

ABSTRACT**Electron beam device for surface treatment**

The present description relates to an electron beam device (100) comprising:

- a treatment chamber (130) having a longitudinal direction (Z);
- at least one electron beam source (110), each source being suitable for emitting an electron beam in a beam plane (PF) substantially transverse to the longitudinal direction so as to induce a plasma or an evaporation point in the treatment chamber for the treatment of a surface of a workpiece (106), said at least one electron beam source being external to the treatment chamber;
- a pumping chamber (120) connected to a first vacuum pump (126), to the treatment chamber and to the at least one electron beam source, the pumping chamber being positioned between said treatment chamber and said at least one electron beam source, and being suitable for performing differential vacuum pumping of said treatment chamber;
- at least one first port (122) for passing the electron beam between the treatment chamber and the pumping chamber; and
- at least one second port (124) for passing the electron beam between the pumping chamber and the at least one electron beam source.

(Figure 1)