

Title (en)  
Fluidized bed heat exchanger

Title (de)  
Wirbelbett-Wärmetauscher

Title (fr)  
Échangeur de chaleur à lit fluidisé

Publication  
**EP 2884162 A1 20150617 (EN)**

Application  
**EP 13197364 A 20131216**

Priority  
EP 13197364 A 20131216

Abstract (en)  
A fluidized bed heat exchanger with a chamber (24) comprises a solid particles inlet port (22), a solid particles outlet port (30), arranged at a distance to the inlet port (22), means (46) for introducing a fluidizing gas from a bottom area into the chamber (24). The heat exchanger has furthermore several heat exchange tubes (28) being arranged at a distance to each other. The heat exchange tubes (28) are each arranged in a meandering fashion and a wall-like pattern and extend substantially parallel to the main flow direction of the solid particles on their way to and through the outlet port (30).

IPC 8 full level  
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CPC (source: EP US)  
**F01K 5/02** (2013.01 - EP US); **F22B 31/0092** (2013.01 - US); **F23C 10/00** (2013.01 - EP US); **F23C 10/04** (2013.01 - EP US); **F28D 7/0041** (2013.01 - US); **F28D 7/082** (2013.01 - EP US); **F28D 13/00** (2013.01 - EP US); **F28F 9/026** (2013.01 - EP US); **F28F 9/0268** (2013.01 - US); **F28F 9/22** (2013.01 - EP US); **F23C 2206/103** (2013.01 - EP US); **F28F 2009/226** (2013.01 - US)

Citation (applicant)  
• US 6802890 B2 20041012 - HYPPAENEN TIMO [FI]  
• US 4615715 A 19861007 - SESHAMANI VENKATRAMAN [US]

Citation (search report)  
• [XYI] WO 2009017972 A2 20090205 - ALSTOM TECHNOLOGY LTD [CH], et al  
• [XI] EP 0597684 A2 19940518 - FOSTER WHEELER ENERGY CORP [US]  
• [YA] DE 202013104381 U1 20131009 - FRODENO CHRISTA [ZA]  
• [A] EP 2348252 A2 20110727 - BABCOCK & WILCOX POWER GENERAT [US]

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 2884162 A1 20150617**; AR 098354 A1 20160526; CN 105723152 A 20160629; HK 1224000 A1 20170811; US 2016356488 A1 20161208; WO 2015090636 A1 20150625

DOCDB simple family (application)  
**EP 13197364 A 20131216**; AR P140104207 A 20141110; CN 201480063961 A 20140815; EP 2014067488 W 20140815; HK 16111171 A 20160923; US 201415038641 A 20140815