

Title (en)
NANOFIBER MANUFACTURING DEVICE AND HEAD USED FOR SAME

Title (de)
NANOFASERHERSTELLUNGSVORRICHTUNG UND DAFÜR VERWENDETER KOPF

Title (fr)
DISPOSITIF DE FABRICATION DE NANOFIBRES ET TÊTE UTILISÉE POUR CELUI-CI

Publication
EP 3633083 A4 20210317 (EN)

Application
EP 18805205 A 20180522

Priority
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• JP 2018019627 W 20180522

Abstract (en)
[origin: EP3633083A1] An object of the present invention is to provide an apparatus for producing nanofibers and a nozzle head use for the same which can be manufactured by drilling and is capable of efficiently carrying molten resin on a gas flow. A nozzle head 20 of an apparatus for producing nanofibers 1 comprises a raw material discharge surface 22 on which a raw material flow passage 25 for discharging a liquid raw material is arranged, and a gas discharge surface 23 which is arranged with an angle α ($0 < \alpha \leq 90^\circ$) toward the raw material discharge surface 22 and on which a gas flow passage 26 for ejecting gas is arranged. The raw material flow passage 25 is orthogonal to the raw material discharge surface 22, the gas flow passage 26 is orthogonal to the gas discharge surface 23, and the raw material flow passage 25 and the gas flow passage 26 are arranged so that the liquid raw material discharged from the raw material flow passage 25 meets gas ejected from the gas flow passage 26.

IPC 8 full level
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Citation (search report)
• [Y] WO 0022207 A2 20000420 - UNIV AKRON [US]
• [Y] EP 1088916 A1 20010404 - NIPPON PETROCHEMICALS CO LTD [JP], et al
• [A] JP 2016183435 A 20161020 - SAINT FORCE INC
• [A] JP 2010189778 A 20100902 - PANASONIC CORP
• See references of WO 2018216681A1

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