

Evolution on the Microstructure of Alumina Coated Stainless Steel Using Electro Phoretic Deposition

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Abstract-This paper emphasizes on the microstructure of Al_2O_3 coating fabricated on biomedical 316L stainless steel using Electrophoretic deposition technique (EPD) by varying the voltage from 10-70 V. An adherent dense coating was obtained at 55 V. The microstructure of the coated surfaces was characterized using Scanning electron microscope (SEM). The coatings fabricated at 55 V have resulted in higher adhesion, lower porosity as compared to the bare substrate.

Key words: Al_2O_3 , Microstructure, EPD

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