

Title (en)  
WATER NEEDLING DEVICE

Title (de)  
WASSERVERNADELUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF D'AIGUILLETAGE PAR JET D'EAU

Publication  
**EP 1797229 A1 20070620 (DE)**

Application  
**EP 05792073 A 20050910**

Priority  
• EP 2005009758 W 20050910  
• DE 102004049146 A 20041007

Abstract (en)  
[origin: US2007261220A1] In a former known hydrodynamic needling device the material web which is meant to be consolidated or finished shall be drawn-in totally or just partly, thus automatically, by an auxiliary material-web drawing-in device. The auxiliary device can work with a frontrunner which is affixed at the beginning of the material web, and which is retracted into the whole machine, or only one part of the non-accessible, if applicable, rollers are driven round by an auxiliary device and the material web is therewith threaded in the provided material-web track.

IPC 8 full level  
**D04H 18/04** (2012.01)

CPC (source: EP US)  
**B65H 20/00** (2013.01 - EP US); **D04H 18/04** (2013.01 - EP US); **B65H 2301/522** (2013.01 - EP US)

Citation (search report)  
See references of WO 2006039970A1

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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**US 2007261220 A1 20071115; US 7500294 B2 20090310**; AT E421605 T1 20090215; CN 1957127 A 20070502; CN 1957127 B 20110629; DE 102004049146 A1 20060413; DE 502005006548 D1 20090312; EP 1797229 A1 20070620; EP 1797229 B1 20090121; ES 2319215 T3 20090505; JP 2008516097 A 20080515; PL 1797229 T3 20090630; WO 2006039970 A1 20060420

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