

**FACULTY OF ENGINEERING.**

**DEPARTMENT OF WATER RESOURCES AND MINING ENGINEERING.**

**DESIGN AND FABRICATION OF THE MOTORISED MINE CAR SYSTEM FOR  
MATERIAL HANDLING**

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of a Bachelor of Science in Mining Engineering*

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## ABSTRACT

A motorized mine car system is too essential for the transportation of equipment, personnel, mined ore and thus for the productivity of the mine.

It consists of various components in which there are ropes, bucket, electric motor, tyres, pulleys among others. The safety and reliability of the mine car system depends on its design, therefore proper and accurate design of it, is essential. In this research, the design of the components making up the mine car system was done through literature survey, invention as well as innovation. Different types and configurations of mine car systems were considered and compared regarding their suitability to small scale mines and adjusted where necessary. This research aims at providing a solution for underground mines (adits or horizontal tunnels) material handling replacing the ill-designed, unsafe as well as low productivity equipment used such as wheelbarrows. A cost effective mine car system is a great call for small scale miners who cannot afford to import a proper mine car system.

DECLARATION

I **KIRIGWAJJO HAMIS** declare to the best of my knowledge that the work presented in this proposal report is my own and has never been presented to any University or higher institute of learning for any academic award.

Signature.....

Date.....

I **SEKWEYAMA ISAAC SAMSON** declare to the best of my knowledge that the work presented in this proposal report is my own and has never been presented to any University or higher institute of learning for any academic award.

Signature.....

Date.....

APPROVAL

This proposal report has been submitted to the Department of Water Resources and Mining Engineering for examination with approval from the following supervisors:

**Mr. NASASIRA BAKAMA MICHAEL**

Signature.....

Date.....

**Mr. SOLOMON AZARIUS LUBAALE**

Signature.....

Date.....

## DEDICATION

We dedicate this report to our beloved parents in appreciation for their unconditional love and care, supporting us since childhood, and for the spirit of hard work, courage and determination they taught us, made us able through the Lord to fight to become complete mining engineers.

We also dedicate it to our beloved friends Namaganda, Kabonge, Moses, Njoka, Ibra among others for the motivation and courage they have always given us to focus on education.

## ACKNOWLEDGEMENT

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Appreciation goes to all our dear supervisors; Mr. Nasasira Bakama Michael, Mr. Solomon Azarius Lubaale for their selfless guidance, knowledge and encouragement given to us throughout the writing of this report as well as the Mining department and Busitema University lecturers.

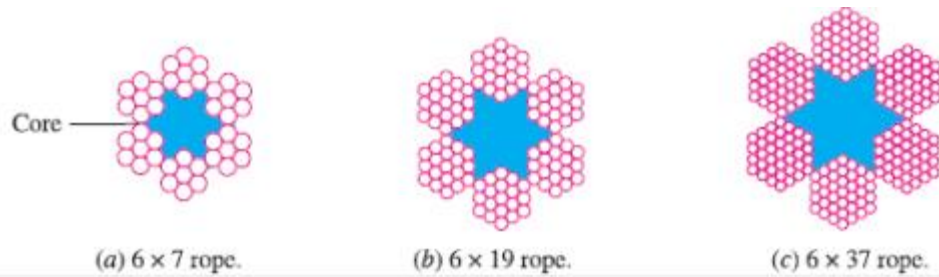
Finally, we thank all our friends and fellow Mining Engineers for all the support and advice they have given me during my proposal report writing.

May the Almighty God reward you abundantly.

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