

ABSTRACT

Occupational Safety and Health (OSH) is a crucial aspect in creating a safe and healthy work environment, especially at PT XYZ, a manufacturing company engaged in electrical panel assembly. This activity carries high risks of workplace accidents, including injuries from sharp objects, muscle strains, and electric shocks. Based on data from 2022–2024, there were 25 recorded accidents caused by non-machine hazards and low compliance with safety procedures. This study aims to identify potential hazards, assess risk levels, and analyze root causes of accidents using the Hazard Identification, Risk Assessment, and Risk Control (HIRARC) method and Fault Tree Analysis (FTA). Results show that cable connection and lug installation activities pose high risks. The main causes of accidents include lack of training, inconsistent implementation of SOPs, and disorganized work environments. Risk control recommendations follow a hierarchical approach, including elimination, engineering controls, administrative measures such as SOP updates and training, and proper use of PPE to reduce accident rates.

Keyword – Occupational Health and Safety, HIRARC, FTA, Work Accident, Risk Control