

ABSTRACT

Competition in the pharmaceutical industry drives companies to improve machine effectiveness in production. PT Bintang Toedjoe targets an Overall Equipment Effectiveness (OEE) of 75% on each production line. However, during January–September 2024, the BEJO line recorded the lowest OEE at 64.01%, mainly due to low Availability. This issue led to production waste, prompting the need to implement Lean Manufacturing. This study uses Value Stream Mapping (VSM) to identify waste and applies root cause analysis through the Fishbone Diagram, 5 Whys, and Interrelationship Diagram. The results show waiting waste in the filling process, caused by long changeover times of packaging operators and delays in processing accumulated products at the end of each batch. Proposed improvements include operator specialization, enhancement of quality talks, standardized work procedures using a Flow Process Chart (FPC), and replacing OPP plastic during line clearance. After implementation, line clearance time was reduced from 3,636 seconds to 3,024 seconds. Waiting time due to line clearance dropped from 1,836 seconds to 1,224 seconds, while delays from product accumulation decreased from 816 seconds to 216 seconds. This implementation proves that Lean Manufacturing is effective in reducing waiting time waste in the BEJO production line.

Keywords: *lean manufacturing, machine effectiveness, waste waiting, value stream mapping, flow process chart, line clearance*