

# **An Experimental Assessment on the Influence of Carbon Nanotubes Matrix Charging on the Fatigue Behaviour of Composite Laminates**

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## **Abstract.**

In this work, an experimental preliminary assessment on the fatigue behaviour of nanomodified composite coupons has been addressed. Comparison between the fatigue life of epoxy resin/carbon fibre neat coupons and epoxy resin/carbon fibre specimens reinforced with nanoparticles have been performed. Tensile, compressive, and in-plane shear samples have been manufactured respectively in accordance with the ASTM D3039, ASTM D3410 and ASTM D3518. The coupons, both with neat and nanomodified epoxy resin, have been tested under tension-tension, compression-compression and in-plane shear fatigue load in order to prior understand the effect of the nanoparticles' addition on the fatigue behaviour of thermosetting epoxy resin.