A Study of Postural Loading in Malaysian Mining Industry using Rapid Entire Body Assessment

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ABSTRACT

The ergonomics and environment factors have been the core issue for the mining industry for many years, and its profiles are rising. To ensure an ergonomics work environment, it is possible to require specific attention especially in this industries sector. It is becoming increasingly difficult to ignore the essential issue in Malaysia due to lack of ergonomics knowledge and low awareness among the engineers in the mining sector. The focus of this study is to evaluate and validate the physical risk factor associated with work-related musculoskeletal disorder (WMSDs) by using Rapid Entire Body Assessment (REBA) among mining industry workers. All the physical risk factors involved the main body regions such as upper arm, lower arm, wrist, trunk, neck and leg that has been identified associated with WMSDs. There were 18 subjects were selected to involve in this study. Those subjects were chosen according to their job task. To increase the reliability of the result, each subject was evaluated thrice in the trials. From the analysis, the average of final score of the REBA is 8.24 indicates high risk and calls for engineering/or work method changes to reduce or eliminate muscular disorder risk. The results of the analysis were used to improve the process of work, design of workstation and also improving the work posture to enhance the comfort level of operators. This study is crucial among the mining industry that is a lack of the information and research about the ergonomics issues in the industry. The overall finding indicated that the whole process of selected work task will contribute to musculoskeletal disorder either for a short or long time exposure.

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