ABSTRACT

Modeling Selection of Containers Buffer Depot Network to Reduce Export Shipment Failure Risk at PT. Pabrik Kertas Tjiwi Kimia, Tbk

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Abstract: Inter-modal transportation system has been the very important component in the supply chain system recently, and containerization as a means of intercontinental cargoes transportation significantly expedites the transit time. This enables manufacturers making use of containers in large scope to competitively gain the vast markets and to encourage them to boost their production and services to buyers. The containers’ demand in huge quantity has been prone to the problem of stability, availability and their distribution capacity of the shipment itself, and avoiding these obstacles will make good impact the fixed export schedule (on-time delivery). On-time delivery has now been the crucial significance to buyers who have expectation for their vendors-service preeminence, and on-time delivery will simultaneously give competitive advantages to manufacturers. Failure of shipment or delivery as it is required by the buyers, will impose great lost to the manufacturers in the midst of the hard competition.

Containers operating as a component of supply chain in the system of goods distribution of manufacturers, especially those with large scope industry, requires high capabilities among of them is the ability to guarantee the availability of the distribution modal of the containers in both quantity and agreeable time of schedule. Due to this reason, this study has been accomplished as an intermediary means for manufacturer in optimizing the goods distribution as per agreed export schedule. With the approach of a network model of the sustaining containers depot and it is intended to guarantee the containers availability and distribution for their shipment of the export commodities.

By using spreadsheet calculation which was integrated with Lingo program in order to optimizing depot buffer network model to fulfilled containers demand, resulted logistics cost reduction for export shipment in 2008 from USD 7,136,612.55 to USD 5,201,354.35 or equal with efficiency of 27.12%.

Keywords: container, buffer depot, on-time delivery.