

Title (en)
Sorting apparatus

Title (de)
Sortiervorrichtung

Title (fr)
Appareil de tri

Publication
EP 2384824 B1 20130313 (EN)

Application
EP 11159107 A 20110322

Priority
JP 2010079064 A 20100330

Abstract (en)
[origin: EP2384824A1] A sorting apparatus has a cylindrical rotary drum (2) for sorting targets supplied to the inside thereof, wherein the cylinder axis of the cylindrical form intersects the vertical direction; and a driving system (3) for rotating the rotary drum around the cylinder axis. The rotary drum includes sorting plates (10), each of which extends along the cylinder axis, wherein the sorting plates are arranged so as to form a circle around the cylinder axis; and a forcing and supporting mechanism (20) for rotatably supporting a base end portion (11a) of each sorting plate, and forcing a head portion (11b) of the sorting plate outward in the radial direction of the rotary drum, where said end portion and said head portion are defined in the rotation direction of the rotary drum. The head portion of each sorting plate overlaps the base end portion of another sorting plate adjacent to said sorting plate in the rotation direction via a gap. In the sorting, among the targets, each having a thickness less than or equal to a predetermined value passes through the gap while each which is caught in the gap and moves upward is released from the forcing by the forcing and supporting mechanism by the weight of the head portion of the sorting plate which forms said gap, and falls down. The sorting apparatus also has a plate receiving wheel (40) which is provided inside the rotary drum, has a rotation axis which extends along the cylinder axis, and has three or more reception plates which extend from the rotation axis and are arranged circularly around the rotation axis and separately from each other. The plate receiving wheel rotates around the rotation axis in the same direction as the rotation direction of the rotary drum in a manner such that a space is provided between the plate receiving wheel and the sorting plates.

IPC 8 full level
B07C 5/04 (2006.01); **B07C 1/12** (2006.01); **B07C 1/16** (2006.01); **B07C 5/06** (2006.01); **B07C 5/12** (2006.01); **B65G 47/57** (2006.01)

CPC (source: EP)
B07C 1/16 (2013.01)

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 2384824 A1 20111109; EP 2384824 B1 20130313; DK 2384824 T3 20130610; JP 2011206735 A 201111020; JP 5640429 B2 20141217

DOCDB simple family (application)
EP 11159107 A 20110322; DK 11159107 T 20110322; JP 2010079064 A 20100330