PORT CAPACITY PLANNING SIMULATION TO SUPPORT THE OPERATION FERTILIZER PLANT (CASE STUDY IN PT. PETROKIMIA GRESIK)

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Abstract

PT. Petrokimia Gresik is a fertilizer company in East Java. At this time the company is able to produce fertilizer for 2,690,000 tons / year and non-fertilizer production 1,647,600 tons / year. To meet the increasing demand for national fertilizer each year, is currently being carried out development of production capacity that had been started in 2008 and will continue until the year 2015. Raw material used in this production is supplied from part of the production itself and partly from imports, while for most of the fertilizer products are distributed to the regions through the port. Along with the development of the production capacity there was increased volume of raw materials and products through the port. To overcome the operational improvements made analysis of the port development plan of PT. Petrokimia Gresik with Simulation.

Simulation methods can be used to determine the extent to which development should be done by analyzing the performance of current operations and make it into the simulation model.
From model simulations that have been carried out verification and validation will be done later experiments with a particular scenario run until the desired year until the year 2015. From the results of this simulation is to know where the load dock operations is too high and needs to be development and see which scenario is more expensive and optimal.

Simulation results obtained from the best alternative is to develop a new pier with a length of 280 m with a grab tool with capacity 7000ton/day and Pump with capacity 1800ton/day.

Keyword: Simulation, ports, docks, production capacity