

Title (en)
A heat pump system for a laundry dryer

Title (de)
Wärmepumpensystem für Wäschetrockner

Title (fr)
Système de pompe à chaleur pour sèche-linge

Publication
EP 2551401 A1 20130130 (EN)

Application
EP 11175681 A 20110728

Priority
EP 11175681 A 20110728

Abstract (en)
The present invention relates to a heat pump system for a laundry dryer, said heat pump system comprises a refrigerant circuit (10) for a refrigerant and an air stream circuit (12) for an air stream. The refrigerant circuit (10) includes a compressor (14), a first heat exchanger (16), lamination means (18) and a second heat exchanger (22) connected in series and forming a loop. The air stream circuit (12) includes the first heat exchanger (16), a laundry drum (26), at least one air stream fan (26) and the second heat exchanger (22) connected in series and forming a closed loop. The refrigerant circuit (10) and the air stream circuit (12) are thermally coupled by the first heat exchanger (16) and the second heat exchanger (22). The compressor (14) is formed as a multi-stage compressor or as a plurality of serial compressors. The refrigerant circuit (10) includes at least one series of further lamination means (20) and a third heat exchanger (24). The compressor (14) includes an intermediate connection arranged between the stages of the multi-stage compressor or between the serial compressors, respectively. The inlet of the further lamination means (20) is connected to the outlet of the first heat exchanger (16). The outlet of the third heat exchanger (24) is connected to the intermediate connection of the compressor (14).

IPC 8 full level
D06F 58/20 (2006.01)

CPC (source: EP US)
D06F 58/206 (2013.01 - EP US)

Citation (search report)

- [IA] EP 1811077 A1 20070725 - SANYO ELECTRIC CO [JP]
- [A] US 2005044744 A1 20050303 - TADANO MASAYA [JP], et al
- [A] EP 2251622 A1 20101117 - DAIKIN IND LTD [JP]
- [A] DE 19738735 A1 19990311 - BOSCH SIEMENS HAUSGERAETE [DE]
- [A] EP 1983095 A2 20081022 - V ZUG AG [CH]
- [A] EP 2060671 A1 20090520 - ELECTROLUX HOME PROD CORP [BE]

Cited by
JP2017528171A; ITPR20130106A1; CN110876272A; CN106868831A; US2014109428A1; CN105734936A; CN105297370A; EP3150758A4; US10633784B2; US9803313B2; WO2015180228A1; WO2015101860A1; WO2014127842A1

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 2551401 A1 20130130; WO 2013014137 A1 20130131

DOCDB simple family (application)
EP 11175681 A 20110728; EP 2012064458 W 20120724