

Electron beam deposition of zirconium ceramic coatings by a forevacuum plasma electron source

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The results of an experiment on electron beam deposition of ceramic coatings of zirconium oxide stabilized with yttrium oxide using a forevacuum plasma electron source are presented. Data on the morphology and elemental analysis of the coating surface were obtained by scanning electron microscopy. The structural and phase composition of the samples revealed the presence of the crystal structure of the synthesized coatings containing monoclinic and tetragonal phases. The values of hardness and modulus of elasticity of coatings were obtained by the Oliver-Farr method.

Keywords: ceramic coatings, forevacuum plasma electron sources, beam plasma.

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