

concept **ERLASER® UNIVERSAL** generates a win-win-situation between customer and manufacturer. The advantages for both parties are: development from «engineering to order» towards «configure to order», reduced delivery times, reduced costs, reduced risks, flexible extendable. **ERLAS** delivers turnkey ready machines including process as well as assured production quality and productivity.

Notes _____

Beam extraction using non vacuum electron beam by reduced acceleration voltage

T. Hassel, H.-J. Maier, G. Klimov, A. Beniyash

Leibniz University of Hannover, Germany
E-mail: hassel@iw.uni-hannover.de

One of the disadvantages of the non-vacuum electron beam (NVEB) systems is a high acceleration voltage, which leads to an increase of defense against X-ray radiation. Due to the reduced acceleration voltage, on the one hand, the size of the beam generator is reduced, which is why a significant weight reduction compared to the conventional EB technology, so that a robotic operation is possible. On the other hand, the requirements for the X-ray protection are reduced because the penetration ability of the X-radiation decreases. For applications such as brazing, cladding and surface heat-treatment, by the low acceleration voltage non-vacuum electron beam (LAVNVEB) system is of great interest.

Some of the first experiments on electron beam emission into the atmosphere with a low acceleration voltage (from 60kV and below) were carried out at an available LAVNVEB system at the Institute of Materials Science at the Leibniz University Hannover.

Notes _____

