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**PARAMETRIC STUDIES OF DRY ABRASION WEAR
BEHAVIOR OF STONE INDUSTRIAL WASTE ADDED
(NATURAL/SYNTHETIC) FIBER REINFORCED POLYMER
COMPOSITES**

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Abstract: In present article a stone industrial waste added (Natural/Synthetic) fiber reinforced Polymer Composites synthesis through VARTM, then parametric studies of dry abrasion wear were performed on it. Taguchi optimization technique was applied for parametric optimization of dry abrasion wear. The following operating parameters (Abrasion Load Wheel Rotation, Filler percentage and Abrasive particle size) of dry abrasion test were optimized. The mean S/N ratio for Dry abrasion wear were found to be 4.71db, 6.48db and 7.98db for granite added jute, glass and carbon fiber reinforced polymer composites. ANOVA analysis helps to identified the order of most influencing input operating parameters on output response dry abrasion wear and order of most significance input operating parameters in decreasing order abrasion load > Wheel rotation > Filler content > Abrasive size for for granite added jute, glass and carbon fiber reinforced polymer composites.

Keywords: Dry Abrasion wear; Granite Powder; Natural Fiber; Synthetic Fiber; Taguchi; VARTM