

Title (en)
COMPRESSION DEVICE AND METHOD

Title (de)
KOMPRESSIONSVORRICHTUNG UND VERFAHREN

Title (fr)
DISPOSITIF ET PROCÉDÉ DE COMPRESSION

Publication
EP 3698049 A1 20200826 (FR)

Application
EP 18765487 A 20180809

Priority
• FR 1701075 A 20171016
• FR 2018052043 W 20180809

Abstract (en)
[origin: KR20190042464A] Provided are a device and a method for centrifugal compression of a working gas, wherein the device includes: several centrifugal compressors (1, 3) forming several compression stages; and several drive motors (5, 6) for driving the compressors (1, 3). The device includes a gas circuit having a first inlet pipe (13) for the gas to be compressed, connected to an inlet of a first compressor (1). The circuit includes a second pipe (14) connected to an outlet of the first compressor (1), wherein the second pipe (14) is connected to an inlet of a second compressor (3). The circuit includes at least one third cooling pipe (15) having one end connected to the outlet of at least one of the compressors (1, 3) and at least one second end connected to an inlet of at least one motor (5, 6) for cooling thereof. The third cooling pipe (15) includes a first member (2) for cooling the gas and two parallel branches, respectively supplying two distinct motors (5, 6) of the device for their respective cooling. The present invention reduces loss caused by friction between rotors and gas.

IPC 8 full level
F04D 17/12 (2006.01); **F04D 25/06** (2006.01); **F04D 29/58** (2006.01)

CPC (source: EP KR US)
F04D 17/12 (2013.01 - EP KR US); **F04D 25/0606** (2013.01 - EP KR); **F04D 29/5806** (2013.01 - EP KR US); **F25B 1/10** (2013.01 - KR); **F25B 31/006** (2013.01 - KR); **F25B 41/20** (2021.01 - KR); **F25B 41/40** (2021.01 - KR); **F04D 25/024** (2013.01 - US); **F04D 25/0606** (2013.01 - US); **F04D 29/5826** (2013.01 - US); **F04D 29/584** (2013.01 - US)

Citation (search report)
See references of WO 2019077213A1

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)
FR 3072429 A1 20190419; **FR 3072429 B1 20200619**; AU 2018350939 A1 20200521; AU 2018350939 B2 20240104; CA 3084428 A1 20190425; CN 111226042 A 20200602; CN 111226042 B 20221104; EP 3698049 A1 20200826; JP 2020537088 A 20201217; JP 7124096 B2 20220823; KR 102498687 B1 20230209; KR 20190042464 A 20190424; US 11519425 B2 20221206; US 2020271129 A1 20200827; WO 2019077213 A1 20190425

DOCDB simple family (application)
FR 1701075 A 20171016; AU 2018350939 A 20180809; CA 3084428 A 20180809; CN 201880067376 A 20180809; EP 18765487 A 20180809; FR 2018052043 W 20180809; JP 2020542202 A 20180809; KR 20180122269 A 20181015; US 201816756827 A 20180809