

## **Ergonomics assessment of production's workstations - A case study in the food manufacturing industry**

### **Abstract**

Musculoskeletal disorders (MSD) is the common injury among workers in the manufacturing industry. Industrial workers tend to experience MSD due to unsuitable occupation they performed. This study aims to assess the level of ergonomics risk factor (ERF) in production's workstations using an ergonomics assessment tools. The study was conducted at a Small and Medium Enterprise (SME) a food manufacturing company located in Kangar, Perlis, Malaysia. Initial assessment based on field observations, interviews and a self-report survey was first carried out to identify the current practice of working environment in production activities of the company. The result of the initial assessment reveals that 100% of 8 respondents have experience pain/discomfort at the back followed by waist/buttock with 87.5%, then 37.5% at shoulder, while lower neck and knee share the same percentage of 25% and the least percentage of 12.5% at upper neck and foot. This indicates that the existing design of the workplace does not provide comfort, satisfaction, health and safety from high risks of MSD. Then, the Rapid Upper Limb Assessment (RULA) and Rapid Entire Body Assessment (REBA) tools were applied to further assessment their ERF on seven workstations. Results found that the filling (Workstation 4) is the highest risk condition due to the highest score of REBA and this workstation requires necessary "NOW"action. Thus, some related recommendations for improvement were then given for future works planning include redesign filling workstation, reducing distances between workstations, height adjustable worktable and ergonomics training.

### **Keywords**

Ergonomics assessment; Food industry; Musculoskeletal disorders (MSD); REBA; RULA