

**“EXPERIMENTAL STUDY OF THE INFLUENCE OF DEBIT ON THE
PERFORMANCE OF ARCHIMEDES SCREW TURBINE TWO BLADE”**

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ABSTRACT

Archimedes Screw Turbine is one of the water turbines where this turbine can operate at low head so that it has potential as a source of electrical energy. This study aims to determine the effect of discharge on the performance of the Archimedes Screw Turbine. The method used in this research is the experimental method. The stages of data collection include, obtaining the large value of the turbine shaft rotation and the torque value of the turbine loading by changing the amount of discharge on the Archimedes Screw Turbine to determine the effect of the performance of the two-blade Archimedes Screw Turbine. The test results data obtained directly the effect of different discharges on the performance provided by the turbine. The results of the test data at a discharge variation of 140 L/Min produce a maximum power of 3,341 Watt with a maximum efficiency of 20.481%. At the discharge variation of 280 L/Minute it produces a maximum power of 6.078 Watt with a maximum efficiency of 26.533%. at a discharge variation of 420 L/Minute produces a maximum power of 5,641 Watt with a maximum efficiency of 19,339. at a discharge variation of 560 L/Minute produces a maximum power of 6.868 Watt with a maximum efficiency of 18.982%.

Keywords : Archimedes Screw Turbine, Debit, Perform.

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