

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 3617393 B1 20220302 (EN)

Application
EP 18191847 A 20180830

Priority
EP 18191847 A 20180830

Abstract (en)
[origin: EP3617393A1] The present 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 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 of the tube (40) are in contact with said plurality of fins (50), and a first and second end portions where said tube is not in contact with the plurality of fins; ■ defines a thickness (tevap, tcondens) of said central portion (60) along a thickness direction (Y);# and wherein the value of the ratio (tcondens/tevap) between a thickness of the central portion (60) of the second heat exchanger (31) and a thickness of the central portion (60) of the first heat exchanger (31) is lower than 1.

IPC 8 full level
D06F 58/20 (2006.01)

CPC (source: CN EP US)
D06F 58/20 (2013.01 - CN); **D06F 58/206** (2013.01 - CN EP US); **F28D 1/0477** (2013.01 - EP); **F28F 1/32** (2013.01 - EP); **F25B 1/00** (2013.01 - EP); **F25B 39/00** (2013.01 - EP); **F25B 2400/12** (2013.01 - EP); **F25B 2500/01** (2013.01 - EP)

Cited by
EP3896210A1; EP3896211A1; US2022282424A1; US11814781B2

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 3617393 A1 20200304; **EP 3617393 B1 20220302**; AU 2019208188 A1 20200319; CN 110872782 A 20200310; CN 110872782 B 20230801; PL 3617393 T3 20220620

DOCDB simple family (application)
EP 18191847 A 20180830; AU 2019208188 A 20190723; CN 201910801465 A 20190828; PL 18191847 T 20180830