

P.o.Box 236, Tororo Tel: +256-454448849 Fax: +256-45436517 Email:adm/a/proc-busitema.se.ug Webaite: usus busitema.ac.ug

FACULTY OF ENGINEERING

DEPARTMENT OF WATER RESOURCES AND MINING ENGINEERING FINAL YEAR PROJECT PROPOSAL

DESIGN AND SIMULATION OF A MAGNETIC MOTOR WATER PUMPING SYSTEM

BY

KHAUKHA SHADRACK FRED

BU/UP/2014/579



MAIN SUPERVISOR: Mr. MASERUKA BENEDICTO

CO-SUPERVISORS: Mr. WANGI MARIO

A final year project proposal submitted in partial fulfillment of the requirement for the award of the Bachelors of Science in Water Resources Engineering of Busitema University

November, 2018

ABSTRACT

Uganda has many water resource but because of high electricity rates and operational cost of generators, it become so hard for people to maximally utilize these resources of water through pumping. Fuel consuming water pumps are not environmental friendly since they release harmful gasses that contribute to global warming. Therefore, this creates a need to design a free energy magnetic pump system that is environmental friendly, affordable and reliable for both commercial and domestic use. The main purpose of this project is to design this system by understanding new science doctrines of free energy theories. The free energy magnetic water pump system operates on a simple principle of natural repelling characteristics of magnetic, a perpetual force that is being harnessed by the magnetic devices producing power is in form of mechanical energy which then runs the pump. From middle ages to the Renaissance, at pre-1800s year, several perpetual motion devices have been invented and claimed to be working by the inventors though no traces of their workability.

After achieving all the specific objective of the proposal, the prototype will be expected to Accomplishing the required work out put.

DECLARATION

I KHAUKHA SHADRACK FRED solemnly declare that this project report is a result of my own efforts and tremendous work done during the research period and it has never been submitted to Busitema University or any other institution of higher learning for any academic award.

NAME:	
REG NO:	
SIGNATURE:	
DATE:	BUSITEMA UNIVERSITY LIBRARY
	ACCESS NO.: TETO 919

APPROVAL

This is to certify that this project proposal was written under the guidance of my supervisors or
the topic "design and construction of a free energy magnetic water pump system" and is now
ready for submission to the senate of Busitema University.
Mr. MASERUKA BENEDICTO
DATE

DATE

Mr. WANGI MARIO

ACKNOWLEDGEMENT

I would like to extend my sincere thanks to the almighty GOD who has gifted me with life and has enabled me to reach this academic height as he has been the provider of all the necessary requirements.

Great thanks to my beloved Aunt Mrs. Birah Nidoi for her financial and moral support

Let me convey my heartfelt appreciation to my supervisors, Mr. Maseruka Benedicto and Mr.

Wanji Mario for their advice as well their guidance during the preparation of this paper.

DEDICATION

I dedicate this final year project proposal report to all my family members; my dad, Mr. Kuloba Robert and my mum Ms. Lunyolo Constance, my Aunt Mrs. Nidoi Birah, Brothers; Nidoi Douglas, Wangokho Moses, Lincoln, Sisters; Nidoi Jasper, Nidoi Shiphrah, Mutonyi Jane Hope for mentoring me.

To my Uncle Mr. Wekesa James for the courage has always given me as well as her moral and financial support towards my academic struggle

LIST OF ACRONYMS

FEMM- Finite Element Magnet Method

FEA- Finite Element Analysis

DWD - Directorate of Water Development

DWRM - Directorate of Water Resources Management

ETM - Enhanced Thematic Mapper

GIS - Geographical Information System

MWE - Ministry of Water and Environment

NARO - National Agricultural Research Organization

NASA - National Aeronautics and Space Administration

NFA - National Forestry Authority

NRSA - National Remote Sensing Agency

RS – Remote Sensing

UNMA - Uganda National Meteorological Authority

UTM - Universal Transverse Mercator

WGS - World Geodetic System

Contemknts

ABSTRACT	i
DECLARATION	ii
APPROVAL	iii
ACKNOWLEDGEMENT	iv
DEDICATION	v
LIST OF ACRONYMS	vi
1.0 INTRODUCTION	1
1.1. Background	1
1.2. PROBLEM STATEMENT:	2
1.3. JUSTIFICATION	2
1.4. OBJECTIVES OF THE STUDY	2
1.4.1. Main Objective	2
1.4.2. Specific objectives	2
2.0. LITERATURE REVIEW	4
2.1. Introduction	4
2.2. Howard Johnson's Motor	6
2.3. Adam's Motor	7
2.4. Steorn's Motor	7
2.5. Muammer Yildiz's Magnet Motor	7
2.6. Rotating magnetic device	8
3.0. METHODOLOGY	9
3.1.1. Parameters that dictates the machine capacity	9
3.1.3. Machine description;	10
3.2. SPECIFIC OBJECTIVE A	13
Design of the free energy magnetic motor unit components	13
3.2.1. Stator and Rotor:	13

	3.2.2. T	he Magnetic flux shields	14
	3.2.2.	Shaft dimensions	15
	3.2.3.	PUMP	15
	3.3. SPI	ECIFIC OBJECTIVE B:	18
	3.3.1.	Concept of Simulation	18
	3.3.2.	CAD 2D Modeling	18
	3.3.3.	Lua Scripting	26
	3.3.4.	progress of Simulation	27
	3.3.5.	Simulation on Magnetic Push-Pull Experiment	27
	3.4. SP	ECIFIC OBJECTIVE 3:	28
	TEST ANI	O VALIDATE	28
4.	. RESULTS	S AND DISCUSSIONS	29
	4.2. PULI	AND PUSH	34
	Table 4.1:	Result of Axial Force and Tangential Force at Various Distances	34
	4.4.3	Discussion	35
C	TATIONS		38

CHAPTER ONE:

1.0 INTRODUCTION

1.1. Background

Uganda has an abundance of water resources Rivers, lakes and wetlands that cover about 20% of the total surface area. (Nsubuga, Namutebi, & Nsubuga-Ssenfuma, 2014). Continuous need of water for different activities like in agriculture, domestic use and industrial use, call for the need of water pumping (Gopal, Mohanraj, Chandramohan, & Chandrasekar, 2013). This is because the population of Uganda increases every time. From the Uganda bureau of statistics, it is explained that Uganda's population has continued to grow rapidly over time. It increased from 9.5 million in 1969 to 41.49 million in 2016 (Ryan, 2017)

The main purpose of this project is to design and construct a free energy magnet motor pump system by understanding new science doctrines of free energy theories. The term "Free-Energy" generally means a method of drawing power from the local environment, without the need to burn a fuel or coal (Kelly, 2010). However, the conventional science contradicts the method of free energy. According to Kelly (2010), the magnet actually does not exert any power at all Similar like the solar panel does not put effort into producing electricity, the power of a magnet flows from the environment and not from the magnet.

Permanent Magnets have continuous power that creates natural repulsion, the repelling characteristics of magnetic waves creates a perpetual motion that is being harnessed by the magnetic devices(Howard C. Lovatt & Peter A. Watterson, 1999). However, the reality is that conventional science just doesn't know the techniques necessary for extracting that power (Kelly, 2010).

Conventional physics says that it is impossible for magnets to provide a primary energy source(Coey, 2002). However, the free energy magnet motor pump system can be achieved based on the property of magnet which is attracting and repelling. Although thousands of researchers worldwide have been pursuing the task of building a working magnet motor. Many claimed to have achieved this objective, however, none has reached the marketplace yet. Most affordable pumps are manually operated and requires a lot of labor and time input. Fuel

Power rate is 8.561Kw

Considering a farmer pumping water for 6 hours a day for 6month in a year i.e. two seasons

Power consumed = 8.561kWx6x30x6

= 9245.88Kw per year

Unit cost of electricity=570

Cost of power used =570x9245.88

= 5,270,151.6 million

Estimated operational cost that include lubrication and spare replacement is 500,000 per yr Total annual expense is 500000+1200000=1700000

Since the machine is self-powered, the amount saved per year will be

5,270,151.6 - 1,700,000

=3,570,151 per year

This implies that within a year, a person will get his money back with an extra saving of 3.570 million shillings.

CITATIONS

- Coey, J. M. D. (2002). Permanent magnet applications. Journal of Magnetism and Magnetic Materials. https://doi.org/10.1016/S0304-8853(02)00335-9
- Gopal, C., Mohanraj, M., Chandramohan, P., & Chandrasekar, P. (2013). Renewable energy source water pumping systems—A literature review. *Renewable and Sustainable Energy Reviews*, 25, 351–370. https://doi.org/10.1016/j.rser.2013.04.012
- Howard C. Lovatt, & Peter A. Watterson. (1999). Energy Stored in Permanent Magnets. IEEE Transactions on Magnetics, 35(1), 505–507. https://doi.org/10.1109/20.737473

Nsubuga, F. N. W., Namutebi, E. N., & Nsubuga-Ssenfuma, M. (2014). Water Resources of Uganda: An Assessment and Review. Journal of Water Resource and Protection Water Resources of Uganda: An Assessment and Review. Journal of Water Resource and Protection, 6(6), 1297–1315. https://doi.org/10.4236/jwarp.2014.614120
Ryan, F. (2017). Uganda's population growth puts spotlight on food. Financial Times.