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عنوان مقاله:

An Investigation of Mechanical and Thermal Properties of Graphene/ FBE Coatings

محل انتشار:

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خلاصه مقاله:

In the present research, effects of adding graphene oxide on the disbonding of fusion bonded epoxycoatings have been investigated. The graphene oxide-based epoxy composite coating (0, 0.25, 0.5, 0.75 and 1 wt %) wasprepared by ultrasonication method in acetone and the samples were electostatic coated. The effect of GO onmechanical and thermal properties of epoxy was investigated using thermogravimetric analyze, cathodic disbanding.Due to the TGA results by adding GO thermal degradation of the composite increases from 127 to 477. Amicrostructure analysis using Field Emission Scanning Electron Microscopy (FE-SEM) showed no agglomeration butwell dispersed GO particles in the epoxy matrix and also, disturb and deflect the crack propagation. The results of thisresearch are a strong evidence for GO/epoxy composites being a potential candidate for use in a variety of industrialapplications, .especially for automobile parts, aircraft components and electronic parts such as supercapacitors,transistors, etc

کلمات کلیدی:

FBE, Graphene oxide, Thermal stability, Mechanical properties

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