ABSTRACT

Warehouse has an important function in maintaining the operation of the production. Warehouse must be designed so the items can be stored in the warehouse optimally. An unoptimal space utilization will cause irregular product placement. This occurred in the warehouse of Slab Steel Plant (SSP) 1 PT. XYZ. The existing condition shows that the average utility in 2012 is 140%. The high utility of this warehouse can be caused by several things, such as the capacity allocation of rework block is not optimal. In addition, the storage policy of finished good block is random and placement of irregular slab steel.

The calculation of Corelap algorithm is used to design the layout of the finished good block and redesign capacity of rework block. Corelap algorithm make a close to the blocks which has a closeness relationship based on activity relationship chart (ARC).

From this research, the design layout of finished good block by using a dedicated storage policy and rework block resulted in increased warehouse capacity of 3.5% and material handling operating cost savings of 8.9%

Keywords: Warehouse, Layout, Dedicated Storage Policy, Corelap Algorithms