

ABSTRACT

The embodiments of the present invention disclose an electron beam generating device and an electron microscope. The electron beam generating device includes: a cathode configured to emit a plurality of electrons; an extraction electrode provided with an extraction hole through which the plurality of the electrons pass to form an electron beam; a first diaphragm cylinder, in which an upper end surface of the first diaphragm cylinder is connected to a lower surface of the extraction electrode, and a bottom portion of the first diaphragm cylinder is provided with a first diaphragm hole corresponding to the extraction hole. The electron beam generating device provided by the embodiment of the present invention reduces the gas generated by the impact of the electrons on an inner wall of a vacuum chamber, so that the vacuum degree of the vacuum chamber in which the electron beam generating device operates is improved, thereby guaranteeing the lifetime and the performance of the electron beam generating device.

Fig. 1