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Thermal Characterization of Graphene Oxide-Epoxy Nanocomposites Produced by Aqueous Emulsion

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Abstract : The present study desired to obtain a nanocomposite of epoxy resin reinforced with graphene oxide (OG), for aerospace application, produced by aqueous emulsion. It was obtained proof bodies with 0.00 wt%, 0.10 wt%, 0.25 wt% and 0.50 wt% in weight of nanoparticles, to check the influence of it in the final quality of the obtained product. The validation of the results was done by the application thermal characterization by differential scanning calorimetry (DSC). It was seen that the nanocomposite reinforced with 0.10 wt% of OG showed the best results, the average glass transition temperature, at 2 °C, compared to the pure resin.

Keywords : aqueous emulsion, graphene, nanocomposites, thermal characterization
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