

Panwipa Puthipad 2011: Improvement and Management of Raw Material Inventory for Bleaching-Dyeing Textile Industries. Master of Science (Agro-Industry Technology Management), Major Field: Agro - Industry Technology Management, Department of Agro-Industry Technology. Thesis Advisor: Assistant Professor Pornthipa Ongkunaruk, Ph.D. 124 pages.

Bleaching-Dyeing Textile Industries are industries that bring textile materials from the weaving and knitting industry through the dyeing process and continue to production or distribution. Raw materials such as color and chemical substances are important components and their value are about 30 to 60 percent of sales. Thus, raw materials inventory management is important for the industries. The standard inventory policies could be implemented to determine when and how much to order raw material so that the total cost is minimized while maintains the customer service level. The objectives of this research are to study and improve inventory management of the case study dyeing industry. First, we categorize the raw materials inventory using ABC classification. Second, we select two raw materials in group A which have the most usage values. Third, we analyze the distribution of the usage rate of selected materials and implement the standard inventory policies such as (s, S), (s, Q) and S policies versus Monte Carlo simulation. Next, we compare those policies with the current policy and analyze the data. The results show that the distributions of raw material usage rate are useful in selecting the appropriate policy and can reduce the total cost compared with the current policy while maintain customer service level and product fill rate that new policy can reduce cost by 6.29 percent

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