## UTILIZATION OF HEMP FIBER AND LATEX GLUE AS NOISE STABILIZING ON CAR BONNET FOR SOUND ABSORPTION AND WATER VAPOR TRANSMISSION RATE

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## *ABSTRACT*

*Hemp fiber is a plant that has a high fiber content and has strong characteristics, a light mass, and resistance to sunlight, and the strength of the fiber does not change. A silencer is one of the tools used to weaken sound or reduce the number of sounds that occur. This hemp fiber composite material can be used as a silencer. This research aims to determine the effect of the two mixtures of materials that have different mixture variations for each specimen and the results of the sound absorption test and which variation has the best results. This research was conducted at the Jember State Polytechnic. The method used in this research is an experimental method where researchers want to find out the cause and effect between independent and dependent variables. In this research, the use of variations in the composition of materials consists of composition A (90% latex: 10% hemp fiber and composition B The result of the sound transmission class test on composition A with an average value of 29.4 dB, in composition B of 29.6 dB, and in composition C of 31.3 dB. ). The result of the water vapor transmission rate test on composition A with the highest value of 0.022 (g), composition B of 0.112 (g), and composition C of 0.274 (g). So it can be concluded that the higher use of hemp fiber as a damping material can increase the value of the transmission loss and the value of the water vapor transmission rate. The best composition is composition C because it has the highest hemp fiber volume value than the other compositions.*


*Keywords : Composite Manufacturing, Transmission Loss Value, Hand Lay-Up, Natural Fibers.*