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Structure and mechanical properties of hydroxyapatite coatings produced on titanium using plasma spraying with induction preheating

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Abstract

Coatings of hydroxyapatite (HAp) were prepared by plasma spraying with induction preheating of titanium substrate from 200 to 1000 °C. The combination of conventional plasma spraying and induction preheating ensured high mechanical properties of HAp coatings. The coatings produced in the temperature range 400–600 °C were characterized by homogeneous nanostructure of splats with an average grain size of 12–31 nm.

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