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(54) Title: CONTINUOUS ALUMINA FIBER SPUNLACE NONWOVEN PREPARATION DEVICE AND PROCESS

(54) 发明名称: 一种连续氧化铝纤维水刺纸制备装置及工艺

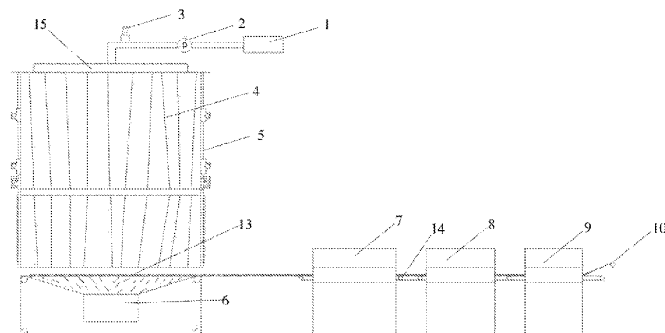


图 1

(57) Abstract: The present invention belongs to the technical field of textile materials. Disclosed are a continuous alumina fiber spunlace nonwoven preparation device and process. The device comprises a storage tank; the storage tank is connected to a spinning die by means of a pipe; a draft device is provided below the spinning die; a negative-pressure suction ventilator is provided below the draft device; a mesh belt is provided between the draft device and the negative-pressure suction ventilator; a conveyor belt drives the mesh belt between the draft device and the negative-pressure suction ventilator to successively pass through a high-temperature furnace, a spunlacing machine and a dryer. Alumina fiber filaments prepared by the present invention are less liable to break, and have lengths of 20% greater than those of common alumina filaments. The spunlacing process is simple and convenient, causes less damage to continuous alumina fibers, involves few impurities during the spunlacing process, and produces flat and smooth surfaces by spunlacing a front surface and a back surface. The tensile strength of the prepared continuous alumina fibers is 38.7% or above greater than that of common chopped fiber paper. Because of lack of a short fiber binder, the surface density can be reduced by 13.2%, achieving the ultra-thin effect.

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MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。

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本国际公布:
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本发明公开了一种连续氧化铝纤维水刺纸制备装置及工艺, 属于纺织材料技术领域。该装置包括储料罐, 所述储料罐通过管道连接有喷丝模具, 喷丝模具的下方设置有牵伸器; 所述牵伸器的下方设置有负压吸风机, 牵伸器与负压吸风机之间设置有网带, 传送带带动所述牵伸器与负压吸风机之间的网带依次经过所述高温炉、水刺机和烘干机。本发明所制备的氧化铝纤维长丝不易断裂, 长度比普通的氧化铝长丝高出20%; 水刺工艺简单方便, 对连续氧化铝纤维损伤较小, 水刺过程中所带入的杂质较少, 经过正反两面水刺之后表面平整光滑; 所制备的连续氧化铝纤维纸抗拉强度相较于普通短切纤维纸要提升38.7%以上; 由于缺少短纤维粘结剂, 面密度能降低13.2%, 达到超轻薄效果。