

ABSTRACT

Workplace accidents are a serious issue that impact both worker health and the operational efficiency of a company. UD KS PRO, a spare parts processing company, has experienced various workplace accidents, including 3 incidents of nearly severed fingers due to cutting machines, 5 cases of crushed fingers from stamping presses, 2 incidents of fingers nearly severed due to being trapped at the back of machines, and 2 cases of bleeding feet caused by thin metal plates while walking. This study aims to assess and reduce the risk of workplace accidents as well as eliminate waste in production activities. The study employs the Lean and Safety method, integrating lean manufacturing principles with a focus on workplace safety. Activities are categorized based on value added (VA), non-value added (NVA), and necessary non-value added (NNVA) to identify activities that do not add value and potentially cause safety risks. The results show that several activities at UD KS PRO fall into the NVA and NNVA categories, which hinder work efficiency and increase the risk of accidents. The implementation of Lean and Safety successfully identified areas needing improvement, such as transportation and operational processes. The application of the kaizen burst concept at UD KS PRO has resulted in significant improvements in the efficiency of production workflow. For instance, using a hand manual forklift reduced the time for moving metal from 54 seconds to 30 seconds, and the lifting time from 120 seconds to approximately 60 seconds. The use of hand manual forklifts not only improved time efficiency but also enhanced workplace safety. The low-risk (low risk) rating for transportation activities increased from 0 to 4, and for operational activities from 2 to 5. The medium-risk rating for transportation activities decreased from 5 to 1, and for operational activities from 4 to 3. The high-risk rating for transportation activities remained the same at 0, while for operational activities, it decreased from 3 to 1.

Keywords: *Lean, Safety, Motorcycle Steering, Production Process*