

CHAPTER V

RESULT

5.1. Conclusion

After the experiment completed so author can extract the conclusion explicitly as follows:

1. All the characteristic of this francis turbine obtained and plot it in curves. This curve predict torque, discharge, turbine power, and turbine efficiency with rotational speed and gate opening determined.
2. The greatest efficiency value was obtained, which was 32,14% for the 10 cm runner. And 31,3% for the 8 cm diameter of runner.
3. Obtaining the largest mechanical power value of 93 W for runners of 10 cm. and 97 W for the 8 cm diameter of runner.
4. This turbine is exactly classified into pico scale power, but not recommended for under ~50 W electricity consume.

5.2. Suggestion

For the further research it is recommended to,

1. The project to find the characteristic of picohydro turbine could used the proper measurement, and consider the availability of that device.
2. It is better to use an electrical device such as generator to vary the load instead of mechanical device such as spring gauge.
3. Use the measurement correctly, especially for tachometer, give more attention to the contact sensor and take it directly centered to the shaft of turbine runner.

