

Penentuan konfigurasi desain tempat kerja terhadap postur pekerja yang ergonomis pada area material cutting industri mebel menggunakan virtual human modelling

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20288929&lokasi=lokal>

Abstrak

Penelitian ini membahas penentuan konfigurasi desain tempat kerja yang berupa desain meja kerja dan peralatan manual handling berdasarkan tinjauan ergonomi terhadap postur dan kapasitas beban angkat pekerja pada area material cutting industri mebel. Penelitian dilakukan melalui pembuatan virtual human modelling pada software Jack. Analisis dilakukan menggunakan Posture Evaluation Index (PEI) yang mengintegrasikan metode LBA, OWAS, dan RULA serta NIOSH Lifting.

Hasil penelitian berupa konfigurasi desain tempat kerja paling ergonomis terhadap postur pekerja pada area material cutting dan rekomendasi alat bantu manual handling yang mampu memperbaiki penilaian postur pekerja sehingga dapat mengurangi risiko terjadinya muskuloskeletal disorder pada pekerja serta meningkatkan produktivitas.

.....This study discusses the determination of workplace design configuration that is consists of working table and manual handling tool design based on ergonomic assesment to posture and lifting load capacity in material cutting area of furniture industry. The research was done using virtual human modelling in Jack software. The analysis was performed by using Posture Evaluation Index (PEI), which integrates the value of LBA, OWAS, and RULA and using NIOSH Lifting method.

The result is ergonomic workplace design configuration to material cutting area workers and recommendation of manual handling tool that can improve posture assessment so that it will reduce the risks that may cause musculoskeletal disorders in workers and also improve productivity.