

Title (en)

Shrink device with container cooling

Title (de)

Schrumpfvorrichtung mit Gebindekühlung

Title (fr)

Dispositif de rétractation avec refroidissement de gerbe

Publication

EP 2551207 B1 20150429 (DE)

Application

EP 12170497 A 20120601

Priority

DE 102011052101 A 20110725

Abstract (en)

[origin: EP2551207A1] The shrinkage device has a transport path (10), an entrance area, a shrinkage tunnel (2) and an outlet area. The transport path serves the uninterrupted transport of the containers (5') through the entrance area, the shrinkage tunnel and the outlet area. A coolant device (20) is arranged in outlet area above the transport path. The transport path comprises a continuous and permeable transport unit for coolant. Another coolant device (25) is arranged below the transport unit in outlet area of the shrinkage device. The coolant is a cooling air flow. An independent claim is included for a method for cooling of containers.

IPC 8 full level

B65B 53/06 (2006.01)

CPC (source: EP)

B65B 53/063 (2013.01); **B65B 2220/24** (2013.01)

Citation (examination)

DE 1586349 A1 19710304 - A W WILISCH KG

Citation (opposition)

Opponent : KHS GmbH

- WO 03093114 A1 20031113 - ROCKWOOL MINERALWOLLE [DE], et al
- FR 2588828 A1 19870424 - SLEEVE INT [FR]
- DE 2156651 A1 19720518
- DE 1586349 A1 19710304 - A W WILISCH KG
- US 3744146 A 19730710 - NICHOLS J
- JP H10327747 A 19981215 - KUREHA CHEMICAL IND CO LTD
- WO 2008110293 A1 20080918 - KHS AG [DE], et al
- DE 2320424 A1 19740314 - LARA SA
- GB 1062349 A 19670322 - ICI LTD
- US 3640049 A 19720208 - FRITZ RICHARD C, et al
- LANGANKI, D. ET AL.: "jede menge zusatznutzen", NEUE VERPACKUNG, 2008, pages 40 - 43, XP055275112
- AGELING, A. ET AL.: "Pressemitteilung KHS", SCREENSHOT- AUSZUG DER ZUR VERÖFFENTLICHUNG BENUTZTEN WEBSITE

Cited by

DE102016213067A1; EP4043354A1; CN114940290A; US11661224B2; WO2018115246A1; EP3423361B2

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)

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DE 102011052101 A1 20130131; DE 102011052101 B4 20231005; SI 2551207 T1 20150831

DOCDB simple family (application)

EP 12170497 A 20120601; CN 201210260644 A 20120725; DE 102011052101 A 20110725; SI 201230259 T 20120601