

Title (en)

CVD REACTOR AND METHOD FOR CLEANING A CVD REACTOR

Title (de)

CVD-REAKTOR UND VERFAHREN ZUM REINIGEN EINES CVD-REAKTORS

Title (fr)

RÉACTEUR CVD ET PROCÉDÉ DE PURGE D'UN RÉACTEUR CVD

Publication

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Application

EP 17769005 A 20170908

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Abstract (en)

[origin: WO2018046650A1] The invention relates to a cleaning method and a CVD reactor comprising a gas inlet element (1) for introducing a process gas into a process chamber (21) arranged between a process chamber cover (19) and the susceptor (2). The gas inlet element (1) contains at least one metal component (20) which has at least one metal surface, in particular a metal surface made of stainless steel, that comes into contact with the process gas. The metal surface has a passivation layer which prevents the metal components of the metal surface from flaking due to one or more reactive gases. The cooling channels (14, 17) are arranged such that the passivation layer is maximally heated to a second temperature of 100 °C in a cleaning step in which chlorine is introduced into the process chamber (21) as a cleaning gas and in which the susceptor (2) is heated to a first temperature of at least 700 °C. At the same time, the passivation layer is formed by chemically reacting a metal-organic compound with the metal atoms of the metal surface. The cleaning gas inlet openings (6) are arranged such that the cleaning gas comes into contact with the metal surface that has the passivation layer. The passivation layer is produced in a conditioning step in which a metal-organic compound is first supplied to the process chamber (21) together with a carrier gas for a first treatment duration, and then air is brought into contact with the metal component for a second treatment duration.

IPC 8 full level

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Citation (search report)

See references of WO 2018046650A1

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