

عنوان مقاله:

Thermal stress analysis of HVOF coating on 17-4 PH Steel

محل انتشار:

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خلاصه مقاله:

Nowadays, high velocity HVOF (High-Velocity-Oxygen-Fuel) coating is one of the newest and advanced method to coat which uses fuel and oxygen with special ratio and stick the coat on the substrate. The purpose of this research is investigation of the effect of thermal stress as result of thermal cycling in sprayed WC-Co coat with HVOF method on the 17-4PH steel. Observation of microstructure in SEM pictures showed that we had a good penetrated of coating on the substrate. Thermal cycling tests were performed at the temperature range between 100~600 oC without external load. Thermal residual stresses determined by using ANSYS software. The results showed that tensile stresses were more than compresses stress and mechanical properties of the coating layer for horizontal direction were bigger than .for vertical direction

کلمات کلیدی:

HVOF, Thermal stress, 17-4 PH, ANSYS, Coating

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