

***THE EFFECT OF VARIATIONS OF INTAKE MANIFOLD BURLING  
ANGLE ON ENGINE PERFORMANCE AND EXHAUST GAS EMISSIONS  
ON BEAT 110 CC MOTORS***

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***ABSTRACT***

*This study aims to determine the effect of variations in the intake manifold curvature angle on engine performance and exhaust emissions on a 110 cc beat motor. The method used in this study is an experiment by conducting experiments on the intake manifold which has changed the angle variation between 30°, 60, and 90. In this study, we look for the most efficient exhaust emissions for vehicles and the best engine performance. The results of exhaust gas emission testing which include Hydrocarbons (HC), Carbon monoxide (CO), and Carbon dioxide CO<sub>2</sub>. The test results obtained the lowest HC value of 113 ppm at the 60 Intake Manifold angle, the lowest CO value of 0.41% at the 60 Intake Manifold angle and the lowest CO<sub>2</sub> value of 8% at the 60 Intake Manifold angle. for engine performance at 90°, the higher the angle of intake Manifold Flow on the Intake Manifold is higher but the resulting Turbulance is small and vice versa the lower the Intake Manifold Flow angle produced is smaller but the resulting Turbulance is higher but if the flow and pressure are more balanced then the mixture better air and fuel*

**KeyWords** : *Intake manifold, Engine Performance, Exhaust Gas Emission, Beat 110cc*