

Modification of Working Conditions Based on Participatory Ergonomics to Improve Occupational Health and Safety (K3) and Welding Worker Productivity

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Abstract : The role of human resources is the basic capital in determining the purpose of a business place. Without the role of human resources, activities in the company will not run smoothly. Every business place always has a risk of accidents. The magnitude of the risk that occurs depends on the type of industry, technology, and risk control efforts made. Work-related accidents are accidents that occur due to work or while carrying out work. Welding MSMEs have a fairly high risk to health, safety and the environment both from the side of workers who can cause accidents and from the side of the work environment, which has the potential to become a hazard and risk. Participatory ergonomic intervention can be a feasible and effective approach to reducing exposure to work-related risk factors in developing country industries. Complaints about occupational health and safety experienced by workers in the welding workshop industry should be able to be overcome by implementing an ergonomic intervention approach. The analysis process includes HIRARC analysis, participatory ergonomics analysis, and SEM-PLS analysis. Hierarch analysis is carried out by assessing the level of severity and likelihood, as well as risk control. At the participatory ergonomics analysis stage, it is obtained from the organizational culture and organizational stakeholders. At the SEM-PLS stage, an analysis is carried out to see whether there is a strong relationship between the research variables in order to produce occupational health and safety (K3) and worker productivity in the welding shop better and in accordance with welding safety standards. So that the output of this study is how participatory ergonomics interventions affect working conditions to improve occupational health and safety and the productivity of welding workers.

Keywords : ergonomic partisipatory, health and safety, welding workers, welding safety

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