Rekomendasi alat bantu material handling yang ergonomis pada era sub store pabrik fast moving consumber goods menggunakan metode virtual humanmodeling = Recommendation of ergonomic material handling equipment in sub store area of fast moving consumer goods manufacturing plant using virtual human modeling methodology

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Abstrak

Area sub store, gudang perantara antara gudang bahan baku dengan area produksi yang menyimpan bahan baku selama 1 shift produksi, mempunyai frekuensi pengiriman material yang tinggi. Dalam melakukan material handling dengan frekuensi yang tinggi tersebut, dibutuhkan alat bantu yang ergonomis agar pekerja tidak mengalami work musculosketeletal disorder. Pendekatan yang digunakan dalam merancang alat yang ergonomis ini adalah metode Virtual Human Modeling.
Output dari penelitian ini adalah perbandingan nilai Posture Evaluation Index (PEI) dan Lifting Index (LI) menggunakan model aktual dengan model rekomendasi. Posture Evaluation Index (PEI) mengintegrasikan hasil analisis dari tiga metode pengukuran ergonomi yaitu Low Back Analysis (LBA), Ovako Working Posture Analysis (OWAS), dan Rapid Upper Limb Assessment (RULA). Sedangkan Lifting Index (LI) merupakan hasil analisis dari pengukuran ergonomi NIOSH. Hasil penelitian memberikan rekomendasi alat bantu material handling yang ergonomis di area sub store.
.....Sub store area, a temporary warehouse, between raw material store and production area, which saves raw material during 1 shift of production, has high frequency of material delivery. In doing such a material handling activity, it is needed to have an ergonomic material handling equipment to avoid worker from work musculoskeletal disorder. The approach used in designing ergonomic equipment is virtual human modeling methodology.
The output of this research is a comparative value of Posture Evaluation Index (PEI) and Lifting Index (LI) using actual model and recommendation model. Posture Evaluation Index (PEI) integrates analytic results of three ergonomic measurement tools. They are Low Back Analysis (LBA), Ovako Working Posture Analysis (OWAS) and Rapid Upper Limb Assessment (RULA). However, Lifting Index (LI) is an analytic result of NIOSH analysis. Output of this research gives a recommendation of ergonomic material handling equipment for sub store area.