

INDUSTRIAL TRAINING REPORT

AT

DANGEROUS GOODS UNIT

PENANG PORT COMMISSION

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REPORT

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ABSTRACT

A study was conducted to analyse the performance of berth at Prai Bulk Cargo Terminal of Penang Port Commission. The aims of this study are to determine the average waiting time spend by a vessel in the queue, the average waiting time spend by a vessel at the berth and as well as to find the optimum number of berth that need to be opened. Data of the actual operation processes over a month period from February 2015 are used and the study applies Queuing theory of waiting line. There are fourteen types of commodity for liquid bulk which is Anhydrous Ammonia, Butadiene, Diesel Oil, Ethylene Glycol Monoethyl, Fuel Oil, Methanol, Kerosene Jet A1, Acrylonitrile, Methyl Methacrylate Monomer, Liquid Petroleum Gases, Sulphuric Acid, Styrene Monomer, Unleade Motor Gasoline, Vinyl Chloride Monomer. The findings of the study reveal that the total pumping rate in February 2015 show an increasing pattern. Unleade Motor Gasoline is the highest number of pumping rate, while Methanol has the least pumping rate. Moreover, 12th of February is the highest number of total pumping rate which has highest arrival rate and service rate of vessel per hour and 6th of February is the lowest number of total pumping rate which has lowest arrival rate and service rate vessel per hour. This type of study is suitable to be applied in other departments that have a similar operation as EPF and some recommendations are recommended for further study.

Keywords: Single Channel Single Phase System, Queuing Theory, Waiting lines, Arrival rate, Service Rate

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