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DISPERSION BEHAVIOUR OF MWCNT IN THE EPOXY MATRIX AND ITS INFLUENCE ON THE MECHANICAL PROPERTIES OF THE RESULTING COMPOSITES

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Different type of chemically functionalized multiwalled carbon nanotubes were dispersed in diglycidyl ether of bis bisphenol A (DGEBA), LY556 epoxy resin. The effect of different functionalization was observed on the mechanical properties of MWCNTs reinforced epoxy composites. Different techniques of dispersion were also employed viz. dispersion of nanotubes in neat epoxy followed by sonication and magnetic stirring. Degree of dispersion was observed by scanning electron microscope (SEM) and UV visible spectroscopy. The mechanical properties of the composites were found to improve by 45% by using 1 wt % of MWCNT. Detailed results will be presented in the conference.