

Title (en)
Heat exchanger

Title (de)
Wärmetauscher

Title (fr)
Échangeur de chaleur

Publication
EP 2679944 A1 20140101 (EN)

Application
EP 13164718 A 20130422

Priority
KR 20120068752 A 20120626

Abstract (en)
A heat exchanger of the present invention includes: a case in which a space is formed; a top cover coupled to the top of the case; a lower cover coupled to the bottom of the case; a cooling water inflow pipe guiding cooling water flowing into the space and having an exit end through which cooling water comes out into the space; a tube through which a refrigerant that exchanges heat with the cooling water passes; and a cooling water discharge pipe guiding the cooling water discharged from the space and having an inlet end that the cooling water enters, in which the tube has a spiral pipe portion positioned in the space and spirally wound, the inlet end is positioned to be spaced from the top cover under the top cover, the height of the inlet end is larger than the height of the upper end of the spiral pipe portion, and the height between the exit end and the lower cover is smaller than the height between the inlet end and the lower cover; therefore, it is possible to achieve a compact heat exchanger while minimizing the installation space and the cooling water can exchange heat with the spiral pipe portion of the tube as much as possible.

IPC 8 full level
F28D 7/02 (2006.01)

CPC (source: EP KR US)
F28D 7/024 (2013.01 - EP KR US); **F28D 7/16** (2013.01 - KR); **F28F 9/00** (2013.01 - KR US); **F28F 9/04** (2013.01 - KR);
F28G 15/00 (2013.01 - KR)

Citation (search report)
• [XI] WO 03087677 A2 20031023 - S S RUSTFRI AS [DK], et al
• [X] DE 102007002051 A1 20070726 - VAILLANT GMBH [DE]

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 2679944 A1 20140101; **EP 2679944 B1 20150805**; ES 2548708 T3 20151020; KR 101727914 B1 20170418; KR 20140000939 A 20140106;
US 2013340985 A1 20131226

DOCDB simple family (application)
EP 13164718 A 20130422; ES 13164718 T 20130422; KR 20120068752 A 20120626; US 201313895542 A 20130516