

Title (en)
OXIDATION FIBER MANUFACTURING METHOD

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER OXIDATIONSFASER

Title (fr)
PROCÉDÉ DE FABRICATION DE FIBRES D'OXYDATION

Publication
EP 3517660 A1 20190731 (EN)

Application
EP 18168095 A 20180418

Priority
TW 107103128 A 20180129

Abstract (en)
The present disclosure mainly uses a transmitting unit to drive the fiber yarn bunch to pass an operation region of the microwave processing unit, and the microwave is focused to perform an ultra-fast pre-oxidization process on the passed fiber yarn bunch, thus processing the fiber yarn bunch to form an oxidation fiber yarn bunch. Not only an oxidization time of an oxidation fiber can be reduced, but also the cross section area of the oxidation layer of the oxidation fiber in the oxidation fiber yarn bunch generated by the microwave focusing oxidization process occupies more than 50 % of the cross section area of the oxidation fiber in the oxidation fiber yarn bunch. Thus, the shell-core structure of the oxidation fiber can be reduced efficiently. Even, the oxidation fiber has no obvious shell-core structure. Accordingly, relatively positive and reliable means for increasing the performance of carbon fiber are provided.

IPC 8 full level
D01F 9/14 (2006.01); **D01F 9/22** (2006.01)

CPC (source: CN EP KR US)
D01D 10/0454 (2013.01 - US); **D01F 9/14** (2013.01 - CN EP US); **D01F 9/145** (2013.01 - CN); **D01F 9/18** (2013.01 - US); **D01F 9/22** (2013.01 - CN KR); **D01F 9/225** (2013.01 - EP US); **D01F 9/32** (2013.01 - US); **D01F 11/16** (2013.01 - EP US); **D06M 10/003** (2013.01 - KR); **D10B 2101/12** (2013.01 - US); **D10B 2211/04** (2013.01 - US); **D10B 2321/10** (2013.01 - US); **D10B 2401/063** (2013.01 - US)

Citation (search report)

- [X] US 2009263295 A1 20091022 - PAULASKAS FELIX L [US], et al
- [I] US 6733737 B1 20040511 - TAN SENG [US], et al
- [A] US 4197282 A 19800408 - BAILLY-LACRESSE JEAN-FRANCOIS [FR], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3517660 A1 20190731; CN 110093685 A 20190806; JP 2019131940 A 20190808; JP 6667568 B2 20200318; KR 20200068527 A 20200615; TW 201932652 A 20190816; TW I695099 B 20200601; US 2019233977 A1 20190801

DOCDB simple family (application)
EP 18168095 A 20180418; CN 201810114753 A 20180202; JP 2018072900 A 20180405; KR 20180156625 A 20181207; TW 107103128 A 20180129; US 201815951341 A 20180412