



ABSTRACT OF THE DISCLOSURE

The ion implantation apparatus deals with an ion beam as a charged particle beam and has an accelerating tube 8 incorporating an electrostatic lens for converging/diverging it. The control of the electrostatic lens is carried out as follows. The swept ion beam 4 is received by a single Faraday cup 46 to measure the beam quantity $I(n)$ and the beam width $Wd(p)$ of the ion beam 4. The evaluated values of the beam quantity and beam width with respect to prescribed standards are calculated. These evaluated values are assigned weights to calculate a unified evaluated value. The focusing voltage V_f applied to the electrostatic lens with the accelerating tube 8 is controlled so that the unified evaluated value is increased. A waveform shaping controller 50 and beam controller 54 constitute a device for making such control.