

(19) World Intellectual Property Organization
International Bureau



PCT



(43) International Publication Date
27 December 2007 (27.12.2007)

(10) International Publication Number
WO 2007/148985 A1

(51) International Patent Classification:

C30B 29/06 (2006.01) **C30B 15/00 (2006.01)**
C30B 11/00 (2006.01)

(21) International Application Number:

PCT/NO2007/000219

(22) International Filing Date: 20 June 2007 (20.06.2007)

(25) Filing Language: English

(26) **Publication Language:** English

(30) Priority Data:

60/815,860	23 June 2006 (23.06.2006)	US
------------	---------------------------	----

(71) **Applicant** (*for all designated States except US*): **REC SCANWAFER AS** [NO/NO]; Tormod Gjestlands vei 41, N-3908 Porsgrunn (NO).

(72) Inventors; and

(75) **Inventors/Applicants (for US only): JULSRUD, Stein** [NO/NO]; Gregorius Dagssonsgt. 190, N-3713 Skien (NO). **NAAS, Tyke, Laurence** [NO/NO]; Tårnfjellvn. 33, N-3910 Porsgrunn (NO).

(74) **Agents:** **ONSAGERS AS** et al.; P.O.Box 6963 St. Olavs plass, N-0130 Oslo (NO).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,
ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK,
LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW,
MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,
ZM, ZW.

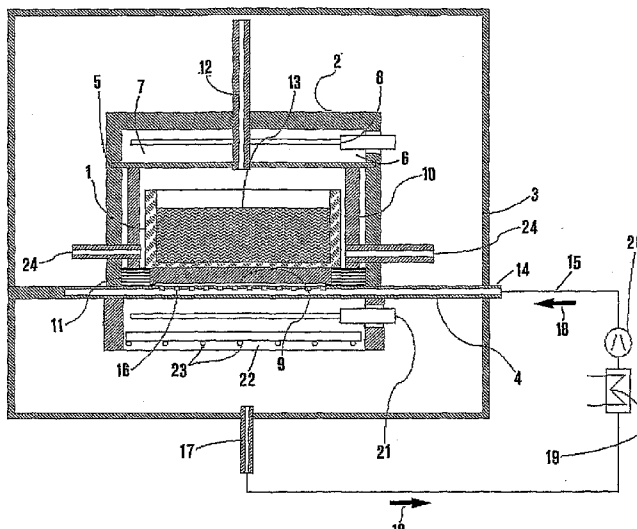
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DEVICE AND METHOD FOR PRODUCTION OF SEMICONDUCTOR GRADE SILICON



(57) Abstract: This invention relates to a device and method for production of ingots of semiconductor grade silicon, including solar grade silicon, where the presence of oxygen in the hot zone is substantially reduced or eliminated by employing materials void of oxides in the hot zone of the melting and crystallisation process. The method may be employed for any known process including for crystallising semiconductor grade silicon ingots, including solar grade silicon ingots, such as the Bridgman process, the block-casting process, and the CZ-process for growth of monocrystalline silicon crystals. The invention also relates to devices for carrying out the melting and crystallisation processes, where the materials of the hot zone are void of oxides.

WO 2007/148985 A1