

ABSTRACT

Based on observations, the operator's posture appears awkward during the cracker molding process. Such postures are at risk of causing Musculoskeletal Disorders (MSDs). To identify these risks, the Rapid Upper Limb Assessment (RULA) was used. The RULA analysis revealed a high score of 7, indicating a significant risk. This poor posture is attributed to inadequate work equipment. Therefore, further investigation is necessary to develop a suitable worktable for the cracker molding process. The Quality Function Deployment (QFD) method was employed to design this worktable, taking into account user needs. Additionally, an anthropometric approach was used to ensure that the workbench design matched the physical characteristics of the operators. After implementing the proposed design, the research successfully reduced the RULA score from 7 to 2, indicating improved ergonomics. A more ergonomic work posture can enhance operator health, reducing the risk of muscle and bone injuries. This also leads to increased productivity, as operators can work more efficiently without experiencing pain or discomfort.

Keywords: *Cracker, Musculoskeletal Disorders (MSDs), Rapid Upper Limb Assessment (RULA), Quality Function Deployment (QFD), Ergonomics.*