Analisis ergonomi gerobak sampah manual dalam virtual environment studi wilayah Jakarta Barat

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Abstrak

Penelitian dilakukan pada objek gerobak sampah manual yang beroperasi di wilayah Jakarta Barat. Terhadap objek tersebut dilakukan analisis ergonomi yang memanfaatkan metode LBA, OWAS, dan RULA yang diintegrasikan melalui perhitungan Posture Evaluation Index (PEI). Analisis memanfaatkan simulasi dalam virtual environment berdasarkan data antropometri dan postur kerja yang ada di lapangan, serta rekomendasi menurut studi literatur. Simulasi kerja diolah menggunakan software NX 6 dan Jack 6.1. Hasil akhir adalah berupa parameter desain gerobak sampah terkait ketinggian handle dan kestabilan gerobak yang dapat mengurangi resiko musculoskeletal disorder pada operator gerobak sampah.
<hr>This study focused on the ergonomic aspect of manual garbage operation in west Jakarta. Ergonomic analysis was performed utilizing methods of LBA, OWAS, and RULA which are integrated in Posture Evaluation Index. The analysis was done based on existing antrhopometry and posture data with the recommendation built based on literature study. Then they were simulated in virtual environment using software NX 6 and Jack 6.1. The final output of this study includes best handle height among recommendation options and cart stabilization which can reduce musculoskeletal disorder risk for garbage cart operators.