Strength And Resilience Test Prototype Rubber Engine Mounting With Rubber Compound And Fiber Mixed Rami (Boehmeria Nivea)

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ABSTRACT

Natural rubber is a polymer of hydrocarbon compounds that produced from processing sap or garden latex. Natural rubber also has flexibility, elasticity and also has good damping. This advantages can be used for the needs of making various automotive industry products, Especially the component of automative sector. However, due to the high content of the double cross-linking in the molecule which causes natural rubber to not withstand certain conditions, many kinds of attempts have been made to overcome the weaknesses of the rubber material according to the needs and applications. As in the use of rubber compound formulas that goal to increase certain abilities according to the intended use. Therefore, this study aims to use compound formulas by utilizing natural rubber which is a matrix with hemp reinforcement in the manufacture of automotive products, with variations in fiber blends of 35, 45, 55 phr. That will be applied to the manufacture of motorcycle engine mounting. With the hope of adding natural fibers that add strength and toughness to machine-installed products, and can be a further development to see other properties. The results of these studies the average test value of 8.74 N / mm² variation of fiber 35 phr, 6.33 N / mm² variation of 45 phr and 6.11 N / mm fiber variation of 55 phr fiber. The stretch results are 237.4% variation of 35 phr fiber, 2.10% variation of 45 phr fiber and 162% variation of 55 phr fiber. On the average hardness tester 80 beach A, 84.5 beach A and 88.5 beach A, while the manufactured product has a hardness of 71.5 shore A. In the compression test or compression set of 24%, 26.6% and. 28% for a mixture of 55 phr, while the manufacturer's product sample is 20%.

Keywords: Natural Rubber, Engine Mounting, Compound Rubber