

عنوان مقاله:

Experimental investigation of the influence of adding nanotubes on tensile mechanical properties of laminated composites

محل انتشار:

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خلاصه مقاله:

The effects of adding carbon nanotubes to mechanical properties of resin and composites has been investigated experimentally. The nanocomposites have glass fiber and epoxy resin systems is made of Epon 828 and Epikure F-205. The carbon nanotube were with weight fraction 0, 0.1, 0.5 and 1 respect to total weight of resin. Results of the nanoresin tensile test have showed, addition of carbon nanotubes can change tensile properties of matrix. The maximum change in value of the young modulus, fracture toughness and ultimate strength is in the resin of 0.5% nanotubes content. The results of tensile test of nanocomposites show that adding carbon nanotube make composites softer and change tensile mechanical properties of composite. Maximum change in fracture toughness, ultimate strength and fracture strain is in sample of 0.5% nanotube content. Results show that overall, the maximum changes in tensile mechanical properties is in samples of 0.5% carbon nanotubes content

کلمات کلیدی:

Nanotubes; Tensile properties; Laminated composites

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