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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H01L 21/00 — A1

(11) International Publication Number: WO 98/37574

(43) International Publication Date: 27 August 1998 (27.08.98)

(21) International Application Number: PCT/US98/02105

(22) International Filing Date: 5 February 1998 (05.02.98)

(30) Priority Data:
08/803,913 21 February 1997 (21.02.97) US

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(81) Designated States: CA, ID, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: METHOD AND APPARATUS FOR MEASURING VOLUME

(57) Abstract

A dispensing system for dispensing material onto a substrate. In one embodiment, the material is dispensed into a cavity of the substrate, the cavity having an unknown volume. The dispensing systme includes a housing, a dispensing apparatus, coupled to the housing, that dispenses a metered quantity of material, and a volumetric measuring probe, coupled to the housing, and positionable over the cavity of the substrate to measure the volume of the cavity. In embodiments of the invention, the volumetric measuring probe includes a concave section having a mating edge that is constructed and arranged to create a substantially airtight seal between the probe and the substrate, a chamber, a first valve, disposed between the chamber and the concave section, a pressure transducer coupled to the concave section to determine air pressure within the concave section, an air inlet port, a second valve, disposed between the air inlet port and the concave section, an air exhaust port, and a third valve, disposed between the chamber and the exhaust port. In one embodiment of the invention, the volumetric measuring probe determines the volume of material dispensed from the dispensing system.

