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(54) Title: VACUUM PUMPING SYSTEM AND METHOD

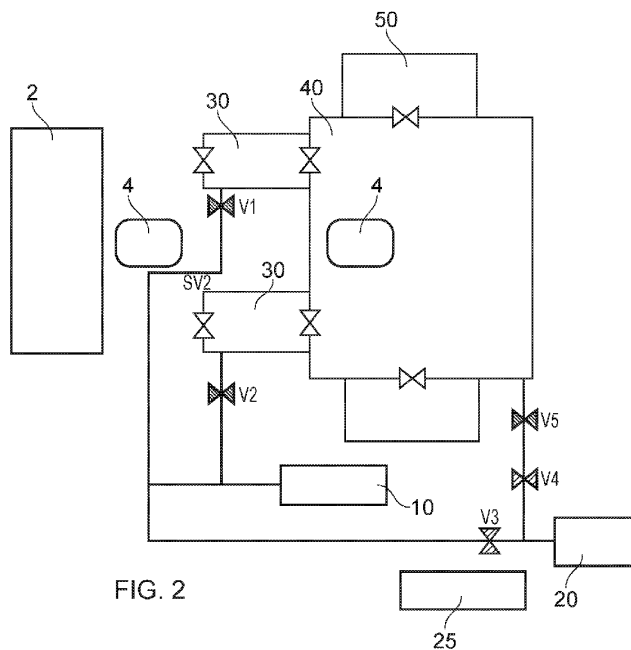


FIG. 2

(57) Abstract: A vacuum pumping system and method for evacuating a vacuum system. The vacuum system may be a wafer transfer station and comprises a smaller load lock vacuum chamber (30) operable to cycle between a predetermined pressure that is below atmospheric pressure and atmospheric pressure, and a larger wafer transfer vacuum chamber (40) configured to be maintained at a pressure at or close to the predetermined pressure. The vacuum pumping system comprises: first and second vacuum pumps (10, 20); a valve system (V1, V2, V3, V4, V5) configured to selectively connect and isolate the first and second vacuum pumps with the smaller and larger vacuum chambers; and control circuitry (25). The control circuitry is configured in response to determining that a pressure within the smaller vacuum chambers (30) is to fall to the predetermined pressure within a first time period, to control the valve system (V1, V2, V3, V4, V5) such that the first and second pump (10, 20) are isolated from the larger vacuum chamber (40) and are in fluid

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communication with the smaller vacuum chamber (30) and both contribute to evacuating the chamber. When the smaller vacuum chamber (30) is at the predetermined pressure the valve system (V1, V2, V3, V4, V5) is controlled so that the second vacuum pump (20) is isolated from the smaller vacuum chamber (30) and pumps the larger vacuum chamber (40).