

Title (en)
NOZZLE BODY FOR PRODUCING SUPERFINE LIQUID JET STREAMS ON WATER NEEDLING DEVICES AND A JET NEEDLING METHOD

Title (de)
DÜSENKÖRPER ZUR ERZEUGUNG VON FEINSTEN FLÜSSIGKEITSSTRAHLEN AN WASSERVERNADELUNGSEINRICHTUNGEN UND VERFAHREN ZUR STRAHLVERFLECHTUNG

Title (fr)
CORPS A BUSES POUR PRODUIRE DES JETS DE LIQUIDE EXTREMEMENT FINS SUR DES DISPOSITIFS D'ENCHEVETREMENT PAR EAU, ET PROCEDE D'ENTRECROISEMENT PAR JETS

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Application
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Abstract (en)
[origin: WO0115812A1] The water jet streams on a nozzle beam for the hydrodynamic water needling are formed inside a nozzle body (14, 31) which extends over the length of the nozzle beam. The material of the nozzle strip (14) is, in general, made of high-grade steel in which the holes (30) for the nozzle jet streams are punched or drilled. According to the invention, the material of the nozzle body (31) is made of hard metal, ceramic or of a material having similar properties such as sapphire, and the holes are then made using a laser beam or an electrical discharge machining method or a diamond drill. The nozzle body can be provided as a nozzle strip or only as one individual unit that produces the respective water jet stream. This ensures not only a high level of abrasive resistance of the hole edge areas, but very smooth and, in particular, longer hole walls which can also be produced with sharp-edges and without the formation of burrs.

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