

Title (en)

METHOD OF PRODUCING A THICK, THERMOFORMABLE, FIBER-REINFORCED SEMI-FINISHED PRODUCT

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES DICKEN, THERMOPLASTISCH VERFORMBAREN, FASERVERSTÄRKTEN HALBZEUGS

Title (fr)

PROCEDE DE FABRICATION D'UN DEMI-PRODUIT EPAIS RENFORCE PAR FIBRES A DEFORMABILITE THERMOPLASTIQUE

Publication

**EP 1372940 A1 20040102 (DE)**

Application

**EP 02727385 A 20020309**

Priority

- DE 10114553 A 20010324
- EP 0202608 W 20020309

Abstract (en)

[origin: DE10114553A1] The invention relates to a continuous method of producing a thick, thermoformable, from a thermoplastic material and reinforcing fibers. The inventive method comprises the following steps: A) blending thermoplastic fibers and reinforcing fibers to give a dry-laid blended web, B) consolidating the blended web by needle felting, C) heating the consolidated blended web, and D) compacting it to give a semi-finished product.

[origin: DE10114553A1] Thermoplastic and non-bound synthetic reinforcing fibers, 20-80mm long are continuously laid down by an air lay-up or carding method to produce a fleece which is then needled. The fleece is heated to above the softening point of the thermoplastic fibers either in an air circulation oven or by infra-red radiation. Consolidation of the fleece into a glass mat reinforced thermoplastic sheet (GMT) is effected on either a laminating machine, a polishing stack or a calender. Functional layers are simultaneously or subsequently pressed onto the sheet.

IPC 1-7

**B29C 70/08**; **B29B 11/16**; **B29C 70/46**; **B29C 70/50**; **D04H 13/00**

IPC 8 full level

**B29B 15/10** (2006.01); **B29C 70/46** (2006.01); **B29C 70/50** (2006.01); **D04H 1/4218** (2012.01); **D04H 1/485** (2012.01)

CPC (source: EP US)

**B29B 15/12** (2013.01 - EP US); **B29C 70/465** (2013.01 - EP US); **B29C 70/506** (2013.01 - EP US); **D04H 1/4218** (2013.01 - EP US); **D04H 1/485** (2013.01 - EP US)

Citation (search report)

See references of WO 02076711A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**DE 10114553 A1 20020926**; EP 1372940 A1 20040102; US 2004112501 A1 20040617; US 7132025 B2 20061107; WO 02076711 A1 20021003

DOCDB simple family (application)

**DE 10114553 A 20010324**; EP 0202608 W 20020309; EP 02727385 A 20020309; US 47253003 A 20031024