



## ABSTRACT

**Name of Institution:** De La Salle University – Dasmariñas

**Address:** Dasmariñas, Cavite

**Title:** “Producing Barium Ferrite Magnets for Loudspeaker from Steelmill Wastes”

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### OBJECTIVES OF THE STUDY:

#### A. GENERAL OBJECTIVE

- To be able to produce Barium Ferrite magnets for loudspeaker out of steelmill wastes

#### B. SPECIFIC OBJECTIVES

- To determine advantages associated in utilizing steelmill wastes that can now be substituted into a Barium Ferrite magnet
- To determine factors that influences the value of producing cheaper but an excellent alternative to imported magnets in producing Barium Ferrite magnets for loudspeaker



**SCOPE AND COVERAGE:**

The study is concentrated on producing Barium Ferrite magnets for loudspeaker from steelmill wastes and focused on recycling these wastes into a profit-making product, aspects governing the conversion of steelmill wastes materials into magnets for loudspeaker which consist of its processes and method.

**METHODOLOGY:**

This study was made by combining some of the techniques which includes research method, research instrument and administration of the instrument. Research method comprises the method defined and its importance. Research instrument known as the data gathering tool used to answer the problem of the study. Administration of the instrument is classified as the data-gathering procedure contains the procedure followed to resolve the problem. All these methods were utilized in order to attain new information and essential data needed to solve the problem.



**MAJOR FINDINGS:**

The result of the study revealed that the locally produced Barium Ferrite have high coercive force, high efficiency and low heat generation. They also gave strong magnetic coupling and low loss characteristics. These merits make Barium Ferrites, also known as ceramic magnets ideal for use in loudspeakers, small motors and stick on devices. As substitute to commercial ferric oxide are very economical to use.

**CONCLUSIONS:**

The use of the steelmill wastes materials will depend in the perceived advantages of the magnetic material of Barium Ferrite in comparison to imported iron oxide in producing magnets for loudspeaker.

**RECOMMENDATIONS:**

Hence we recommend that the locally produced Barium Ferrite can be substituted to imported iron oxide in producing loudspeaker magnets. However, further studies could be conducted to improve the magnetic strength, processing conditions, and heat treatment as well as the effect of additives on its properties.