

Aircraft Material Purchasing Planning Optimization Using 3 Different Model (Economic Order Quantity, Least Unit Cost, And Wagner Within Algorithm)

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Abstract

Every company running its business is definitely required to be able to carry out its business processes effectively and efficiently. Likewise with PT. GMF Aeroasia tbk is an MRO company of the Republic of Indonesia. In its business process. The company faces a lot of homework to be done well. Especially in a pandemic situation like today. Companies are required to be able to save on purchasing costs both from internal processes and external. This analysis is targeted at the purchase budget and material procurement for aircraft maintenance. Because the purchase and procurement of parts for aircraft maintenance is considered very crucial. Procurement and purchase of aircraft material are still considered inefficient, especially when purchasing aircraft material is mostly imported from abroad and often there are many additional costs and burdens that companies have to bear. By analyzing several factors that cause a lot of costs including lot determination, transportation costs, setup costs for purchasing materials, purchasing time spans, minimum costs, and also the minimum amount of material purchases that can be made by the company. By using the three methods as the title above, namely: Economic Order Quantity, Least Unit Cost, and also Wagner Within Algorithm.

Keywords

Economic Order Quantity, Least Unit Cost, Wagner Within, Transport cost, Set-Up cost, Inventory Cost, Industrial Management.

Biography

Mukhammad Yusuf Hakim is currently the student of master double degree program supported by Erasmus+ International credit Mobility, Department of Industrial Engineering, University of Indonesia, Indonesia and Department of Management and Optimization of Supply chain and Transport, IMT Atlantique, Nantes, France. He obtained a bachelor's degree in Industrial Engineering at Muhammadiyah University of Tangerang, Indonesia. He later specialized in Aircraft Maintenance dedicated for Boeing 747 and 777 Series Work under Ministry of Transportation Republic of Indonesia. Yusuf had been a project manager of a reputable Engineering and Services company in Indonesia for over seven years. He continued his master study in linear field from his bachelor's degree at University of Indonesia then also join Erasmus+ International Credit Mobility under University of Indonesia, IMT Atlantique and FICEM Institution to gain his double degree master study.

Komarudin is a Professor in Design and Management System, Industrial Engineering Department, Universitas Indonesia. He earned Bachelor in Universitas Indonesia and a Master's in the Universiti Teknologi Malaysia, and then a Doctoral degree in Vrije Universite Brussel. He has published journals and conference papers. His research interests include manufacturing system, quality management system and also design and management system.