ABSTRACT

This project mentions about an electronic manufacturer and its services that was hired by the customer to produce their products. It is very important to prepare the inventory for customers needs and to produce more products for many customers at the same time.

The objective of this study was to implement various purchasing models to reduce total inventory costs. Starting from ABC classification of all materials used in the studied factory. Then, the purchasing models were applied. According to the information in the year 2002, the level A materials had 56 items and the annual value of about 81% of total material costs which was about 146.4 million bahts and the materials were imported from overseas. Since the purchasing and transportation costs for this level were very high, different kinds of materials were allowed to be included in one lot. For the level B materials, there were 17 items and the annual value was approximately 5% which was about 8.1 million bahts and 50% of these materials were imported. For the level C materials, there were 84 items and the annual cost was about 14% which was about 25.9 million bahts and domestically available. The costs of purchasing orders, inventories, and safety stocks of level A, B and C were about 4.4 million bahts.

After this study, some recommendations could be made. For level A, the model of economic fixed quantity should be used and various materials can be put together in one container. For level B, the model similar to the level A should be used but only one material or one order is put in one container. For the level C, the model of fixed interval should be used. If the suggested models have been implemented with 90% service level and 10% interest rate, the inventory control costs will be reduced by 8.5% or 0.37 million bahts per year compared to the current method.