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(54) **Title:** SEMICONDUCTOR PROCESS DEVICE AND PROCESS CHAMBER THEREOF

(54) 发明名称: 半导体工艺设备及其工艺腔室

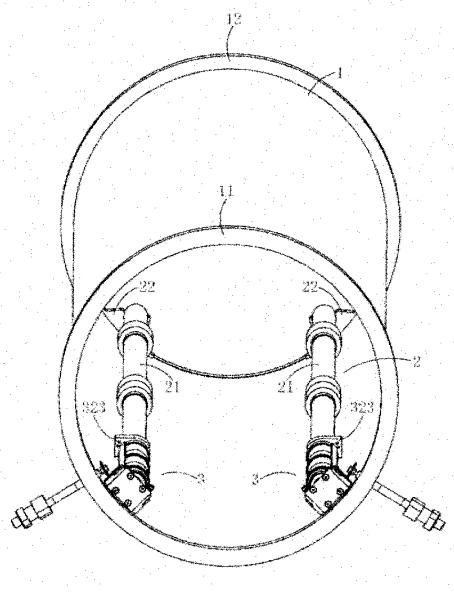


图 1

(57) **Abstract:** Provided in the embodiments of the present application are a semiconductor process device and a process chamber thereof. A front flange and a rear flange of the process chamber are respectively arranged at a furnace mouth and a furnace tail of a furnace tube; a support mechanism is arranged in the furnace tube, and comprises two support rods, which are used for bearing a first wafer boat and a second wafer boat; two first electrode mechanisms are respectively sleeved on first ends of the two support rods, have opposite polarities, are configured to bear a front end of the first wafer boat when the first wafer boat is loaded on the support rod, and are respectively electrically connected to two terminals at the front end of the first wafer boat, so as to introduce electrodes into the first wafer boat; and two second electrode mechanisms are both arranged at the furnace tail of the furnace tube, and are configured to introduce electrodes into the second wafer boat when the second wafer boat is loaded on the support rod. According to the embodiments of the present application, the first electrode mechanisms are prevented from moving along with a cantilever paddle and a furnace door, so that the first electrode mechanisms have simple structures, and the occupied space can be significantly reduced.

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MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

本国际公布:

— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本申请实施例提供了一种半导体工艺设备的工艺腔室。该工艺腔室的前法兰和后法兰分别设置在炉管的炉口和炉尾处；支撑机构设置于炉管内，支撑机构包括有两个支撑杆，支撑杆用于承载第一晶舟及第二晶舟；两个第一电极机构分别套设于两个支撑杆的第一端，并且两个第一电极结构的极性相反，用于在第一晶舟装载于支撑杆上时，承载第一晶舟前端，并且分别与第一晶舟前端的两个端子电连接，以将电极引入至第一晶舟；两个第二电极机构均设置于炉管的炉尾处，用于在第二晶舟装载于支撑杆上时，将电极引入至第二晶舟。本申请实施例实现了避免第一电极结构随悬臂桨及炉门运动，从而不仅使得第一电极机构结构简单，而且还能大幅减小空间占用。