

ABSTRAK

PT BERDIKARI MEUBEL NUSANTARA merupakan industri *furniture* yang memproduksi produk utama berupa *beach chair* atau *strandkorb* dengan bahan baku kayu. Permasalahan yang terjadi berupa hasil produksi dari *section sanding* yang tidak memenuhi target produksi dan riwayat kecelakaan kerja pada *section sanding* dimana keduanya dipengaruhi oleh kelelahan dari pekerja operator *section sanding*. Penelitian ini bertujuan untuk merancang beban kerja optimal dan penentuan lama waktu istirahat pendek pada *Section Sanding* PT Berdikari Meubel Nusantara bertujuan untuk mengurangi kelelahan operator. Upaya untuk mengevaluasi beban kerja operator berdasarkan *Full Time Equivalent* (FTE), sementara untuk mengurangi kelelahan operator dengan memberikan waktu istirahat pendek berdasarkan faktor kelonggaran. Hasil pengukuran beban kerja fisik dengan FTE pada aktivitas kerja dempul menghasilkan nilai FTE 1,57 kategori *overload*, aktivitas kerja dowel menghasilkan nilai indeks FTE 1,10 kategori normal, aktivitas kerja drip menghasilkan nilai indeks FTE 1,23 kategori normal, aktivitas kerja pembakaran menghasilkan nilai indeks FTE 0,81 kategori *underload*, aktivitas kerja penghalusan menghasilkan nilai indeks FTE 1,38 kategori *overload*, aktivitas pengosokkan amplas menghasilkan nilai indeks FTE 1,02 kategori normal. Pengukuran beban kerja fisik menggunakan metode *Cardiovascular Load* (%CVL) berdasarkan denyut nadi, sebanyak 5 operator masuk dalam kategori diperlukan perbaikan dengan denyut nadi diatas 30%. Usulan perbaikan yang direkomendasikan berupa menyeimbangkan beban kerja berdasarkan metode FTE, dimana dilakukan penambahan jumlah operator dan alokasi elemen kerja dengan kategori normal, serta merancang waktu istirahat pendek pada saat operator mengalami kelelahan. Usulan waktu istirahat pendek yaitu 64 menit, yang diberikan pada pukul 10.10 – 10.40 WIB, 13.29 – 13.39 WIB, dan 14.45 – 15.09 WIB.

Kata Kunci : Beban Kerja, Penyeimbangan, *Full Time Equivalent* (FTE), Kelonggaran, *Cardiovascular Load* (%CVL)

ABSTRACT

PT. BERDIKARI MEUBEL NUSANTARA is a furniture industry that produces furniture industry that produces beach chair or strandkorb as its main product using raw material. The problems that occur are the production results of the sanding section that do not meet the production target and the history of work accidents in the sanding section. section that does not meet the production target and a history of work accidents in the sanding section, both of which are affected by the sanding section, both of which are influenced by the fatigue of the sanding section operator workers.. This study aims to design the optimal workload and the determination of the length of short rest periods in the Sanding Section. PT Berdikari Meubel Nusantara aims to reduce operator fatigue. Efforts to evaluate operator workload based on Full Time Equivalent (FTE), while to reduce operator fatigue by providing short breaks based on the based on the allowance factor. The results of measuring physical workload with FTE in the putty work activity resulted in an FTE value of 1.57 in the overload category, dowel work activity produces FTE index value of 1.10 normal category, drip work activity results in an index value of FTE index value of 1.23 normal category, burning work activity produces an index value of FTE index value 0.81 underload category, smoothing work activity generates FTE index value 1.38 overload category, sandpaper rubbing activity produces FTE index value of 1.02 normal category. Measurement of physical workload using the Cardiovascular Load (%CVL) method based on pulse rate, as many as 5 operators fall into the in the required improvement category with a pulse rate of above 30% Recommended improvement proposal in the form of balancing the workload based on the FTE method, where additional number of operators and allocation of work elements with normal categories, as well as designing short breaks when operators experience fatigue. designing short breaks when operators experience fatigue. Proposed short break time is 64 minutes, which is given at 10.10 - 10.40 AM, 01.29 - 01.39 PM, and 02.45 - 03.09 AM.

Keywords: *Workload, Balancing, Full Time Equivalent (FTE), Allowance, Cardiovascular Load (%CVL)*