MODELING AND SIMULATION OF INVENTORY SYSTEM TO OBTAIN DESIGN ALTERNATIVES WAREHOUSING (CASE STUDY IN PT.PETROKIMIA GRESIK)

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ABSTRACT

PT. Petrokimia Gresik is a fertilizer manufacturer in East Java. At the moment PT. Petrokimia Gresik has an installed capacity of 2.690.000 ton / year and non-fertilizer production 1.647.600 ton / year. Because of the need for fertilizer is increasing nationally, for that PT. Petrokimia Gresik is doing developing the production capacity that has been started in the year 2008. Along with the development of production capacity, the need for raw materials, and the results of the production also increased, thus the need for raw materials storage area has also increased. To meet the need for such storage is required the development of warehousing, and optimizing the function of warehouse and facilities – supporting facilities in order more efficient. To determine the extent to which development should be done, namely by analyzing the operational performance and trend predictions for the development until the year 2015. By knowing the amount needed at the present condition which includes raw material consumption tons / ton of products, semi finished and finished goods, then the future can be predict the need for land until the year 2015. By way of making an inventory system simulation model and comparing the data for additional production capacity through 2015. so it can be calculated need for warehousing land.

This study is expected to provide inputs for the company in conducting warehouse system design to overcome the company's operational expenses due to plant development until the year 2015.
keywords: simulation, production capacity, semi-finished goods, finished goods