

Determination of Spare Parts Procurement in Plastic Packaging Manufacturing Company

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Abstract

A company is like a system which is a unit of several interrelated entities in it. The system in a good company will help the company to achieve the goals to be achieved. This success can be obtained by implementing a good production system from upstream to downstream. One of the important processes is the procurement process. PT. ABC is a manufacturing company for plastic packaging products. Procurement management is one of the important activities in the supply chain. Consumable parts or consumables are materials that cannot be reused and are often used to support the production process. In its implementation, the procurement of consumable parts at PT. ABC is done on an irregular basis or changes as needed. It is not uncommon for the procurement of consumable parts to be submitted by the user to the purchasing department suddenly. This causes several risks that can occur, such as shortages of inventory for the relevant departments, difficulty for the purchasing department to get the spare parts requested quickly and with quality, then making the process of submitting the purchase of documents done too often. PT. ABC does not have a fixed amount of raw materials that must be ordered and when is the right time to place an order. Often requests for some consumable parts are made without a fixed time and quantity which requires the administrative process of purchasing applications to occur too often. Therefore, writing this research aims to assist companies in finding the factors that affect the uncertainty of demand in the procurement of consumable parts. Next, determine the stock that must be provided at the time of ordering which as long as it is still probabilistic and uncertain.

Keywords

Spare parts, Inventory Management, Procurement Policy, Order Quantity

Biographies

Lailatul Fadhilla Rahmi is the master degree student of Industrial Engineering at Universitas Indonesia with Industrial Management concentration. She completed her bachelor degree at Universitas Gunadarma, majoring in Industrial Engineering. Her first experience was as a Purchasing Staff at PT. Hanes Supply Chain Indonesia engaged in the garment industry for one year. She continued her career in the packaging food and beverage industry named PT. Hokkan Deltapack Industry as a Procurement Staff. She was monitoring and controlling all the branches and did the negotiation with suppliers. She has the determination and passion to be able to learn and improve her skills professionally.

Djoko Sihono Gabriel is a Professor in Industrial Engineering at Universitas Indonesia. He earned a Bachelor of Engineering (B. Eng.) in Industrial Engineering, Bandung Institute of Technology, Bandung, Indonesia in 1980, the engineer (Ir.) in Industrial Engineering, Bandung Institute of Technology, Bandung, Indonesia in 1981, the master of engineering (M. Eng.) in Industrial Management, Universitas Indonesia, Jakarta, Indonesia in 1995, the doctor (Dr.) in mechanical engineering, Universitas Indonesia, Jakarta, Indonesia in 2015. He is a professor in industrial engineering at Faculty of Engineering, Universitas Indonesia with a major in industrial management.

Farizal is a senior lecturer in Industrial Engineering Department Universitas Indonesia. He earned a Bachelor of Engineering degree from Universitas Indonesia and a master's degree from Oklahoma State University. He completed his Doctoral degree from Mechanical, Industrial and Manufacturing Engineering (MIME) Department of University of Toledo, USA. His research focuses on reliability design optimization, renewable energy, supply chain management, and techno-economy.