

# Manajemen Persediaan Suku Cadang Menggunakan Metode Multi-Criteria ABC dan Penentuan Model Forecasting Di PT Pupuk Iskandar Muda = Spare Parts Inventory Management Using Multi-Criteria ABC Method and Forecasting Model Determination at PT Pupuk Iskandar Muda

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## Abstrak

Karya akhir ini membahas manajemen persediaan suku cadang yang permintaannya cenderung bersifat intermitten pada salah satu perusahaan pupuk milik negara yang terletak di provinsi Aceh. Jumlah suku cadang pada perusahaan rekayasa kimia seperti perusahaan pupuk dapat berjumlah ratusan hingga ribuan, sehingga diperlukan klasifikasi untuk mempermudah pengelolaannya. Pada penelitian ini, pengelompokan item suku cadang dilakukan menggunakan metode Multi-Criteria ABC dengan pembobotan Exponential Smoothing. Penentuan model peramalan juga dilakukan pada item suku cadang dengan klasifikasi A menggunakan tiga metode yaitu metode Single Exponential Smoothing, metode Croston, dan metode Syntetos-Boylan Approximation. Ketiga metode peramalan dibandingkan berdasarkan Mean Absolute Deviation (MAD), Mean Squared Error (MSE) dan Mean Absolute Percent Error (MAPE) untuk mendapatkan metode peramalan yang optimal.

.....This thesis discusses the management of spare parts inventory, which demand tends to be intermittent, in one of the state-owned fertilizer companies located in the province of Aceh. The number of spare parts in chemical engineering companies, such as fertilizer companies, can be in the hundreds to thousands, classification is needed to facilitate the management. In this study, the classification of spare parts is conducted using the MultiCriteria ABC method with Exponential Smoothing weighting. Demand forecasting is also carried out on class A using three forecasting models, namely the Single Exponential Smoothing method, the Croston method, and the Syntetos-Boylan Approximation method. The three forecasting models are compared based on Mean Absolute Deviation (MAD), Mean Squared Error (MSE) and Mean Absolute Percent Error (MAPE) to obtain the appropriate model for the spare parts.