

Title (en)

LAUNDRY DRYER INCLUDING A HEAT PUMP SYSTEM

Title (de)

WÄSCHETROCKNER MIT EINEM WÄRMEPUMPENSYSTEM

Title (fr)

SÈCHE-LINGE COMPRENANT UN SYSTÈME DE POMPE À CHALEUR

Publication

EP 3617390 A1 20200304 (EN)

Application

EP 18191843 A 20180830

Priority

EP 18191843 A 20180830

Abstract (en)

The invention relates to a dryer (1) including# A treating chamber (3) where items are introduced and treated with a process air flow;# a heat pump system (30) having a refrigerant circuit in which a refrigerant can flow, said refrigerant circuit including a first heat exchanger (32) where the refrigerant is heated up, a second heat exchanger (31) where the refrigerant is cooled off, a compressor (33) to pressurize and circulate the refrigerant through the refrigerant circuit, and a pressure-lowering device; said first and/or second heat exchanger (32, 31) being apt to perform heat exchange between said refrigerant flowing in said refrigerant circuit and said process air; the refrigerant being a flammable refrigerant;# wherein each of said first and second heat exchanger (32, 31): ■ is a finned tube heat exchanger comprising a tube (40) having multiple sections (41) one above the other and a plurality of fins (50); ■ is divided in three portions: a central portion (60) wherein said multiple sections (41) of the tube are in contact with said plurality of fins (50), and a first and second end portions (61, 62) where said tube (40) is not in contact with the plurality of fins (50);# and wherein a ratio between a total external volume (TEV2) of all sections of the tube included in the central portion (60) in contact with the plurality of fins of the second heat exchanger (31) and a total external volume (TEV1) of all sections of the tube included in the central portion (60) in contact with the plurality of fins of the first heat exchanger (32) has a value lower than 0.95.

IPC 8 full level

D06F 58/20 (2006.01)

CPC (source: CN EP US)

D06F 58/02 (2013.01 - CN); **D06F 58/206** (2013.01 - CN EP US); **F25B 39/00** (2013.01 - EP); **F28D 1/0477** (2013.01 - EP); **F28F 1/32** (2013.01 - EP); **F25B 30/02** (2013.01 - EP); **F25B 2400/12** (2013.01 - EP); **F25B 2500/01** (2013.01 - EP); **F28D 2021/0038** (2013.01 - EP)

Citation (applicant)

EP 3066406 B1 20180110 - BSH HAUSGERAETE GMBH [DE]

Citation (search report)

- [YD] EP 3066406 B1 20180110 - BSH HAUSGERAETE GMBH [DE]
- [Y] WO 2014146704 A1 20140925 - ELECTROLUX APPLIANCES AB [SE]
- [XA] EP 2980305 A1 20160203 - MIELE & CIE [DE]
- [Y] EP 2881514 A1 20150610 - MIELE & CIE [DE]

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 3617390 A1 20200304; **EP 3617390 B1 20220316**; AU 2019213457 A1 20200319; CN 110872776 A 20200310; CN 110872776 B 20240213; PL 3617390 T3 20220711

DOCDB simple family (application)

EP 18191843 A 20180830; AU 2019213457 A 20190812; CN 201910815721 A 20190830; PL 18191843 T 20180830