

Title (en)

COOLING HOLES FOR FILM WRAPPED ARTICLES

Title (de)

KÜHLLÖCHER FÜR IN FOLIE EINGEWICKELTE ARTIKEL

Title (fr)

TROUS DE REFROIDISSEMENT POUR ARTICLES EMBALLÉS SOUS FILM

Publication

EP 3434607 A1 20190130 (EN)

Application

EP 18185457 A 20180725

Priority

US 201715660507 A 20170726

Abstract (en)

Holes in the film can be formed after film wrapping the bundle. Slits are formed in the heat shrink film prior to film wrapping the bundle. While the bundle moves through a heat shrink tunnel on a conveyor, the slits can be opened by increasing the shrinkage of the film surrounding the slit. This can be accomplished by directing high speed jets of hot air on the slits. Although slits are preferred the hot air can be used on any opening to increase the size of the opening.

IPC 8 full level

B65B 53/06 (2006.01); **B65B 61/02** (2006.01); **B65B 61/22** (2006.01); **B65D 71/08** (2006.01)

CPC (source: EP US)

B65B 53/063 (2013.01 - EP US); **B65B 61/02** (2013.01 - EP US); **B65B 63/08** (2013.01 - US); **B65D 71/08** (2013.01 - EP US); **B65B 2220/24** (2013.01 - EP US)

Citation (applicant)

US 201313972078 A 20130821

Citation (search report)

- [XAY] EP 0879770 A1 19981125 - UNILEVER PLC [GB], et al
- [Y] US 6820745 B1 20041123 - ONO TADASHI [JP], et al
- [Y] WO 2015026982 A1 20150226 - CERF ALAIN [US]
- [A] WO 0236436 A1 20020510 - NEAGLE CLAUDE ANDREW [US], et al

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3434607 A1 20190130; EP 3434607 B1 20200401; US 2019031382 A1 20190131

DOCDB simple family (application)

EP 18185457 A 20180725; US 201715660507 A 20170726