

Title (en)

HEAT EXCHANGE APPARATUS AND HEAT PUMP APPARATUS

Title (de)

WÄRMEAUSTAUSCHVORRICHTUNG UND WÄRMEPUMPENVORRICHTUNG

Title (fr)

APPAREIL D'ÉCHANGE DE CHALEUR ET APPAREIL DE POMPE À CHALEUR

Publication

**EP 3106783 A1 20161221 (EN)**

Application

**EP 16164946 A 20160412**

Priority

JP 2015116413 A 20150609

Abstract (en)

A heat exchange apparatus according to the present disclosure includes a refrigerant supply source, an ejector, an extractor, a first pump, a second pump, a cooler, and a liquid passage. The first pump is a dynamic pump and disposed on the liquid passage between the extractor and the cooler. The second pump is a positive displacement pump and disposed on the liquid passage between an outlet of the first pump and an inlet of refrigerant liquid of the ejector.

IPC 8 full level

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CPC (source: CN EP US)

**F25B 1/08** (2013.01 - US); **F25B 9/08** (2013.01 - CN); **F25B 30/02** (2013.01 - EP US); **F25B 31/00** (2013.01 - US); **F25B 43/006** (2013.01 - US); **F25B 45/00** (2013.01 - US); **F25B 2341/001** (2013.01 - EP US); **F25B 2341/0014** (2013.01 - EP US); **F25B 2400/16** (2013.01 - EP US)

Citation (applicant)

JP 4454456 B2 20100421

Citation (search report)

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- [A] US 2014053596 A1 20140227 - KOMORI KOU [JP], et al
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EP3502587A4

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 16164946 A 20160412**; CN 201610162015 A 20160321; JP 2016065585 A 20160329; US 201615076649 A 20160322