

Title (en)

PACKAGE, PACKAGE MANUFACTURING METHOD, AND THREAD WINDING DEVICE

Title (de)

VERPACKUNG, HERSTELLUNGSVERFAHREN FÜR VERPACKUNG UND FÄDENWICKELVORRICHTUNG

Title (fr)

EMBALLAGE, PROCÉDÉ DE FABRICATION D'EMBALLAGE ET DISPOSITIF D'ENROULEMENT DE FIL

Publication

EP 3640174 A4 20210310 (EN)

Application

EP 18816974 A 20180601

Priority

- JP 2017117710 A 20170615
- JP 2018021233 W 20180601

Abstract (en)

[origin: EP3640174A1] To improve unwindability and suppress the latching in the package. The package 7 includes a winding tube 6 having no initial level difference and having both ends flangeless, and a yarn 4 wound around it. The yarn 4 includes a first step 7A and a second step 7B arranged with each other in a longitudinal direction of the winding tube 6. The second step 7B has a diameter larger than that of the first step 7A. The yarn 4 includes a first yarn layer 51 and a second yarn layer 53 alternately layered with each other. The first yarn layer 51 is wound with a width (A) from a reference end (P) corresponding to the first step 7A and the second step 7B. The second step 7B is wound with a width (B) narrower than the width (A) only corresponding to the second step 7B.

IPC 8 full level

B65H 55/04 (2006.01); **B65H 54/28** (2006.01); **B65H 54/32** (2006.01); **B65H 54/48** (2006.01); **B65H 54/553** (2006.01); **B65H 57/28** (2006.01)

CPC (source: EP)

B65H 54/2809 (2013.01); **B65H 54/32** (2013.01); **B65H 54/48** (2013.01); **B65H 55/04** (2013.01); **B65H 2701/31** (2013.01)

Citation (search report)

- [XYI] CH 562156 A5 19750530 - METTLER FR SOEHNE AG MASCHINEN
- [X] CH 544717 A 19740115 - METTLER SOEHNE MASCHF [CH]
- [YA] CH 425572 A 19661130 - METTLER SOEHNE MASCHF [CH]
- [Y] JP H07125920 A 19950516 - MURATA MACHINERY LTD
- [A] DE 4009370 A1 19910926 - GEBALD GREGOR [DE], et al
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Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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