

ABSTRACT

PT. Baruna Trayindo Jaya is a manufacturing company engaged in production or manufacture of cable tray, cable support system, and pole pipe. PT. Baruna Trayindo Jaya still has waste on its production floor and does not yet have effectiveness for production. Researchers conducted observations in the field and processed the data using systematic layout planning (SLP) methods to redesign the facility layout and lean manufacturing approach to minimize waste on the production floor. The data selected to be processed through OPC with the number of operations and the long duration of time is cable ladder products. Data processing using FPC, OPC, routing sheet, FTC, MPPC, ARC, ATBD, ARD, AAD, and flow process materials for alternative layouts as well as adjustment factor determination, looseness determination, and current value stream mapping to minimize waste. After processing the data, 2 alternate layouts are generated with different production distances and times. Alternate layout 1 is selected compared to alternate layout 2 because it has a shorter distance and production time. The implementation of both methods can reduce distance reduction by 56,56% and time reduction by 10,07% on alternative layout 1 of the initial layout.

Keywords: *Facility Layout, Systematic Layout Planning, Lean Manufacturing*