



**THE DESIGN AND FABRICATION OF A
FREE FLOWING WATER TURBINE
FOR
UITM-PERHILITAN RESEARCH CENTER
TAMAN NEGARA**

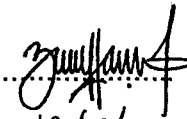
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"I declared that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree."

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ABSTRACT

Universiti Teknologi MARA (UiTM) associated with PERHILITAN had established the UiTM-PERHILITAN Research Centre, located at Kuala Keniam, Taman Negara Pahang. The research centre located 25km upstream of Tembeling River, only accessible using boat. Although the location is strategic for geological, environment, and technical research and development, this research centre is located away from the National Power Grid. The generator set used to power-up the centre was not efficient, as it used 200 litres of gasoline for 2 hours operation. The gasoline price and its transportation might be costly and UiTM cannot bear the cost for generator's long run. Looking at this problem, the author had came up with a research thesis, supported by a full scale model of free flowing water turbine that can supply the centre with electricity up to 1kw of power. The design of the turbine can avoid environment damage such as land erosion, jungle flooding and lost of flora and fauna. No damp or weir is used in order to rotate the turbine. By finishing this thesis, the author hopes that the turbine can be further develop for commercial used in the future and a self-sustainable community can be achieved, without have to be dependent on the oil-based power generation.

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