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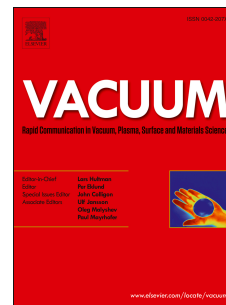
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## ELECTRON BEAM WELDING – TECHNIQUES AND TRENDS - REVIEW

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### **Abstract**

Electron beam welding, despite a long history and widespread arc and laser technology, is still widely used in industry. The main applications for this high efficiency welding process are: automotive, electronics, electrical engineering, aerospace and mechanical engineering industry. The technology ensures high-quality welded joints in structural metals in a wide range of thickness from 0.025 mm to 300 mm. It is also used for the production of films and coatings by deposition and surface modification. In the paper approximated examples of the use of the electron beam are given by the welding, rapid prototyping, texturing surface, cladding with wire and powder as well as alloying. It also provides information about the possible techniques that can be used during these processes and the trends in electron beam welding.

**Keywords:** electron beam welding, cladding, surface modification, rapid prototyping, machines

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