

Title (en)

METHOD AND DEVICE FOR DRAWING A QUARTZ GLASS CYLINDER FROM A MELT CRUCIBLE

Title (de)

VERFAHREN UND VORRICHTUNG ZUM ZIEHEN EINES QUARZGLASZYLINDERS AUS EINEM SCHMELZTIEGEL

Title (fr)

PROCÉDÉ ET DISPOSITIF D'ÉTIRAGE D'UN CYLINDRE DE VERRE QUARTZEUX À PARTIR D'UN CREUSET DE FUSION

Publication

EP 2445843 A1 20120502 (DE)

Application

EP 10724515 A 20100615

Priority

- EP 2010058359 W 20100615
- DE 102009030852 A 20090626

Abstract (en)

[origin: DE102009030852B3] The method for drawing a quartz glass cylinder from a melting crucible (1), which comprises an inner space (5) that extends in direction to a crucible middle axis (6) and is limited by a side wall and a bottom, comprises supplying silicon dioxide grain (3) into the melting crucible, softening the silicon dioxide grain to a viscous quartz glass mass in the melting crucible, and vertically downwardly removing the softened viscous quartz glass mass as cylindrical quartz glass strand using a first drawing device through a first drawing nozzle (4a) provided in the bottom of the melting crucible. The method for drawing a quartz glass cylinder from a melting crucible (1), which comprises an inner space (5) that extends in direction to a crucible middle axis (6) and is limited by a side wall and a bottom, comprises supplying silicon dioxide grain (3) into the melting crucible, softening the silicon dioxide grain to a viscous quartz glass mass in the melting crucible, vertically downwardly removing the softened viscous quartz glass mass as cylindrical quartz glass strand using a first drawing device through a first drawing nozzle (4a) provided in the bottom of the melting crucible, and producing the quartz glass cylinder from the cylindrical quartz glass strand by cutting. A further cylindrical quartz glass strand is removed using a second drawing device through a second drawing nozzle provided in the bottom of the melting crucible, where the first and second drawing nozzles are spatially arranged from each other, are eccentrically arranged to the crucible middle axis and have a distance of 50 mm from each other. The drawing nozzles are simultaneously distributedly arranged around the crucible middle axis, and lie opposite to the crucible middle axis. The quartz glass strands are removed with first and second mass streams by first and second drawing nozzles respectively, where the first and second mass streams differ around maximum 100%. The opening cross-section of the first and second nozzles is maximum 50 cm $2>$. The first drawing device has a first rolling tractor, which extends itself over a first extending section along the crucible middle axis. The second drawing device has a second rolling tractor, which extends itself over a second extending section along the crucible middle axis. The first and second extending sections do not intersect. An independent claim is included for a device for drawing a quartz glass cylinder from a melting crucible.

IPC 8 full level

C03B 17/04 (2006.01)

CPC (source: EP US)

C03B 17/04 (2013.01 - EP US); **Y02P 40/57** (2015.11 - EP US)

Citation (search report)

See references of WO 2010149530A1

Citation (examination)

- US 4195982 A 19800401 - COUCOULAS ALEXANDER [US], et al
- DE 20221054 U1 20041125 - HERAEUS TENEVO AG [DE]

Designated contracting state (EPC)

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DOCDB simple family (application)

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