

Title (en)
DRUM-TYPE WASHING MACHINE

Title (de)
TROMMELWASCHMASCHINE

Title (fr)
MACHINE À LAVER À TAMBOUR

Publication
EP 2781640 A4 20150225 (EN)

Application
EP 12850049 A 20121108

Priority
• JP 2011248318 A 20111114
• JP 2012007178 W 20121108

Abstract (en)
[origin: EP2781640A1] A drum-type washing machine according to the present invention includes: a rotary drum which is formed in a bottomed cylindrical shape; a water tub which houses the rotary drum; a water circulation system which causes a circulation pump to circulate washing water in the water tub through a circulation path connected to the water tub; a motor which drives the rotary drum; a load detector which detects a load on the circulation pump; and a controller which controls at least one of a washing step and a rinsing step. Further, when the load detector detects a predetermined change in load of the circulation pump while the motor and the circulation pump are being driven, the controller stops driving the motor and stops a function of the circulation pump. Consequently, it is possible to prevent bubbles and air from entering the circulation pump, and prevents excessive bubbling or noise from being caused.

IPC 8 full level
D06F 25/00 (2006.01); **D06F 33/02** (2006.01); **D06F 33/36** (2020.01); **D06F 34/18** (2020.01); **D06F 39/06** (2006.01); **D06F 39/08** (2006.01); **D06F 34/10** (2020.01)

CPC (source: CN EP US)
D06F 33/36 (2020.02 - CN EP US); **D06F 34/18** (2020.02 - CN EP US); **D06F 34/10** (2020.02 - CN EP US); **D06F 39/083** (2013.01 - CN EP US); **D06F 2103/18** (2020.02 - CN EP US); **D06F 2103/48** (2020.02 - CN EP US); **D06F 2105/06** (2020.02 - CN EP US); **D06F 2105/46** (2020.02 - CN EP US)

Citation (search report)
• [A] JP 2011041741 A 20110303 - TOSHIBA CORP, et al
• [A] JP 2009261673 A 20091112 - TOSHIBA CORP, et al
• [A] EP 2169105 A1 20100331 - PANASONIC CORP [JP]
• See references of WO 2013073140A1

Cited by
RU2701256C1; EP3783143A4; US2021087734A1; US2021277562A1; US11970807B2; EP3819420A4; EP3214218A4; US11821127B2; WO2018007144A1; WO2020009530A1; WO2018007149A1; US11905637B2; US10541607B2; US10811964B2; US11193227B2; US11578447B2; US11753760B2

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 2781640 A1 20140924; EP 2781640 A4 20150225; CN 103930609 A 20140716; CN 103930609 B 20160106; JP WO2013073140 A1 20150402; WO 2013073140 A1 20130523

DOCDB simple family (application)
EP 12850049 A 20121108; CN 201280055632 A 20121108; JP 2012007178 W 20121108; JP 2013544115 A 20121108