

ABSTRAK

Penelitian ini dilatarbelakangi oleh permasalahan sistem kerja yang dipengaruhi oleh beberapa faktor, yaitu faktor lingkungan, faktor mesin/peralatan, dan faktor kondisi pekerjaan. Tujuan penelitian mengetahui seberapa besar tingkat kelelahan pekerja berdasarkan metode *Macro Ergonomic Analysis and Design* (MEAD) di Keripik Balado 4x7. Serta memberikan usulan perbaikan sistem kerja menggunakan metode *Macro Ergonomic Analysis and Design* (MEAD) agar dapat meningkatkan produktivitas pekerja di Keripik Balado 4x7. Data yang digunakan berupa data primer, yaitu mengukur denyut nadi pekerja dihitung dengan aplikasi *Cardiograph*, serta data varian berupa lingkungan kerja fisik, peralatan kerja, kondisi pekerjaan, dan sistem organisasi dan matriks varian. Hasil penelitian menunjukkan tingkat kelelahan pekerja berdasarkan metode *Macro Ergonomic Analysis and Design* (MEAD) menggunakan perhitungan *cardiovascular load* (%CVL) berada pada rentang $48,11\% \leq X \leq 114,12\%$ sehingga diperlukan perbaikan. Usulan perbaikan dilakukan dengan menghitung kebutuhan waktu istirahat pekerja di bagian produksi pada kegiatan pembuatan keripik balado didapatkan hasil sebesar 24,14 menit/hari kerja, sehingga waktu istirahat yang hanya 60 menit/hari kerja perlu dilakukan penambahan waktu istirahat sebesar 24,14 menit/hari kerja supaya pekerja tidak mudah kelelahan.

Kata Kunci: *Sistem Kerja, MEAD, Waktu Istirahat, Produktivitas*

ABSTRACT

This research is motivated by issues in the work system influenced by several factors, namely environmental factors, machine/equipment factors, and job condition factors. The purpose of the research is to determine the level of worker fatigue using the Macro Ergonomic Analysis and Design (MEAD) method at Keripik Balado 4x7. It also aims to propose improvements to the work system using the MEAD method to increase worker productivity at Keripik Balado 4x7. The data used include primary data, such as measuring workers' heart rates with the Cardiograph app, and variance data on the physical work environment, work equipment, job conditions, and organizational systems and variance matrices. The research results show that the level of worker fatigue based on the MEAD method, using the cardiovascular load calculation (%CVL), ranges from $48,11\% \leq X \leq 114,12$ indicating the need for improvements. The proposed improvements involve calculating the necessary rest time for workers in the production of keripik balado, resulting in a requirement of 24,14 minutes per workday. Thus, the current rest time of 60 minutes per workday needs to be extended by 24,14 minutes per workday to prevent workers from easily becoming fatigued.

Keywords: Work System, MEAD, Rest Time, Productivity