Title (en)
Two-stage compression cycle

Title (de)
Zweistufiger Kompressionszyklus

Title (fr)
Cycle de compression à deux étages

Publication
EP 2863151 B1 20191002 (EN)

Application
EP 14188877 A 20141014

Priority
JP 2013216944 A 20131018

Abstract (en)
[origin: EP2863151A2] An object is to provide a two-stage compression system that has no need for oil equalization between a lower-stage compressor and a higher-stage compressor, which makes it possible to simplify the configuration, and that makes it possible to reliably ensure appropriate oil levels in both the lower-stage compressor and the higher-stage compressor. In a two-stage compression system (1) in which a lower-stage compressor (2) and a higher-stage compressor (3) are disposed in series, and an oil separator (7) is provided on a discharge side of the higher-stage compressor (3), a first oil-returning circuit (11) and a second oil-returning circuit (12), which are independent of each other, are provided so as to be connected between the oil separator (7) and the lower-stage compressor (2) and the higher-stage compressor (3), and V1 > V2 is satisfied, assuming that the volume of oil returned to the lower-stage compressor (2) from the first oil-returning circuit (11) is V1, and the volume of oil returned to the higher-stage compressor (3) from the second oil-returning circuit (12) is V2.

IPC 8 full level
F25B 1/10 (2006.01); F25B 31/00 (2006.01); F25B 41/00 (2006.01)

CPC (source: EP US)
F25B 1/10 (2013.01 - EP US); F25B 31/004 (2013.01 - EP); F25B 41/40 (2021.01 - EP US); F25B 2400/072 (2013.01 - EP); F25B 2400/075 (2013.01 - EP)

Cited by
CN105758066A; CN108444137A; CN110325803A; CN106766371A; EP3385640A4; US11428226B2; US11415342B2; US11428225B2; US11994127B2

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

DOCDB simple family (publication)
EP 2863151 A2 20150422; EP 2863151 A3 20150729; EP 2863151 B1 20191002; JP 2015078804 A 20150423; JP 6301101 B2 20180328

DOCDB simple family (application)
EP 14188877 A 20141014; JP 2013216944 A 20131018