Peredam Kebisingan Suara Dan Suhu Dengan Serat Pohon Keragi Pada Knalpot Variasi *(Noise And Temperature Reducer With Keragi Fiber On Variation)*

Pembimbing (Ir. Dwi Djoko Suranto, MT)

Demi Kogoya
Study Program of Automotive Engineering Majoring of Engineering
Program Studi Mesin Otomotif
Jurusan Teknik

ABSTRACT

This research report entitled "Noise And Temperature Reducer With Keragi Fiber On Variation" was carried out for approximately 18 months, starting from May 2019 to November 2020. This research was conducted in the Automotive Engine Laboratory of the Jember State Polytechnic. This is due to the large number of people using motorbike transportation, so that it can cause environmental pollution and noise pollution caused by exhaust. Utilization of natural resources of keragi tree plants is an alternative to overcome this problem, by designing noise and temperature silencer with keragi tree fibers in the variation exhaust. This research was conducted to reduce environmental pollution and noise pollution in exhausts by utilizing organic materials such as keragi tree fiber as the main raw material. This test was carried out by using a variation of the engine speed on a 4 stroke motorcycle, single cylinder 110 cc with pertalite fuel. Measurement of noise level and exhaust silencer temperature using Environment Meter and Thermo Kopel. Based on the results of the study, it shows that the highest percentage of reduction in exhaust noise level is achieved by the treatment of keragi fiber prototype to standard exhaust at 4.500 engine speed, namely 1.62 %. Heat dissipation occurs in the prototype treatment with yeast fiber arrangement from 5.23 ° C /minute to 3.16 ° C /minute.

Keywords : *Noise, Temperature, Sunshade Fiber, Variation Muffler*