Title (en)

SUPERCHARGED AIR COOLING UNIT

Title (de)

AUFGELADENE LUFTKÜHLEINHEIT

Title (fr)

UNITÉ DE REFROIDISSEMENT D'AIR SURALIMENTÉ

Publication

EP 3375988 A1 20180919 (EN)

Application

EP 18158318 A 20180223

Priority

JP 2017049825 A 20170315

Abstract (en)

A supercharged air cooling unit comprises: an air supply conduit for allowing supercharged air being supplied from a supercharger to an engine to flow therethrough; an energy recovery device including a first cooling section for allowing working fluid to be subjected to heat exchange with the supercharged air flowing through the air supply conduit to pass therethrough, an expander for receiving the working fluid vaporized in the first cooling section and flowing therefrom, and a power obtaining section for obtaining a power generated by the expander; a cooling device including a second cooling section for allowing cooling medium to be subjected to heat exchange with the supercharged air flowing through the air supply conduit to pass therethrough; and a single casing accommodating the air supply conduit, the first cooling section, and the second cooling section. The air supply conduit, the first cooling section, the second cooling section, and the casing constitute a cooler.

IPC 8 full level

F01K 23/06 (2006.01)

CPC (source: CN EP)

F01K 23/065 (2013.01 - EP); **F02B 29/0406** (2013.01 - CN); **F02B 29/0475** (2013.01 - CN); **F02G 5/00** (2013.01 - CN)

Citation (applicant)

JP 2015200181 A 20151112 - KOBE STEEL LTD, et al

Citation (search report)

- [I] US 2015285103 A1 20151008 - TANAKA YUJI [JP], et al
- [I] JP 2013167241 A 20130829 - HITACHI SHIPBUILDING ENG CO
- [A] US 2015322821 A1 20151112 - ADACHI SHIGETO [JP], et al
- [A] US 2015330262 A1 20151119 - ADACHI SHIGETO [JP], et al

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 3375988 A1 20180919; **EP 3375988 B1 20191016**; CN 108625976 A 20181009; JP 2018155099 A 20181004; KR 20180105578 A 20180928

DOCDB simple family (application)

EP 18158318 A 20180223; CN 201810213904 A 20180315; JP 2017049825 A 20170315; KR 20180028698 A 20180312