Evaluation of Work Discomfort in Bottled Drinking Water (AMDK) Palletizing Workers with Standing Work Positions

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Abstract

One of the problems of ergonomics in the industry is the work posture caused by repetitive movements continuously with a heavy burden. These problems can be risky for Musculoskeletal Disorders (MSDs). Palleting work station is operated manually. As many as 18 workers felt discomfort in the limbs when palleting. This study aims to identify the inconvenience of workers’ limbs to recommend the design of work aids at the palleting work station. Initial assessment of work posture using Rapid Upper Limb Assessment (RULA). Assessment of the level of employee discomfort using the Nordic Body Map (NBM). The level of worker fatigue is measured by pulse. The result of RULA analysis is that all cardboard lifting activities require repairs. The smallest LI origin and destination sequences were 2.27 and 7.94 with RWL of 1.44 kg and 12.49 kg, respectively. The results of the NBM analysis obtained 7 body parts that are considered to have the greatest score, namely the back, left and right elbows, left and right hands, and left and right thighs. The results of pulse measurements indicate the work performed is quite heavy. The results of these analyzes are the design of the rotary hydraulic jack concept.

Keywords: MSDs, Palleting, posture, working tool