

Title (en)  
FLAME RESISTANT FIBER BUNDLES, CARBON FIBER BUNDLE PRODUCTION METHOD, AND FLAME RESISTANT FURNACE

Title (de)  
FLAMMFESTE FASERBÜNDEL, VERFAHREN ZUR HERSTELLUNG VON KOHLENSTOFFASERBÜNDELN UND FLAMMFESTER OFEN

Title (fr)  
FAISCEAUX DE FIBRES IGNIFUGES, PROCÉDÉ DE PRODUCTION DE FAISCEAUX DE FIBRES DE CARBONE ET FOUR RÉSISTANT AUX FLAMMES

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Application  
**EP 21770941 A 20210317**

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Abstract (en)  
The present invention aims at efficient production of high quality oxidized fiber bundles and carbon fiber bundles. A production method for an oxidized fiber bundle comprising a step for heat-treating aligned acryl based fiber bundles in an oxidizing atmosphere while turning them back on guide rollers installed on both ends outside the furnace body of a hot gas heating type oxidation furnace wherein: supply nozzles for supplying hot gas into a heat treatment chamber are installed at an end in the traveling direction of the acryl based fiber bundles; a fiber bundle traveling passage(s) exists above and/or below each nozzle; hot gas is supplied from the supply face(s) located above and/or below the acryl based fiber bundle; and the requirements (1) and (2) are satisfied where  $V_f$  is the gas flow speed in a substantially parallel direction to the traveling direction of the acryl based fiber bundle in the fiber bundle traveling passage and  $V$  is the gas flow speed in a substantially parallel direction to the traveling direction of the acryl based fiber bundle in the heat treatment chamber.  $1.5\text{m/s} \leq V_f \leq 15\text{m/s}$   $1.5\text{m/s} \leq V \leq 10\text{m/s}$

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