

STUDY OF MECHANICAL PROPERTIES OF COCONUT SHELL PARTICLE AND COIR FIBRE REINFORCED EPOXY COMPOSITE

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Abstract

Coconut coir fibre and shell particle reinforced epoxy based composite has proven a very promising material for structural application where wood and plastics were used. It has well mechanical property. Following has been concluded more specifically for this coir and particle reinforced composite. Density of this composite developed using only shell particle is low and order of 1.171g/cm^3 for 35wt% of shell particle changes from 28% to 35%. Here it is possible to comment that density decreases with increase of wt% of particle. Density increases with addition of shell particle in case of coir and particle composite. Here fibre reduces density. The water absorption capacity was found to be maximum for 33 to 35 wt % of coconut shell particle for composite of particle only. Water absorption increases with increase of coir wt% in coir and particle composite. Density of this does not increase appreciably with increase of particle content with coir. This does not increase up to mark for both only particle based and coir & particle Composites. Uniform dispersion of coconut shell particle and coir is found. So, mixing and adhesion among particles and coir fibre is proper. Disorder is negligible.