

ABSTRAK

REDESIGN ALAT PENGIRIS TALAS PADA PRODUK KERIPIK TALAS IKM SIWARAK DENGAN METODE *ERGONOMIC FUNCTION DEPLOYMENT (EFD)*

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Proses pengirisan talas pada IKM keripik talas di Desa Siwarak masih menggunakan alat sederhana yang belum ergonomis sehingga berpotensi menimbulkan kelelahan dan gangguan muskuloskeletal pada pekerja. Penelitian ini bertujuan untuk merancang ulang alat pengiris talas yang ergonomis guna meningkatkan kenyamanan, keselamatan, dan produktivitas kerja. Metode yang digunakan adalah Ergonomic Function Deployment (EFD) untuk menerjemahkan kebutuhan operator berdasarkan atribut ENASE ke dalam respon teknis melalui House of Ergonomic (HOE), serta metode Rapid Entire Body Assessment (REBA) untuk menilai risiko postur kerja sebelum dan sesudah redesain.

Hasil penelitian menunjukkan bahwa alat aktual memiliki tingkat risiko ergonomi tinggi dengan skor REBA sebesar 10, sedangkan alat hasil redesain mengalami penurunan skor menjadi 2 yang termasuk kategori risiko rendah. Redesain alat dengan penyesuaian dimensi antropometri, perbaikan handle, penambahan rangka penopang, dan fitur pelindung terbukti mampu memperbaiki postur kerja serta meningkatkan aspek ergonomi dan keselamatan operator.

Kata kunci: Redesain; *Ergonomic Function Deployment (EFD)*; *Rapid Entire Body Assessment (REBA)*

ABSTRACT

REDESIGN OF A TARO SLICING TOOL FOR TARO CHIP PRODUCTS AT IKM SIWARAK USING THE ERGONOMIC FUNCTION DEPLOYMENT (EFD) METHOD

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The taro slicing process at taro chip SMEs in Siwarak Village still uses simple, non-ergonomic tools, which have the potential to cause fatigue and musculoskeletal disorders among workers. This study aims to redesign an ergonomic taro slicing tool to improve work comfort, safety, and productivity. The Ergonomic Function Deployment (EFD) method was employed to translate operator needs based on ENASE attributes into technical responses through the House of Ergonomic (HOE), while the Rapid Entire Body Assessment (REBA) method was used to evaluate work posture risks before and after the redesign.

The results indicate that the existing tool has a high ergonomic risk level with a REBA score of 10, whereas the redesigned tool shows a reduced score of 2, which falls into the low-risk category. The redesigned tool, incorporating anthropometric dimension adjustments, handle improvements, the addition of a support frame, and protective features, was proven to improve working posture and enhance ergonomic and operator safety aspects.

Keywords: Redesign; Ergonomic Function Deployment (EFD); Rapid Entire Body Assessment (REBA)