

Title (en)

METHOD AND CRUCIBLE FOR PRODUCING PARTICLE-FREE AND NITROGEN-FREE SILICON INGOTS BY MEANS OF TARGETED SOLIDIFICATION, SILICON INGOT, AND THE USE OF THE CRUCIBLE

Title (de)

VERFAHREN UND TIEGEL ZUR HERSTELLUNG VON PARTIKEL- UND STICKSTOFF-FREIEN SILICIUM-INGOTS MITTELS GERICHTETER ERSTARRUNG, SILICIUM-INGOT UND DIE VERWENDUNG DES TIEGELS

Title (fr)

PROCÉDÉ ET CREUSET PERMETTANT LA PRODUCTION DE LINGOTS DE SILICIUM EXEMPTS DE PARTICULES ET D'AZOTE PAR SOLIDIFICATION ORIENTÉE, LINGOT DE SILICIUM ET UTILISATION DU CREUSET

Publication

EP 3966368 A1 20220316 (DE)

Application

EP 20724460 A 20200505

Priority

- DE 102019206489 A 20190506
- EP 2020062408 W 20200505

Abstract (en)

[origin: WO2020225244A1] The present invention relates to a method and to a crucible for producing particle-free and nitrogen-free silicon ingots by means of targeted solidification, in which method a crucible is provided, the inner surface of the crucible having a coating containing SixNy over its full surface or at least in regions, which coating is coated with a protective layer containing SiOx in order to reduce or prevent the introduction of nitrogen and SixNy particles into the silicon. The invention also relates to a silicon ingot, which is virtually free from nitrogen or SixNy particles.

IPC 8 full level

C30B 11/00 (2006.01); **C30B 29/06** (2006.01); **C30B 35/00** (2006.01)

CPC (source: EP US)

C04B 41/009 (2013.01 - EP); **C04B 41/52** (2013.01 - EP); **C04B 41/89** (2013.01 - EP); **C30B 29/06** (2013.01 - EP US); **C30B 35/002** (2013.01 - EP US); **C04B 2111/00879** (2013.01 - EP)

Citation (search report)

See references of WO 2020225244A1

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)

WO 2020225244 A1 20201112; DE 102019206489 A1 20201112; EP 3966368 A1 20220316; JP 2022531716 A 20220708; US 2022213616 A1 20220707

DOCDB simple family (application)

EP 2020062408 W 20200505; DE 102019206489 A 20190506; EP 20724460 A 20200505; JP 2021566107 A 20200505; US 202017608627 A 20200505