

## *ABSTRACT*

Occupational Safety and Health (OSH) is a form of effort to create a safe and comfortable work atmosphere. Reviewing current industrial developments, PT. XYZ is a company engaged in the production of imitation leather which is still actively operating. In the production line area, PT. XYZ involves human resources, machines, equipment and the environment. However, this involvement raises several work accident problems. At PT. XYZ, work accidents were recorded from 2014 to 2022. Based on the data obtained, the coating area contributed to 42 cases of work accidents. Some cases of work accidents that occur such as pinched hands, slipped, crushed by metal, cuts, and blisters. This resulted in injury and even injury to the operator's body. It is known that the cause of the potential risk is due to the operator's unsafe actions(unsafe action).Through the results of observations and interviews, potential risks stem from operators who are not focused at work, do not use personal protective equipment (PPE), and are even negligent because there are no mandatory procedures and instructions to be carried out. As for the unsafe conditions from the environment, it has been proven that many chemical spills were found, so the production floor became slippery (unsafe condition). Of these various problems, this research is aimed at identifying potential risks, conducting assessments and designing risk controls.

The method used to solve these problems is the Hazard Identification, Risk Assessment and Risk Control (HIRARC) method which aims to assess each potential risk by categorizing risks into small, medium, high and extreme levels for determining risk control.

By using Hazard Identification, Risk Assessment and Risk Control (HIRARC) method obtained 12 potential risks overall. With the results of 5 small risk level categories, 2 medium risk level categories, 3 high risk level categories, and 1 extreme risk level. Control focuses on extreme risk level categories, namely pinch risk. Therefore, approach Fault Tree Analysis (FTA) is used to determine the risk control design that becomes top even by tracing the root causes of the extreme risk level, so as to obtain a

design, namely work instructions for personal protective equipment (PPE) by using t  
*requitement* ISO 45001:2008 Klausul 8.1.2 and UU No.1 Tahun 1970. These  
instructions are designed to minimize the potential risk of being pinched, clarify the  
use of personal protective equipment (PPE) while working, and as an effort to increase  
self-awareness for operators to work safely and comfortably.

**Keywords: Occupational health and safety (K3), HIRARC, FTA, Risk Control,  
Work Instructions**