IOP Conference Series: Materials Science and Engineering 2016 vol.134 N1

Efficiency of surface cleaning by a glow discharge for plasma spraying coating

Kadyrmetov A., Kashapov N., Sharifullin S., Saifutdinov A., Fadeev S.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The article presents the results of experimental studies of the quality of cleaning steel surfaces by a glow discharge for plasma spraying. Shows the results of measurements of the angle of surface wetting and bond strength of the plasma coating to the surface treated. The dependence of the influence of the glow discharge power, chamber pressure, distance between the electrodes and the processing time of the surface on cleaning efficiency. Optimal fields of factors is found. It is shown increase joint strength coating and base by 30-80% as a result of cleaning the substrate surface by a glow discharge plasma spraying.

http://dx.doi.org/10.1088/1757-899X/134/1/012010

Keywords

activation, cleaning, experiment, Glow discharge, optimization., plasma coating, plasma spraying, plasma torch, substrate, surface