

ABSTRAK

USULAN PERBAIKAN TEKNIK PENYIMPANAN PUPUK NON SUBSIDI UNTUK OPTIMALISASI SISTEM PENYIMPANAN DI CV XYZ MADIUN

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Penelitian ini bertujuan memperbaiki sistem penyimpanan pupuk non-subsidi di CV. XYZ Madiun yang masih menggunakan penempatan berdasarkan ruang kosong sehingga menyebabkan produk sulit dicari dan jarak perpindahan material menjadi tidak efisien. Penelitian dilakukan dengan menganalisis kondisi penyimpanan, aktivitas perpindahan barang, serta klasifikasi ABC sebagai dasar penerapan metode Class Based Storage. Perancangan juga dilengkapi dengan sistem stacking pallet dan penggunaan forklift sebagai alternatif material handling. Hasil penelitian menunjukkan bahwa layout eksisting memiliki total jarak material handling sebesar 3.700.090 meter. Penerapan Class Based Storage menghasilkan layout usulan dengan total jarak 2.936.775 meter atau berkurang 763.315 meter (20,63%). Waktu material handling pada layout usulan 1 sebesar 58.735,50 menit, sedangkan penerapan forklift pada layout usulan 2 menghasilkan waktu 36.709,69 menit. Hasil tersebut menunjukkan efisiensi waktu sebesar 50,39% dibandingkan layout eksisting. Sistem usulan didukung SOP penyimpanan, stacking pallet, penggunaan forklift, dan keselamatan kerja untuk menjaga keteraturan proses penyimpanan serta perpindahan produk.

Kata kunci: Class Based Storage, klasifikasi ABC, tata letak gudang, material handling, pallet storage.

ABSTRACT

This study aims to improve the non-subsidized fertilizer storage system at CV. XYZ Madiun, where items are currently placed based on available empty space, making products difficult to locate and resulting in inefficient material movement distances. The research involved analyzing storage conditions, material movement activities, and ABC classification as the basis for implementing the Class-Based Storage method. The design also incorporates a pallet stacking system and the use of forklifts as a material handling alternative. The results indicate that the existing layout involves a total material handling distance of 3,700,090 meters. Implementing Class-Based Storage yielded a proposed layout with a total distance of 2,936,775 meters, representing a reduction of 763,315 meters (20.63%). Material handling time for the first proposed layout was 58,735.50 minutes, whereas the use of forklifts in the second proposed layout resulted in a time of 36,709.69 minutes. These results demonstrate a time efficiency of 50.39% compared to the existing layout. The proposed system is supported by Standard Operating Procedures (SOPs) for storage, pallet stacking, forklift usage, and workplace safety measures to ensure organized storage and product movement processes.

Keywords: *Class-Based Storage, ABC classification, warehouse layout, material handling, pallet storage.*