Title (en)

HEAT EXCHANGE UNIT

Title (de)

WÄRMETAUSCHEREINHEIT

Title (fr)

UNITÉ D'ÉCHANGE DE CHALEUR

Publication

EP 3859252 A1 20210804 (EN)

Application

EP 19867489 A 20190924

Priority

- JP 2018184827 A 20180928
- JP 2019037267 W 20190924

Abstract (en)

Provided is a heat exchange unit that uses a flammable refrigerant and is capable of highly reliable refrigerant leakage detection. A heat exchange unit exchanges heat between a liquid medium sent to utilization-side equipment and a flammable refrigerant, to perform at least one of cooling and heating of the liquid medium. The heat exchange unit includes a heat exchanger, a casing, a drain pan (80) arranged below the heat exchanger in a lower part of the casing, and a gas detection sensor (70). The heat exchanger exchanges heat between the refrigerant and the liquid medium. The casing accommodates the heat exchanger. The drain pan has a bottom plate (82) and a side wall (84) extending upward from the bottom plate. The first gas detection sensor detects the presence or absence of refrigerant gas in an internal space (Si) of the drain pan, the internal space being located above the bottom plate of the drain pan and below an upper end part of the side wall of the drain pan.

IPC 8 full level

F25B 49/02 (2006.01); **F24F 1/20** (2011.01); **F24F 1/36** (2011.01); **F25B 1/00** (2006.01)

CPC (source: EP US)

F24F 1/0063 (2019.01 - US); **F24F 5/00** (2013.01 - EP); **F24F 11/36** (2017.12 - EP US); **F24F 13/20** (2013.01 - EP); **F24F 13/222** (2013.01 - EP); F24F 13/20 (2013.01 - US); F24F 13/222 (2013.01 - US); F24F 2013/207 (2013.01 - US); F24F 2013/227 (2013.01 - US); F24F 2110/65 (2017.12 - US); F25B 13/00 (2013.01 - EP); F25B 25/005 (2013.01 - EP); F25B 49/02 (2013.01 - EP)

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)

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DOCDB simple family (application)

EP 19867489 A 20190924; CN 201980063788 A 20190924; JP 2018184827 A 20180928; JP 2019037267 W 20190924; US 201917280571 A 20190924