

## **ABSTRACT**

PT. ASD is a private company engaged in manufacturing that produces spare parts for cars and motorcycles. PT. ASD's raw material warehouse is still not good enough in handling the placement of raw materials, resulting in delays in the delivery of raw materials to the production floor. Delays in the delivery of raw materials occur due to activities in finding the required raw materials. So this activity takes a longer time due to the large amount of raw material with a large level of use being stored randomly in the aisle and near the I/O door of the raw material warehouse.

In an effort to overcome this problem, a proposal for the design of raw material storage allocation is made. The first step is to identify and classify raw materials using FSN analysis to get raw material SKU priority, the next step is to calculate the storage slot capacity and storage distance between slots and the rectilinear distance, to determine the slot requirements for each raw material SKU and determine the distance of each slot from I/O. The results of the two calculations will be combined with the classification results from the FSN analysis, the last step is the provision of codification for labels, which aims to find out where the location of the raw material SKU is stored. In an effort to produce the correct storage allocation design, it is necessary to simulate the results of the improvements, by performing sampling calculations using the same pick list data at the time of observation. The result of the sampling calculation will be assumed as the proposed condition and the data from the observation will be assumed as the actual condition.

Based on the comparison results obtained, the proposed conditions get decrease in processing time on picking activity by 256.28 seconds or 45% lower than the actual condition.

**Keywords : FSN Analysis, Warehouse Slotting, Rectilinear Distance**