

Title (en)

SYSTEM AND METHOD FOR PURIFICATION OF SILANE USING LIQUID NITROGEN IN A POLYSILICON PRODUCTION PROCESS

Title (de)

SYSTEM UND VERFAHREN ZUR REINIGUNG VON SILAN MIT FLÜSSIGEM STICKSTOFF IN EINEM POLYSILICIUMHERSTELLUNGSVERFAHREN

Title (fr)

SYSTÈME ET PROCÉDÉ DE PURIFICATION DE SILANE AU MOYEN D'AZOTE LIQUIDE DANS UN PROCESSUS DE PRODUCTION DE POLYSILICIUM

Publication

**EP 2641044 A1 20130925 (EN)**

Application

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- US 2011059711 W 20111108

Abstract (en)

[origin: WO2012067892A1] A system and method for improved cryogenic cooling of process streams in polysilicon manufacturing is provided. The disclosed system and method provides for the cryogenic cooling of a silane and hydrogen process stream during the manufacture of polysilicon with concurrent recovery of refrigeration capacity from the vaporized nitrogen as well as the recovery of refrigeration capacity from the cold hydrogen stream. The improved cryogenic cooling system and method reduces the overall consumption of liquid nitrogen without sacrificing cooling performance of the cryogenic cooling of the silane and hydrogen process stream.

IPC 8 full level

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CPC (source: EP US)

**C01B 33/035** (2013.01 - EP US); **F25J 3/00** (2013.01 - US); **H02K 21/38** (2013.01 - EP US)

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