

**Variation Of Hemp fiber Reinforced Composite Cilicer On The Muffler On
Opacity And Sound Level In Diesel cars**

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ABSTRACT

The result of residual fuel combustion in diesel engines produces opacity which can cause negative effects, both on human health and on the environment. The purpose of this study was to determine the effect of the addition of hemp fiber adsorbents and hemp fiber activated carbon on pollutants from diesel engine exhaust emissions. The object of this research was Isuzu Panther 1992 with variations of RPM 1000, 1500 and 2000. This study used an experimental method by collecting data using a sound level meter and smoke tester. The results of the exhaust emission pollutant study showed that the addition of hemp fiber to the exhaust was lower by 0.33% compared to the standard exhaust while the results of the noise study showed the addition of hemp fiber to the exhaust was lower by 87.9 dB compared to the standard exhaust.

Keywords: Mufflers, Activated Carbon, Opacity, Sound Level.