



De La Salle University – Dasmariñas

**TRANSPORTATION REDUCTION THROUGH AN
IMPROVED LAYOUT**

An Undergraduate Thesis

Presented To

The Faculty of the College of Technology

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In Partial Fulfillment

Of the Requirements for the

Degree of

Bachelor of Science in Industrial Technology

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ABSTRACT

Name of Institution : De La Salle University -Dasmariñas

Address : Dasmariñas, Cavite, Philippines

TITLE : Transportation Reduction through
an Improved Layout

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OBJECTIVES OF THE STUDY

A. GENERAL OBJECTIVE:

Improve the operation time of the workers and reduce the transportation time in producing Betafoam products inside the production plant of SAGREX Company.

**B. SPECIFIC OBJECTIVES**

1. Assess the distance traveled by the workers from one process to another.
2. Identify where changes should occur in the setup and flow of production.
3. Develop a new layout that will suit the production of SAGREX.

SCOPE AND COVERAGE :

This study is concentrated on the application of Systematic Plant Layout (SLP) through the theories of Shop Layout and Management to reduce the transportation time and increase the operation time inside the production area.. The coverage is within the production of Polyethylene Betafoam products at Southern Agro Export Corporation (SAGREX).

**METHODOLOGY :**

Motion and Time Study was the method used in this study through the use of stopwatch with regards to the principle of Shop Layout and Management with space, adjustment, and relationship. The Descriptive Method of gathering the data needed by the author was obtained through the use of Process Charts, Flow Process Charts, and From-To Chart.

Also, to obtain the profit and savings the company could earn if they re-layout their existing production area against the cost of re-layout through Return of Investment.

MAJOR FINDINGS :

The workers spent 56.61% TRANSPORTATION TIME and 44.39% for OPERATION TIME in producing Polyethylene Betafoam products due to the existing layout of SAGREX.

**CONCLUSIONS :**

The researcher conclude that the transportation time spent by the workers in producing polyethylene foam (Betafoam Products) could be reduce from 56.61% to 32.20%. Thus, this would increase the time of operation from 44.39% to 67.80%.

RECOMMENDATIONS :

Adapting the Principles of Systematic Layout Planning (SLP), the researcher recommends the use of a detailed planning and to redesign and re-layout the plant. Moreover, SLP and AUTOCADDie (computer-generated program) would serve as a guideline and overview of a desired layout the plant wants to and fits to.