

## **ABSTRACT**

### **MINIMIZING THE DISTANCE AND THE COST OF MATERIAL HANDLING USING CORELAP AND CRAFT METHOD (Case Study in Cap Tani Vermicelli Factory)**

*The planning of facility layout is a sorting out process from something that is systematic, starting from: Site selection, engine position, determining warehouse, and also production process. In order that the production become effective and efficient, the layout facility need to be planned very carefully. Cap Tani Vermicelli Factory is a manufacture industry in food sector. The layout which they used showed that the distance between each engines is quite separated, that is why they need a bigger space overall and high transfer cost. The layout method Corelap and Craft can be used to find out the activities between engines and also can be used to minimize the distances between engines, which will reduce the cost of material handling. Corelap method used to find out the activity connection between related engines, where as Craft method in this case is used to minimize the distances between engines so that the cost of Material handling become smaller. In the beginning of the layout design for group 1 ( Rice Washer Machine, Dough Machine, and Press Machine ) is located at the end of the layout design, the reason for this is to give distances from the finished goods warehouse to Rice Washer Machine about 40 meters. After the layout design change based on iteration suggestion number 3, the distances for group 1 is adjacent to raw material warehouse / finished goods warehouse, giving about 16,15 meters distance between finished goods warehouse to Rice Washer Machine. Based on that, the early spacing process which is 202,25 meters can be reduced to 173,15 by using the iteration suggestion number 3. Meaning the iteration suggestion number 3 during the study period is succesful on reducing the distances of transferring goods for about 29,10 meters or 14,39% and also reducing the cost of transferring goods for about Rp. 748.825, which in 1 year saving up about Rp. 17.383.473,5 or 47,54%.*

**Keywords:** *The cost of material handling, transferring distances, Corelap Method, Craft Method, Layout.*