

ABSTRACT

PT XYZ is a furniture and craft design and manufacturing company in Bandung. Products produced include Qatar standing burner, camel box, traditional sail boat, plaque, radio, watchbox, and music box. In carrying out the production process, there are several potential hazards that need to be addressed. With these potential hazards, the company has tried to overcome them by providing PPE (Personal Protective Equipment) and work instructions to workers. However, the PPE provided does not meet the standards and the lack of monitoring facilities causes the risk of work accidents in the production division to still occur. As a result, the number of work accidents in the company still fluctuates every year.

To solve this problem, the use of HIRARC (Hazard Identification, Risk Assessment and Risk Control) and FMEA (Failure Mode and Effects Analysis) methods is proposed. The HIRARC method is used to identify hazards, risk assessment, and determine controls. The FMEA method is used to determine the Risk Priority Number (RPN) to analyze the priority of risks that require control. Based on the analysis, two control designs are proposed that refer to the hierarchy of control. The first control is administrative in the form of an OHS data monitoring dashboard designed using the Entity Relationship Diagram method. The next control is PPE in the form of proposed Personal Protective Equipment that is adjusted to the PER.08/MEN/VII/2010 standard.

The purpose of these two controls is to minimize the risk of work accidents in the production division of PT XYZ, improve the implementation of the Occupational Safety and Health Management System (SMK3), and achieve zero accident targets. With this approach, it is expected that the company can significantly improve work safety. Keywords - [HIRARC, FMEA, ERD, Occupational Health and Safety]