A 19701016 - FRANZ WAGNER & CO KG  
• [X] US 4402362 A 19830906 - DUBROVSKY EVGENY V [SU]

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3045852 A1 20160720; EP 3045852 B1 20181128**; US 2016216046 A1 20160728

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