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(54) **Title: WASTE GAS ABATEMENT TECHNOLOGY FOR SEMICONDUCTOR PROCESSING**

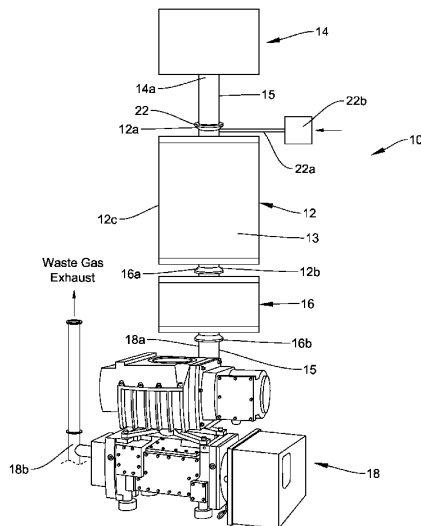


FIG. 1

(57) **Abstract:** A semiconductor waste abatement system for a semiconductor processing system includes a vacuum pump, an abatement apparatus having an abatement chamber in fluid communication with a source of semiconductor waste gas from the semiconductor processing chamber, and with the abatement chamber configured to ionize the waste gas and to exhaust ionized gas. The abatement system further includes a filter apparatus with a filter chamber, which forms a liquid reservoir. The inlet of the filter apparatus is in fluid communication with the outlet of the abatement chamber and the liquid reservoir, and the outlet of the filter apparatus is in communication with the inlet of the vacuum pump, wherein the filter chamber is under a vacuum, and wherein semiconductor waste gas is ionized in the abatement chamber and then filtered by the filter apparatus prior to input to the vacuum pump.

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