

Title (en)

Process for working a pile in a pre-needling apparatus and apparatus for doing so

Title (de)

Verfahren zum arbeiten ein Vliess mit einem Vernadelungmaschine und Maschine

Title (fr)

Procédé pour ouvrir une nappe dans un appareillage de pré-aiguilletage, et installation mettant en oeuvre un tel procédé

Publication

EP 1736585 A1 20061227 (FR)

Application

EP 06290966 A 20060614

Priority

FR 0506303 A 20050622

Abstract (en)

The method involves executing an elliptic type combined movement in a pre-needling apparatus (3), where the combined movement includes back-and-forth movement and a forward movement of pre-needling needles (47). The forward movement of the needles is utilized for providing a movement to a stack of the apparatus (3) for allowing the introduction of the stack in a consolidation apparatus (2). The stack is directly passed from the apparatus (3) to the apparatus (2), where the apparatuses (2, 3) are combined in a common case (11) for forming a single machine. An independent claim is also included for an installation for working a stack in a pre-needling apparatus.

IPC 8 full level

D04H 18/00 (2012.01)

CPC (source: EP US)

D04H 18/02 (2013.01 - EP US)

Citation (search report)

- [A] FR 2525642 A1 19831028 - DILO KG MASCHF OSKAR [DE]
- [A] US 5909883 A 19990608 - JOURDE BERNARD [FR], et al
- [A] US 5873152 A 19990223 - JOURDE BERNARD [FR], et al
- [A] US 6161269 A 20001219 - DILO JOHANN PHILIPP [DE], et al
- [A] FR 2738846 A1 19970321 - DILO KG MASCHF OSKAR [DE]
- [A] US 5636420 A 19970610 - JOURDE BERNARD [FR], et al
- [A] FR 2663961 A1 19920103 - ASSELIN ETS [FR]

Cited by

CN104141200A

Designated contracting state (EPC)

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)

EP 1736585 A1 20061227; CN 1891883 A 20070110; FR 2887565 A1 20061229; FR 2887565 B1 20070824; US 2006288548 A1 20061228

DOCDB simple family (application)

EP 06290966 A 20060614; CN 200610105464 A 20060622; FR 0506303 A 20050622; US 21862705 A 20050906