

Title (en)  
METHOD FOR MAKING A SELF-SUPPORTING WIRE PACKAGE

Publication  
**EP 0334211 B1 19920826 (DE)**

Application  
**EP 89104728 A 19890316**

Priority  
DE 3809635 A 19880322

Abstract (en)  
[origin: EP0334211A1] Method for producing a self-supporting bundle from strand-like material, this strand-like material being wound in a plurality of layers onto an essentially conical winding reel. The layers are inclined relative to the longitudinal axis of the winding reel. The first layer contains N1 turns, whilst the next layer, wound in the same direction as the first layer, contains N1 + DELTA N turns. The number of turns in each winding layer wound in the same direction is increased in the same way, until the total number of possible turns at the selected winding pitch is reached.  
<IMAGE>

IPC 1-7  
**B65H 49/02**; **B65H 54/32**; **B65H 55/04**; **B65H 57/18**

IPC 8 full level  
**B65H 49/02** (2006.01); **B65H 54/32** (2006.01); **B65H 55/04** (2006.01); **B65H 57/18** (2006.01)

CPC (source: EP)  
**B65H 49/02** (2013.01); **B65H 54/325** (2013.01); **B65H 55/04** (2013.01); **B65H 57/18** (2013.01); **B65H 2701/312** (2013.01)

Cited by  
CN110887728A; DE10016518B4; US6062506A; EP2669228A3; EP2669227A3; DE4010005A1; DE102006018428B4; DE102006018428B8; DE202006021292U1; DE102012024450A1; WO9413569A1; WO2014090408A1; WO0175909A1; WO0162652A1

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**EP 0334211 A1 19890927**; **EP 0334211 B1 19920826**; AT E79829 T1 19920915; CN 1027749 C 19950301; CN 1036542 A 19891025; DD 283592 A5 19901017; DD 297944 A5 19920130; DE 3809635 A1 19891005; DE 3809635 C2 19910110; DE 3809635 C3 19960620; DE 3844964 C2 19970213; DE 58902107 D1 19921001; JP H0238271 A 19900207; JP H0725480 B2 19950322

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**EP 89104728 A 19890316**; AT 89104728 T 19890316; CN 89101756 A 19890321; DD 32675389 A 19890320; DD 34049589 A 19890320; DE 3809635 A 19880322; DE 3844964 A 19880322; DE 58902107 T 19890316; JP 6649389 A 19890320