

VACUUM COATER DEVICE AND MECHANISM FOR SUPPORTING AND MANIPULATING WORKPIECES IN SAME

ABSTRACT OF THE DISCLOSURE

An apparatus for providing a vacuum coating to a workpiece, including: a coating chamber containing a coating material, with the coating chamber being operable at an elevated temperature and a sub-atmospheric pressure; an electron beam gun projecting an electron beam into the coating chamber and onto the coating material, where the electron beam gun is operable to melt the coating material and to evaporate molten coating material; and, a mechanism for supporting manipulating the workpiece in the coating chamber. The supporting mechanism further includes: a coupling device for retaining the workpiece; a joint connected to the coupling device enabling movement of the workpiece in all directions; an intermediate member connecting the coupling device and the joint; and, a device connected to the intermediate member for moving the workpiece in a designated vertical plane. The supporting mechanism may also include a device connected to the intermediate member for moving the workpiece in a designated horizontal plane.

Figure 1