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(71) Applicant: **EDWARDS LIMITED** [GB/GB]; Innovation
Drive, Burgess Hill, Sussex RH15 9TW (GB).

(72) Inventor: **LUCCHETTA, Emiliano**; Edwards Limited,
Innovation Drive, Burgess Hill Sussex RH15 9TW (GB).

(74) Agent: **BOOTH, Andrew**; Edwards Limited, Innovation
Drive, Burgess Hill RH15 9TW (GB).

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(54) Title: VACUUM PUMP PASSIVE MAGNETIC BEARINGS

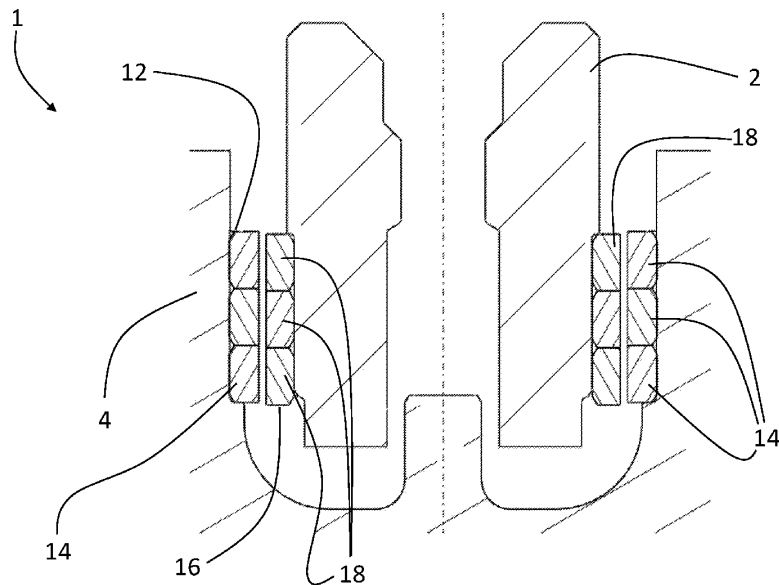


FIG. 1

(57) Abstract: The present invention provides a vacuum pump (1) passive magnetic bearing, the vacuum pump (1) including a stator (2) and a rotor (4) configured to rotate about a rotational axis relative to the stator (2); the passive magnetic bearing comprising a rotor bearing half (12) including one or more substantially annular rotor-side magnets (14) and an opposing and substantially concentrically radially arranged stator bearing half (16) including one or more substantially annular stator-side magnets (18); a radial gap (g) extending between the rotor and stator bearing halves (14, 16); wherein at least one, preferably each, rotor-side magnet (14) has an axial extent which is from around 3.5 times to around 5.3 times the width of the radial gap (g), and a radial extent which is less than 1.2 times the axial extent of the respective magnet; and/or, wherein at least one, preferably each, stator-side magnet (18) has an axial extent which is from around 3.5 times to around 5.3 times the width of the radial gap (g), and a radial extent which is less than 1.2 times the axial

WO 2024/252119 A1

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