# PROTOTYPE OF GLASSWOLL HEAT AND SOUND REMOVAL WITH SUGARCANE BASS WASTE

By :
**Masnun Afandi Nur Hatta**
Automotive Machinery Study Program, Department of Engineering,
State Polytechnic of Jember

## ABSTRACT

East Java is one of the provinces on the island of Java where the average population uses vehicles as a means of transportation so that in its operation it causes environmental pollution and noises such as the sound of engines coming out through the exhaust or horn. So in this study the authors want to reduce environmental pollution and noise pollution in the exhaust by utilizing organic materials such as bagasse as the main raw material. Bagasse has potential characteristics to be used as a disposable product material, including strength, durability and visual characteristics. This study aims to determine the heat and sound absorbent glasswool prototype using bagasse waste and also to determine the capacity and sound absorption coefficient using bagasse waste. The method used in this study is an experimental method. Where the method is a research method used to test the effect of a treatment carried out on the object under study so that it turns the object into a new material. The experimental method carried out in this study was to try a combination of bagasse in a modified exhaust with the assumption that it could reduce exhaust noise and heat levels. The test was carried out using variations in engine speed on a 4 stroke motorcycle, cylinder volume 110 cc with pertalite fuel. In this test using engine speed 1,500, 3,000 and 4,500 and carried out with 3 tests with the type of standard exhaust silencer and exhaust variation so that the best dB max results at 1,500 rpm are exhaust treatment B (variation exhaust) of 73.9 dB, for the temperature (ºC) the best max is the exhaust treatment B (variation exhaust) at rpm 1,000 is 64.4 C, at 3,000 rpm is B (variation exhaust) 86.5 C and at 4,500 rpm is B (variation exhaust) 102 ,5 C.

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