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(54) Title: UNIVERSAL VACUUM CHAMBER INCLUDING EQUIPMENT MODULES SUCH AS A PLASMA GENERATING SOURCE, VACUUM PUMPING ARRANGEMENT AND/OR CANTILEVERED SUBSTRATE SUPPORT

(57) Abstract

A vacuum processing chamber having a substrate support removably mounted therein. The chamber includes an opening in a sidewall thereof and the opening is large enough to allow the substrate support to be removed from the chamber through the opening. A modular mounting arrangement extends through the opening and removably supports the substrate support in the interior of the chamber at a position located inwardly of an inner sidewall of the chamber. The mounting arrangement includes a mounting flange and a support arm. The mounting flange is attached to an exterior surface of the chamber and the support arm extends between the substrate support and the mounting flange. The chamber includes a single vacuum port in a central portion of an endwall of the chamber spaced from the substrate support. The vacuum port is connected to a vacuum pump which removes gases from the interior of the chamber and maintains the chamber at a pressure below atmospheric pressure. The substrate support is easy to service or replace since it can be removed through a sidewall of the chamber. The sidewall mounted substrate support also allows a large vacuum port to be located in the endwall of the chamber thus allowing high flow to be achieved by connecting the vacuum port to a large capacity vacuum pump. The chamber also includes a modular liner, a modular plasma generating source and a modular vacuum pumping arrangement, each of which can be replaced with interchangeable equipment.

