ABSTRACT

The construction sector is one of the highest and most fatal contributors to workplace accidents in Indonesia. This is due to the prevalence of unsafe behavior and unsafe working conditions during construction projects. In this study, workplace accidents at CV XYZ are caused by unsafe conditions such as inadequate and untidy workplaces, workers not using personal protective equipment, slippery work areas, inadequate warning systems, and unsafe actions such as non-compliance in using protective equipment and the use of dangerous machinery. Based on these issues, this study aims to design risk controls to minimize the risk of workplace accidents in road construction projects.

The research process begins with hazard identification and risk assessment regarding road construction project activities using the Hazard Identification, Risk Assessment, and Determining Control (HIRADC) approach. Based on the results of hazard identification and risk assessment, risk controls are determined to reduce the risk of workplace accidents. After obtaining the risk control results, they are integrated into the occupational health and safety management process using a business process improvement approach. The risk control design in this study aims to meet the requirements of ISO 45001:2018 clauses 6.1.1, 6.1.2, and 6.1.3. The designed risk controls include Standard Operating Procedures (SOP) for safety management, an accident reporting system, and checklists for personal protective equipment usage, project area inspections, and safety sign installations.

Keywords: ***Road Construction, Workplace Accidents, HIRADC, Risk Control, ISO 45001:2018***