

Title (en)
FILLING MACHINE COMPRISING AIRFLOW SYSTEM

Title (de)
FÜLLMASCHINE MIT LUFTSTROMSYSTEM

Title (fr)
MACHINE DE REMPLISSAGE COMPRENANT UN SYSTÈME D'ÉCOULEMENT D'AIR

Publication
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Application
EP 22194482 A 20220907

Priority
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Abstract (en)
A paperboard container filling machine (10) comprising an aseptic chamber (30, 40), having: an upper air distribution chamber (35, 45); a lower processing chamber (36, 46) housing processing equipment (32, 42, 49) configured for interacting with paperboard containers passing through the processing chamber; a throughflow plate (37, 47) separating the distribution chamber (9) and the processing chamber (36, 46); and a paperboard container transport sub-system (12) configured for transporting the paperboard containers through the processing chamber along a container transport path (14) from an inlet opening (31, 41) to an outlet opening (33, 43) of the processing chamber. The throughflow plate has a predefined thickness (T) and comprises a plurality of slits (38, 48) configured for directing the air from the air distribution chamber to the processing chamber, the slits having a predefined length (L), a predefined width (W) and a predefined length/width ratio (L/W), wherein said thickness is at least 1.5 times said predefined width, and wherein said predefined length/width ratio is larger than any one of: 4, 6, 8, 10, 15 and 20. A related method is also described.

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CPC (source: EP)
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Citation (search report)

- [IY] WO 2022176907 A1 20220825 - SHIKOKU KAKOKI CO LTD [JP]
- [II] EP 0903297 A1 19990324 - SHIKOKU KAKOKI CO LTD [JP]
- [IJ] JP 2019501086 A 20190117
- [Y] US 6461233 B1 20021008 - GILKISON KEVIN C [US], et al
- [Y] US 6358139 B1 20020319 - RENZ MANFRED [DE]
- [Y] US 2011117828 A1 20110519 - HUANG RONG FUNG [TW]
- [A] US 2007184769 A1 20070809 - LIN XIANG QIAN [SG]
- [A] US 10759643 B2 20200901 - SOELLNER JUERGEN [DE], et al
- [A] DE 102005004658 B3 20060614 - SIG TECHNOLOGY AG [CH]
- [A] US 6368206 B1 20020409 - HUNTER JIM [US], et al
- [A] US 10507500 B1 20191217 - HUNTER JIM [US], et al

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