

Title (en)

METHOD AND SYSTEM FOR MANUFACTURE OF MULTI-SEGMENT ARTICLES OF TOBACCO INDUSTRY

Title (de)

VERFAHREN UND SYSTEM ZUR HERSTELLUNG VON MEHRSEGMENTIGEN STABARTIGEN ARTIKELN DER TABAK VERARBEITENDEN INDUSTRIE

Title (fr)

PROCÉDÉ ET SYSTÈME POUR FABRIQUER D'ARTICLES À SEGMENTS MULTIPLES EN FORME DE TIGE DE L'INDUSTRIE DU TABAC

Publication

EP 3576553 B1 20220511 (EN)

Application

EP 18711684 A 20180130

Priority

- PL 42039117 A 20170203
- IB 2018050561 W 20180130

Abstract (en)

[origin: WO2018142279A1] Method for manufacturing of multi-segment rod-like articles (25, 25', 25'') of the tobacco industry in an apparatus (2) for manufacturing multi-segment rods (6) or segment rods (6', 6'') comprising the steps of: feeding rod-like segments of at least one kind (A, B, C, E, F) constituting a multi-segment rod-like article (25, 25', 25''); putting together rod-like segments (A, B, C, E, F) in a segments train (ST) on a wrapping material (7); manufacturing a continuous segment rod (CR', CR'') or multi-segment rod (CR) containing rod-like segments (A, B, C, E, F) wrapped by the wrapping material (7), whereas the segments are pushed together or cavities are left between the segments; and cutting the continuous segment rod (CR', CR'') or multi-segment rod (CR) into multi-segment rods (6) or segment rods (6', 6'') containing any combination of rod-like segments (A, B, C, E, F), double rod-like segments (A, B, C, E, F) and halves of rod-like segments (A, B, C, E, F), whereas at the time of cutting of the continuous multi-segment rod (CR) the multi-segment rods (6) or the segment rods (6', 6'') move in a longitudinal direction (T1); then changing conveying direction of the multi-segment rod (6) or the segment rod (6', 6'') from the longitudinal direction (T1) to a transverse direction (T2), and fixing the end segments (D) to the multi-segment rods (6) or the segment rods (6', 6''), conveyed in the transverse direction (T2) in an end segment fixing apparatus (3) adapted to manufacture multi-segment rod-like articles (25, 25', 25''). The method is characterised in that after the change of the conveying direction of the multi-segment rod (6) or the segment rod (6', 6'') from the longitudinal direction (T1) to the transverse direction (T2), and before fixing the end segment (D), a step of checking quality the manufactured multi-segment rods (6) or the segment rods (6', 6'') is performed at a measuring unit (9) and defective multi-segment rods (6) or the segment rods (6', 6'') are rejected, next feeding the multi-segment rods (6) or the segment rods (6', 6'') to a compensation unit (13) for storing the multi-segment rods (6) or the segment rods (6', 6'') and for compensating the rejection of the multi-segment rods (6) or the segment rods (6', 6''), and then feeding the multi-segment rods (6) or the segment rods (6', 6'') from the compensation unit (13) to the end segment fixing apparatus (3) so that the end segment fixing apparatus (3) is continuously fed with the multi-segment rods (6) or the segment rods (6', 6'').

IPC 8 full level

A24C 5/34 (2006.01); **A24C 5/47** (2006.01); **A24D 3/02** (2006.01)

CPC (source: EP KR RU US)

A24C 5/1835 (2013.01 - US); **A24C 5/34** (2013.01 - EP KR RU); **A24C 5/345** (2013.01 - US); **A24C 5/47** (2013.01 - EP); **A24C 5/475** (2013.01 - EP KR); **A24D 3/02** (2013.01 - EP); **A24D 3/0295** (2013.01 - EP KR); **A24C 5/28** (2013.01 - US); **A24C 5/475** (2013.01 - US); **A24D 3/0229** (2013.01 - US); **A24D 3/0295** (2013.01 - US)

Citation (opposition)

Opponent : G.D S.p.A.

- US 5666976 A 19970916 - ADAMS JOHN M [US], et al
- US 2007117700 A1 20070524 - KUSHIHASHI SHIGENOBU [JP], et al
- EP 3193642 B1 20191106 - PHILIP MORRIS PRODUCTS SA [CH]
- WO 2015158522 A1 20151022 - HAUNI MASCHINENBAU AG [DE]
- WO 2017187502 A1 20171102 - JAPAN TOBACCO INC [JP]

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 2018142279 A1 20180809; BR 112019016110 A2 20200414; CN 110234240 A 20190913; CN 110234240 B 20220729; EP 3576553 A1 20191211; EP 3576553 B1 20220511; JP 2020513787 A 20200521; KR 102546260 B1 20230620; KR 20190106999 A 20190918; PL 234278 B1 20200131; PL 420391 A1 20180813; RU 2019123214 A 20210303; RU 2019123214 A3 20210429; RU 2748505 C2 20210526; US 2020015512 A1 20200116

DOCDB simple family (application)

IB 2018050561 W 20180130; BR 112019016110 A 20180130; CN 201880009554 A 20180130; EP 18711684 A 20180130; JP 2019542118 A 20180130; KR 20197017484 A 20180130; PL 42039117 A 20170203; RU 2019123214 A 20180130; US 201816469144 A 20180130