

ABSTRACT

Title: The Impact of Work Rest Scheduling on Lower Extremities Muscle Fatigue and Psychophysical Perception for Prolong Standing Worker

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Abstract:

In industrial workplace, standing working position is present in most of production processes. The application of work standing activity allows worker to work in higher degrees freedom and puts the worker at flexible working style. However problems may appear when worker are exposed to long standing activity. The static contraction occurred particularly at the back and legs can result in reduced the muscle performance. As in electronic companies, workers are exposed to prolonged standing activity and the increasing demands condition creates a forceful working condition that increases the formation of muscle fatigue. Published articles have been reviewed this condition and it was proven that muscle fatigue has been one of the important of the issue to be addressed in prolonged standing activity for Malaysia's manufacturing industry. It has been proposed that fatigue reduction can be done by promoting the suitable work rest setting that meets with the requirement of workplace and as well as the worker itself. As there is a less number of study covers in the impact of work rest scheduling in promoting muscle fatigue improvement for electronics industry, this project has been made in order to fill with this research gap. Basically, this study is a case study based which aim to highlight the impact of two settings on work rest schedule (frequent-short; infrequent-long) in reducing the body discomfort. An exploratory survey was made at the initial stage of research to identify the level of muscle discomfort followed by the experimental stage to recommend a work-rest schedule that decreases fatigue and improves body comfort. Main findings show that infrequent-long promotes lesser muscle efforts compared to frequent short. The frequent short rest for 5 minutes (2X5 minutes) at first half of working day did not adequately promote reduction of muscle fatigue. It was recommend promoting more frequent rest (more than 2 times at the half of the day) and deciding for more than 5 minutes rest at each break slot so that the adequate muscle fatigue recovery could be formed.