DESIGN AND FABRICATE OF NEW PELTON WHEEL BLADE

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A report submitted in fulfillment of the requirements for the award of Diploma of Mechanical Engineering

Faculty of Mechanical Engineering
Universiti Malaysia Pahang

NOVEMBER 2008
SUPERVISOR’S DECLARATION

“I hereby declare that I have read this report and in my opinion this report is sufficient in terms of scope and quality for the award of Diploma of Mechanical Engineering”

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Supervisor : En. Muhammad Imran Bin Mohmad Sairaji

Position : Vocational Training Officer

Date : ......................................................
STUDENT'S DECLARATION

I declare that this thesis entitled “Design and Fabricate of New Pelton Wheel Blade” is the result of my own research except as cited in the reference. The thesis has not been accepted for any diploma concurrently submitted in candidature for any other diploma.

Signature : ..............................................
Name : Mohd Qayyuum Bin Mohd Ridzuan
Date : ..............................................
To my beloved father, mother, sister and brother

Mohd Ridzuan B Abdul Manaf, Nor Balquis Binti Simon,

Noor Qursyaaien and Mohd Qha’liq
ACKNOWLEDGEMENT

In the name ALLAH S.W.T the Most Beneficent and Most Merciful. The deepest sense of gratitude to the Almighty for the strength and ability to complete this Final Year Project. Infinite thanks I brace upon Him.

I would like to take this opportunity to express my sincere appreciation to my supervisor En. Muhamad Imran Bin Mohmad Sairaji, for encouragement, guidance, morale support, and critics of motivation that makes this project a success. I am also very thankful to Mr. Devaraja Ramasamy, En.Khairul Azha B A.Jalal and En.Mohd Rashidi B Maarof for their help and tips in understanding Pelton wheel blade, using CNC Milling machine and Sand Casting. Without them, this project is surely will not succeed with excellent speed.

I would also like to extend my deepest appreciation to my mother, father and my family for their supports and motivation throughout this final year project.

Last but not least, I am also indebt to Faculty of Mechanical Engineering for the usage of workstation computer, CNC Milling machine, sand casting and fluid lab equipments for fabrication and analysis of Final Year Project. My Sincere appreciation to who has involved directly and indirectly in succession of the project and thesis. Their views and tips are useful indeed. I am grateful to all of them. Thank You.
ABSTRACT

Design and fabricating New Pelton Wheel Blade is a conceptual understanding of turbine engineering and water flow engineering which is not provided in daily lectures room due to the fact that it is advance knowledge in this field. It is one of the industry that needs necessary knowledge in Malaysia, this is because in our country has many dam but they did not use Pelton concept turbine. Theoretically, it uses the same concept and field of engineering. As such, it is vital to attain this basic knowledge through this project. The design is taken from the existing Pelton wheel and it is vital because the new Pelton wheel needs to fit inside the existing hub. Material that is strong and considerably light is was used to fabricate the Pelton wheel blade using various methods. Evaluation of the test is based on the data obtained in which its range is identical between the existing and new Pelton wheel blade. The findings suggest that a lighter Pelton are an ideal selection, but we compensate the weight with a much more resistant and strong material. All of the work that been done in this project prove to be vital to the performance of the Pelton wheel blade.
ABSTRAK

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Raw material used
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% - percentage
Ø - diameter
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