

Title (en)
METHOD FOR PRODUCING A SINGLE CRYSTAL FROM SEMICONDUCTOR MATERIAL BY THE FZ METHOD; DEVICE FOR CARRYING OUT THE METHOD AND SEMICONDUCTOR SILICON WAFER

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES EINKRISTALLS AUS HALBLEITERMATERIAL GEMÄSS DER FZ-METHODE; VORRICHTUNG ZUR DURCHFÜHRUNG DES VERFAHRENS UND HALBLEITERSCHEIBE AUS SILIZIUM

Title (fr)
PROCÉDÉ DE FABRICATION D'UN MONOCRISTAL EN MATÉRIAU SEMI-CONDUCTEUR SELON LA MÉTHODE FZ ; DISPOSITIF DE MISE EN ŒUVRE DU PROCÉDÉ ET PLAQUETTE SEMI-CONDUCTRICE EN SILICIUM

Publication
EP 3810834 A1 20210428 (DE)

Application
EP 19728955 A 20190604

Priority
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• EP 2019064554 W 20190604

Abstract (en)
[origin: TW202001008A] Method of manufacturing a single crystal of semiconductor material according to the FZ method, apparatus for carrying out the method and silicon semiconductor wafer. The method comprises creating a molten zone between a feed rod and a growing single crystal; melting feed rod material in a high frequency magnetic field of a first induction coil; crystallizing material of the molten zone on top of the growing single crystal; rotating the growing single crystal about an axis of rotation and changing the direction of rotation and the speed of rotation according to a predetermined pattern; and imposing an alternating magnetic field of a second induction coil on the molten zone, wherein the alternating magnetic field is not axisymmetric with respect to the axis of rotation of the growing single crystal.

IPC 8 full level
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CPC (source: EP KR US)
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Designated contracting state (EPC)
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DE 102018210317 A1 20200102; CN 112334605 A 20210205; CN 112334605 B 20221115; EP 3810834 A1 20210428; JP 2021529149 A 20211028; JP 7225270 B2 20230220; KR 102522807 B1 20230417; KR 20210020153 A 20210223; TW 202001008 A 20200101; TW I707991 B 20201021; US 11788201 B2 20231017; US 2021222319 A1 20210722; WO 2020001940 A1 20200102

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