

Title (en)
HEAT EXCHANGER

Title (de)
WÄRMETAUSCHER

Title (fr)
ÉCHANGEUR DE CHALEUR

Publication
EP 3423759 A1 20190109 (EN)

Application
EP 17707879 A 20170301

Priority
• EP 16158356 A 20160303
• EP 2017054694 W 20170301

Abstract (en)
[origin: WO2017148974A1] A condensing heat exchanger comprises a combustion chamber, provided at its top with room for the installation of a premix gas burner. The heat exchanger comprises a flue gas draft, delimited by walls, among which two water cooled walls between which flue gas can flow. Each of the water cooled walls comprises channels for water flow. The combustion chamber is bound at its top at least partly by the room provided for the burner; at its sides by a set of two first combustion chamber walls opposite to each other; and by a set of two second combustion walls opposite to each other; and at its bottom by the flue gas draft. The first combustion chamber walls are provided with channels for water flow. The first combustion chamber walls are provided as extensions of water cooled walls delimiting the flue gas draft. The two first combustion chamber walls each comprise a first segment and a second segment, located below the first segment. The first segments are each curved so that the section of the combustion chamber bound by the first segments widens in the downstream flue gas flow direction. Each of the two first segments is provided with channels for water flow. The second segments are each curved so that the section of the combustion chamber bound by the second segments narrows in flue gas downstream direction. The second segment of the first combustion chamber walls comprises longitudinal fins elongated in the direction away from the top of the combustion chamber and extending into the combustion chamber. The first segment of the first combustion chamber walls is smooth meaning that it does not comprise heat exchange increasing protrusions extending in the combustion chamber.

IPC 8 full level
F24H 1/26 (2006.01); **F24H 8/00** (2006.01); **F24H 9/00** (2006.01)

CPC (source: EP)
F23C 3/00 (2013.01); **F24H 1/26** (2013.01); **F24H 8/00** (2013.01); **F24H 9/0026** (2013.01); **F28F 7/02** (2013.01); **F28F 13/08** (2013.01); **F23C 99/006** (2013.01); **F23D 14/02** (2013.01); **F28D 2021/0024** (2013.01); **F28F 21/084** (2013.01); **Y02B 30/00** (2013.01)

Citation (search report)
See references of WO 2017148974A1

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)
WO 2017148974 A1 20170908; CL 2018002481 A1 20190201; CN 108700335 A 20181023; EP 3423759 A1 20190109

DOCDB simple family (application)
EP 2017054694 W 20170301; CL 2018002481 A 20180830; CN 201780014251 A 20170301; EP 17707879 A 20170301