

Title (en)

Method and apparatus for controlling surface porosity of metal materials

Title (de)

Verfahren und Vorrichtung zur Steuerung der Oberflächenporosität von Metallmaterialien

Title (fr)

Procédé et appareil de commande de porosité de surface de matériaux métalliques

Publication

EP 2687611 A1 20140122 (EN)

Application

EP 12005250 A 20120717

Priority

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Abstract (en)

Method for controlling surface porosity of a metal material (210), wherein the metal material is first heat treated under an oxidizing atmosphere, so that metal oxide is formed in the metal material, after which the metal material is held under a reducing atmosphere, so that the said oxide is at least partly reduced whereby pores are formed in the metal material. The invention is characterized in that the metal material is brought through, firstly, an annealing device (205a), in which the said heat treatment at least partly takes place and in which the metal material is subjected to the oxidizing atmosphere, and, secondly, a reduction device (205b) in which the metal material is subjected to the said reducing atmosphere, in that the metal material is not subjected to another atmosphere, apart from said oxidizing and said reducing atmospheres, between the oxidizing and reducing atmospheres, and in that gaseous H₂O is caused to be present in a downstream section (211) of the annealing device through which the metal material is conveyed before reaching the reduction device.

IPC 8 full level

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CPC (source: EP)

C21D 1/76 (2013.01); **C21D 8/0278** (2013.01); **C21D 9/561** (2013.01); **C23C 8/14** (2013.01); **C23C 8/18** (2013.01); **C23C 8/80** (2013.01)

Citation (applicant)

- WO 0204145 A2 20020117 - DANIELI TECHNOLOGY INC [US]
- EP 1935508 A1 20080625 - LINDE AG [DE]

Citation (search report)

- [X] DE 102009018683 A1 20101028 - SMS SIEMAG AG [DE]
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Designated contracting state (EPC)

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BA ME

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