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本国际公布:
— 包括国际检索报告(条约第 21 条(3))。

(54) Title: EDGE GAS INTAKE DEVICE, SEMICONDUCTOR PROCESS CHAMBER, AND SEMICONDUCTOR PROCESS APPARATUS

(54) 发明名称: 边缘进气装置、半导体工艺腔室及半导体工艺设备

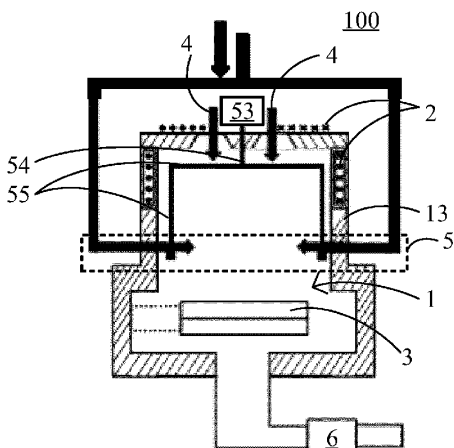


图 1

(57) Abstract: Provided in the present application are an edge gas intake device, a semiconductor process chamber, and a semiconductor process apparatus. The device comprises: a rotating gas intake assembly, which is annular and is rotatable around its own axis; a fixed gas intake assembly, which is annular and is arranged outside the rotating gas intake assembly, wherein a first interface surface on the outer periphery of the rotating gas intake assembly is interfaced with a second interface surface on the inner periphery of the fixed gas intake assembly in a relatively rotatable manner; a first gas intake channel is provided in the rotating gas intake assembly, the first gas intake channel is provided with a first gas inlet in the first interface surface, and a plurality of first gas outlets are provided along the inner periphery of the rotating gas intake assembly; and a second gas intake channel is provided in the fixed gas intake assembly, the second gas intake channel is provided with a second gas outlet in the second interface surface, and the first gas inlet is in communication with the second gas outlet. The present solution can improve the uniformity of distribution of gas into the semiconductor process chamber, thereby enhancing process uniformity.

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(57) 摘要: 本申请提供一种边缘进气装置、半导体工艺腔室及半导体工艺设备, 该装置包括旋转进气组件, 呈环状, 旋转进气组件能够围绕自身轴线旋转; 固定进气组件, 呈环状, 设置在旋转进气组件外侧, 位于旋转进气组件的外周的第一对接面与位于固定进气组件的内周的第二对接面可相对旋转地对接, 旋转进气组件中设置有第一进气通道, 第一进气通道在第一对接面设置有第一进气口, 且沿旋转进气组件的内周设置有多个第一出气口; 固定进气组件中设置有第二进气通道, 第二进气通道在第二对接面设置有第二出气口, 第一进气口与第二出气口相连通。本方案可以提高通入半导体工艺腔室中的气体分布均匀性, 从而可以提高工艺均匀性。