

ABSTRACT

This study aims to evaluate occupational safety risks in the paper printing production process at PT Anugrah Jadi Berkah using the Failure Mode and Effect Analysis (FMEA) and Fault Tree Analysis (FTA) methods. The FMEA method is used to assess potential failures based on three main parameters: severity, occurrence, and detection, which then produces a Risk Priority Number (RPN) value as a reference for improvement priorities. The analysis results show that the paper cutting area has the highest RPN value of 270, which is triggered by the risk of injury from sharp machine blades and the lack of a protective system in the work area. On the other hand, the punching machine area recorded the highest RPN value of 240, caused by inexperienced operators who work in a hurry when operating the machine, thus increasing the potential for injury and production disruption. Several recommendations for improvement include increasing OHS training for operators, installing automatic safety sensors, placing visual SOPs in vulnerable areas, and implementing routine inspections and maintenance. The implementation of these steps is expected to reduce the risk of work accidents, increase production process efficiency, and create a safer work environment. This research also contributes to strengthening safety risk management strategies in the manufacturing industry.

Keywords: Failure Mode and Effect, Occupational Safety, Printing, Production, Risk Priority Number