

Title (en)

Ion pump and vacuum pumping unit using the same.

Title (de)

Ionenpumpe und Vakuumpumpanlage dafür.

Title (fr)

Pompe ionique et unité de pompage à vide utilisant celle-ci.

Publication

**EP 0469631 A2 19920205 (EN)**

Application

**EP 91113057 A 19910802**

Priority

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Abstract (en)

An exhaust apparatus (50) and a vacuum pumping unit (100) using the exhaust apparatus are disclosed. The exhaust apparatus (50) comprises a thermionic emission source (21), an electron accelerating grid (22) surrounding the thermionic emission source, an outer electrode (23) surrounding the electron accelerating grid, an ion accelerating grid (24) intersecting an axis of the outer electrode and installed apart from the outer electrode, a vessel (25) containing the thermionic emission source, the electron accelerating grid, the outer electrode, and the ion accelerating grid therein, a magnet (26) disposed outside of the vessel and generating a magnetic field almost parallel to the axis of the outer electrode, a power supply (29) for heating the thermionic emission source, a first DC power supply for applying a voltage between the electron accelerating grid, the outer electrode (23) and the thermionic emission source (21), a second DC power supply for applying a voltage between the outer electrode and the ion accelerating grid so as to get the outer electrode positive. The vacuum pumping unit (100) is constituted by interposing the exhaust (50) apparatus between a vacuum vessel to be evacuated and an auxiliary vacuum pump. By this, gas molecules in the vacuum vessel (25) are ionized by electron bombardment and accelerated toward the auxiliary vacuum pump (31) to be exhausted. <IMAGE>

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