

Title (en)
Gas cabinet

Title (de)
Gaskabinett

Title (fr)
Cabinet de gaz

Publication
EP 1835222 A1 20070919 (DE)

Application
EP 07005328 A 20070315

Priority
DE 102006013942 A 20060317

Abstract (en)

Gas cabinet used in the semiconductor industry, comprises housing (1) in which a gas bottle (9) that is accommodated, is attached to duct system, an inlet port, an outlet port, a flow displacement hollow body, a recess, and an inert gas connection. The duct system is present in the housing and lies in a flow of scavenging air, which enters into the housing through the inlet port and leaves the housing through the outlet port. The housing exhibits a range with a correspondingly reduced cross-section for the delimitation of the flow cross-section. The gas cabinet useful in the semiconductor industry, comprises housing (1) in which a gas bottle (9) that is accommodated, is attached to duct system, an inlet port, an outlet port, a flow displacement hollow body, a recess, and an inert gas connection. The duct system is present in the housing and lies in a flow of scavenging air, which enters into the housing through the inlet port and leaves the housing through the outlet port. The housing exhibits a range with a correspondingly reduced cross-section for the delimitation of the flow cross-section. The gas cabinet is designed in such a manner that the free-flow cross-section of the scavenging air is limited in the housing to a quantity that is needed for a reliable purification. The flow displacement hollow body is accommodated for the delimitation of the flow cross-section in the housing, exhibits the inert gas connection for its purification, exhibits unequal cross-section along its height, and extends up to the region of the gas bottle. In the housing two flow displacement bodies that face one another with an intermediate distance between them are intended. Both the flow displacement hollow bodies protrude into the region of the gas bottle and are provided respectively at their sides facing the gas bottle with the recess, into which the gas bottle protrudes. The recesses in both the flow displacement bodies have the same size. One of the flow displacement bodies is longer in the direction of flow of the scavenging air than the other flow displacement body. The longer flow displacement hollow body has a smaller cross-section in the segment facing the other flow displacement body than in the rest of the segment. The flow displacement body partially separates two flow spaces for scavenging air. Both the flow spaces are separable from each other by closable inlet ports.

Abstract (de)

In der Halbleiterindustrie werden Gaskabinette eingesetzt, in denen sich Gasflaschen (8, 9) mit Gasen befinden, die über ein Leitungssystem (13, 14) Verbrauchern zugeführt werden. Die Gase können giftig, korrosiv oder brennbar sein. Damit als Leckage austretende Gase abgeführt werden, ohne daß sie unkontrolliert an die Umwelt gelangen, muß im freien Querschnitt des Gaskabinetts eine Mindestluftgeschwindigkeit eingehalten werden. Damit die Installations- und Betriebskosten verringert werden, wird das Gaskabinett (1) so ausgebildet, daß der freie Strömungsquerschnitt für die Spülluft im Gehäuse (1) auf das für eine zuverlässige Spülung notwendige Maß beschränkt ist. Die abzusaugende Spülluftmenge kann dadurch auf ein Minimum reduziert werden. Das Gaskabinett wird insbesondere in der Halbleiterindustrie eingesetzt.

IPC 8 full level
F17C 13/08 (2006.01); **F17C 13/12** (2006.01)

CPC (source: EP US)
F17C 13/084 (2013.01 - EP US); **F17C 13/123** (2013.01 - EP US); **F17C 2201/0104** (2013.01 - EP US); **F17C 2201/032** (2013.01 - EP US); **F17C 2201/056** (2013.01 - EP US); **F17C 2205/0111** (2013.01 - EP US); **F17C 2205/013** (2013.01 - EP US); **F17C 2205/0142** (2013.01 - EP US); **F17C 2205/0176** (2013.01 - EP US); **F17C 2221/03** (2013.01 - EP US); **F17C 2223/0123** (2013.01 - EP US); **F17C 2223/035** (2013.01 - EP US); **F17C 2260/042** (2013.01 - EP US); **F17C 2260/044** (2013.01 - EP US); **F17C 2270/0518** (2013.01 - EP US); **Y10T 137/4259** (2015.04 - EP US)

Citation (applicant)
US 5151395 A 19920929 - TOM GLENN M [US]

Citation (search report)

- [X] US 5151395 A 19920929 - TOM GLENN M [US]
- [A] US 4603707 A 19860805 - GREGOIRE ROGER J [US], et al
- [A] EP 0569020 A1 19931110 - JEHL HANS JUERGEN [DE]

Cited by
US9222407B2; WO2014074968A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1835222 A1 20070919; **EP 1835222 B1 20090513**; AT E431523 T1 20090515; DE 102006013942 A1 20070920; DE 502007000711 D1 20090625; US 2008012458 A1 20080117; US 8047220 B2 20111101

DOCDB simple family (application)
EP 07005328 A 20070315; AT 07005328 T 20070315; DE 102006013942 A 20060317; DE 502007000711 T 20070315; US 68707007 A 20070316