

Title (en)

IMPROVEMENTS IN OR RELATING TO PACKAGING

Title (de)

VERBESSERUNGEN AN ODER IM ZUSAMMENHANG MIT VERPACKUNGEN

Title (fr)

AMELIORATIONS D'UN EMBALLAGE OU RELATIVES A UN EMBALLAGE

Publication

**EP 2490947 A2 20120829 (EN)**

Application

**EP 10784563 A 20101022**

Priority

- US 27953709 P 20091022
- GB 2010001963 W 20101022

Abstract (en)

[origin: WO2011048385A2] A segregated nitrogen flush system (10) segregates a nitrogen flow arrangement (12) for providing a nitrogen flush, a chemical flow arrangement (16) and a steam flow arrangement (14) for sterilization of the segregated nitrogen flush system. Electronics are segregated from a flow of sanitizing steam or chemical that would harm electronics and other controls. A filter (18) upstream from a nitrogen delivery path (28) provides a resilient transition from nitrogen flow to higher pressure flow of sanitizing steam. Nitrogen flow is commanded through the nitrogen delivery path (28) to a nitrogen flush assembly (22) having a forward nozzle and plenum member for providing nitrogen flush to partially closed cartons. Guide rails are configured to converge to close the cartons increasingly as they index forward. During a second operating mode, sanitizing steam flows through at least the filter. During a third operating mode, sanitizing chemical flows through the chemical flow arrangement (16) to the nitrogen flush assembly (22).

IPC 8 full level

**B65B 3/00** (2006.01); **B65B 31/04** (2006.01)

CPC (source: EP)

**B65B 3/00** (2013.01); **B65B 31/041** (2013.01); **B65B 31/042** (2013.01)

Citation (search report)

See references of WO 2011048385A2

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)

**WO 2011048385 A2 20110428; WO 2011048385 A3 20110818; EP 2490947 A2 20120829**

DOCDB simple family (application)

**GB 2010001963 W 20101022; EP 10784563 A 20101022**