

Title (en)
METHOD FOR PRODUCING A NON-WOVEN FIBRE FABRIC

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES VLESSES AUS FASERN

Title (fr)
PROCEDE DE PRODUCTION D'UN NON-TISSE A PARTIR DE FIBRES

Publication
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Application
EP 99939910 A 19990618

Priority

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Abstract (en)
[origin: DE19827567A1] To produce a nonwoven material (44) from fibers, with perforated hole structures (36) over the whole cross section of the material (44), a perforation mechanism (22,26) has facing surfaces (24,28) for the fiber web (18) to move between them. The surface (24) of one unit (22) has a number of spikes (30) pointing at the fiber web. The surface (28) of the facing unit (26) has openings (32), where the spikes (30) can pass through and displace the fibers without damage to form the opening structures (36) in the nonwoven. The fiber web (18) is converted into a nonwoven (44) at the station (38) where it is bonded with heat directly after the perforation structure (36) has been formed. The openings (32) in the lower surface (28) are linked to an underpressure and overpressure system (34), such as with a fan, so that fibers (14) from the web (18) which lie in the shaped openings (32) are cleared by blowing or suction. The lower unit (26) is a perforated belt or a calender roller. The upper unit is a roller (22) with a dia. of 100-500 mm, or it is a plate with an up and down movement. The spikes (30) at the roller (22) are cone-shaped, or as involutes, each with a rounded tapering point. The spikes (30) have a length of 2-5 mm. The fibers (14) are pref. staple fibers, or continuous filaments, bicomponent fibers and filaments. An Independent claim is included for a perforated nonwoven material (44) where the perforated hole structures (36) have a dia. of 0.5-5.0 mm. Preferred Features: The bonding point surfaces cover 10-40% of the fabric surface, in a distribution of 60-110 bonding points/cm<2>. The perforation holes (36) are out-of-round. The hole structures (36) in the nonwoven (44) are at irregular gaps from each other.

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