

Exploratory researches regarding surface depositions using HVOF thermal spraying process

*Cercetări exploratorii privind depunerile pe suprafață utilizând procedeul
de pulverizare termică HVOF*

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Abstract

Currently researchers are working to obtain materials which can withstand extreme environmental conditions while retaining their properties imposed. In industry there is a growing need to reduce or control corrosion and wear for several reasons: to extend the lifespan of machinery, to produce more efficient engines and devices, to develop new advanced products, to conserve limited material resources, to save energy and improve safety.

The surface is the most important part of engineering components because it is where most defects appear especially those caused by corrosion. The surface may also have important functional attributes which are not limited to chemical and mechanical properties, but also features like thermal, electronic, magnetic and optical which influences the choice of material.

This paper presents an experimental study regarding surface deposition using the HVOF thermal spraying technique with the objective to obtain superior wear and corrosive surface resistance for carbon steels.

Keywords

Thermal spraying, HVOF, advanced materials, surface engineering.