INDUSTRIAL TRAINING REPORT

AT

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REPORT

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TOPIC:

UNIVARIATE FORECASTING MODEL ON DEMAND OF FORKLIFT AT PBKSB AND BOX-JENKINS METHODOLOGY

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"In the name of ALLAH the Most Gracious, the Most Merciful"

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ABSTRACT

The purpose of this study was to forecast model for total hour's demands of forklift at Kemaman Supply Base from year January 2003 until April 2013. This is forecast model based on objective in the study. The objectives of this study are to identify and describe the underlying structure and the phenomenon as depicted by the sequence of data, to determine the best model that can be used to forecast the total hours of demand forklift by client at KSB, and to forecast the total hours of demand forklift from KSB's clients for two years forward. The dataset have 132 monthly observations. The dataset is secondary data was collected by SAP System. Forklift is an industry handling vehicle which is refers to various kinds of wheeled cargo handling vehicles to do loading and unloading goods. Port operation process has always uncertain due to the seasonal and fluctuating throughput demand, plus with the delaying in the daily operation, breakdown and maintenance of the equipment. Forklift demand and other heavy machineries are the most important equipment when operating the logistic industries especially at terminal. Demands of forklift at port increase due to the increase the activities of drillings for oil and gas industries. From the analysis, it is found that the data been influenced by trend component and there is seasonal component. Then, comparison has done to test two methods that are Univariate Techniques Modeling and Box-Jenkins Methodology. So, it was found that the best model for forecasting if Holt-Winters' Multiplicative technique. Then, the model has been used to forecast total hours demand of forklift at KSB for twelve month in year May 2014 until April 2015. The future values for demand forklift at KSB keep increasing time by time. All the objectives for this study achieved.

Keywords: forecasting, time series, forklift, SAP

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