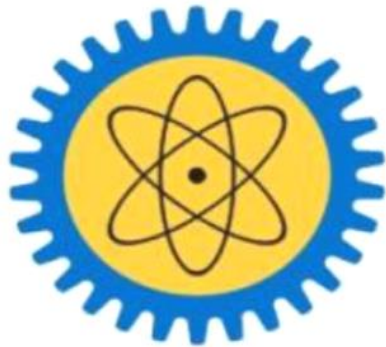




**BUSITEMA
UNIVERSITY**
Pursuing Excellence

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF WATER RESOURCES ENGINEERING

FINAL YEAR PROJECT REPORT

**DESIGN AND FABRICATION OF AN EGGLAYING HOLLOW CONCRETE BLOCK
MAKING MACHINE**

CASE STUDY: BUSITEMA UNIVERSITY

By

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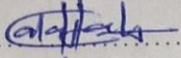
Final year project report is submitted to the department of water resources engineering in partial fulfillment of the requirement for the award of Bachelors of Science degree in water resources engineering at Busitema University.

ABSTRACT

The concrete block making machines is an old method of making blocks for various applications, and over the year's various design concepts and modifications have been attained for better functionality and productions. However, in Uganda it has been observed that there is not enough block making equipment or tools that optimized human labor, as well as the quality and quantity of production. This project aims in achieving some of the design constrains by designing an egg laying hollow concrete block making machine. Before concept generation and selection, characteristics, type of blocks was analyzed to facilitate the next design phase. During conceptual design phase, different concepts were proposed using concept generation methods and the best concepts were selected. From the selected concepts, the design was developed in accordance with technical and economic criteria and general arrangement, component shapes and materials were determined. A significant increase in the production efficiency and reduction of human labor has been observed. which also validated by prototype manufacturing and also for further enhancements. Moreover, the components and assembly were analyzed using Solid works.

DECLARATION

I KANDEKE ALAFAH a student of Busitema University with a registration number of BU/UP/2020/0312 hereby declare that, this report is a true work of my hands and has never been presented by any institution or university for an academic award.

Signature.....

Date...24/10/2024.....

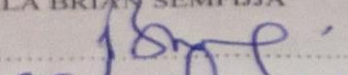
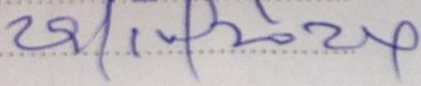
APPROVAL

This proposal is submitted as partial fulfillment for the award of Bachelor's Degree in
Water Resources Engineering of Busitema University, with approval from my project supervisor

MR. BAAGALA BRIAT SEMPIJJA

Signature:

Date:

ACKNOWLEDGEMENT

I would like to thank the almighty God for this guidance, protection and knowledge. I would also like to thank my parents for their continuous support both spiritually and financially. My sincere gratitude goes to my final year project Supervisor MR. BAAGALA BRIAN SEMPIJJA for his guidance, fellow students and Water Resources Department who have equipped me with the necessary knowledge that has enabled me to excel in academics.

DEDICATION

I dedicate this report to my dear parents, sisters, and brothers who have contributed in one way or another as far as my academics are concerned in terms of finances, moral and emotional support, and above all their love and guidance. May God reward them abundantly

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LIST OF ACRONYMS

HCB	Hollow Concrete Blocks
UBOS	Uganda Bureau of Statistics
CMU	Concrete masonry unit
SDGs	Sustainable Development Goals
NHBRC	Nation Home Builders Registration council
NPV	Net Present Value
UNBS	Uganda National Bureau of Standards

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