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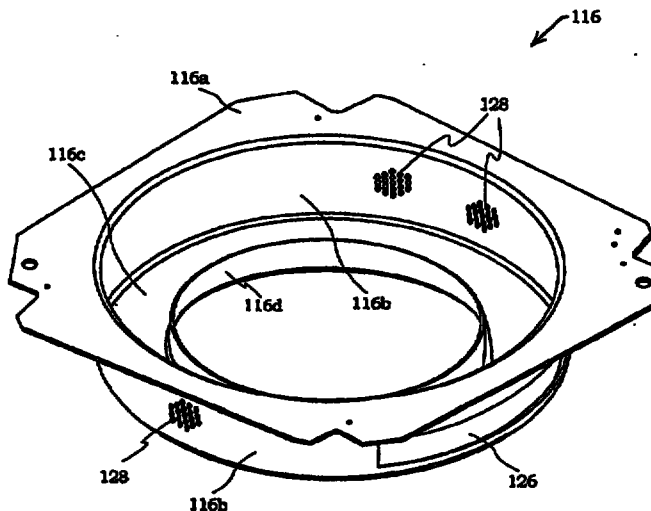
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| <b>(21) International Application Number:</b> PCT/US99/22488<br><b>(22) International Filing Date:</b> 28 September 1999 (28.09.99)<br><b>(30) Priority Data:</b><br>09/163,722 30 September 1998 (30.09.98) US<br><b>(71) Applicant:</b> LAM RESEARCH CORPORATION [US/US];<br>4650 Cushing Parkway, Fremont, CA 94538 (US).<br><b>(72) Inventors:</b> SCHOEPP, Alan, M.; 10010 Highway 9, Ben<br>Lomond, CA 95005 (US). DENTY, William, M., Jr.; 2217<br>Kenwood Avenue, San Jose, CA 95128 (US). BARNES,<br>Michael; 12215 Santa Teresa Drive, San Ramon, CA 94583<br>(US).<br><b>(74) Agent:</b> MARTINE, Peter, B.; Martine Penilla & Kim, LLP,<br>710 Lakeway Drive, Suite 170, Sunnyvale, CA 94086 (US). |           | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR,<br>BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD,<br>GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,<br>KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,<br>MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,<br>SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW,<br>ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ,<br>UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD,<br>RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK,<br>ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI<br>patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR,<br>NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i><br><br><b>(88) Date of publication of the international search report:</b><br>25 May 2000 (25.05.00) |

**(54) Title:** CHAMBER LINER FOR SEMICONDUCTOR PROCESS CHAMBERS



**(57) Abstract**

A chamber liner for use in a semiconductor process chamber and a semiconductor process chamber containing the chamber liner are disclosed. The process chamber includes a housing having an inner surface defining a chamber in which a vacuum is drawn during processing of a semiconductor wafer. The chamber liner (116) has a plasma confinement shield (116c) with a plurality of apertures (116e). An outer sidewall (116b) extends upwardly from the plasma confinement shield (116c). An outer flange (116a) extends outwardly from the outer sidewall (116b) such that the outer flange (116a) extends beyond the chamber and into a space at atmospheric pressure. The chamber liner (116) preferably further includes an inner sidewall (116d) that extends upwardly from the plasma confinement shield (116c). The plasma confinement shield (116c), the inner and outer sidewalls (116d and 116b, respectively), and the outer flange (116a) are preferably integral with one another.