

Title (en)  
CARBON FIBER BUNDLE AND METHOD FOR MANUFACTURING SAME

Title (de)  
KOHLENSTOFFFASERBÜNDEL UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
FAISCEAU DE FIBRES DE CARBONE ET LEUR PROCÉDÉ DE FABRICATION

Publication  
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Application  
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Abstract (en)  
[origin: EP3653768A1] The carbon fiber bundle of the present invention is a carbon fiber bundle that satisfies a predetermined elastic modulus of strands, a predetermined tensile strength of strands, a predetermined knot strength, and a predetermined average single fiber diameter, in which the probability that a flaw with a size of 50 nm or more exists on the collected fracture surface when performing a single fiber tensile test with a gauge length of 10 mm is a predetermined ratio. Such a carbon fiber bundle is suitably obtained by filtering a spinning dope solution in which a polyacrylonitrile copolymer is dissolved in a solvent, at a predetermined filtration speed, using a filter medium having a predetermined particle retention and a filter basis weight, then spinning the filtered spinning dope solution to obtain a precursor fiber bundle for carbon fiber, and heat-treating the obtained precursor fiber bundle for carbon fiber at an appropriate temperature profile in an oxidizing atmosphere until reaching a predetermined density to obtain an oxidized fiber bundle, and then heat-treating the oxidized fiber bundle at a predetermined temperature in an inert atmosphere. An object of the present invention is to provide a carbon fiber bundle that exhibits excellent tensile strength of strands and elastic modulus of strands in a well-balanced manner and also has excellent knot strength, and a method for manufacturing the same.

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