Paper-JT- 004: Effect of Re-Design of Auto Taping Machine System in Small Production Scale

Didi Istardi[a*], Remon Simatupang[b]

[a]Department of Electrical Engineering, Batam Polytechnics, Parkway st., Batam Center, Batam, 29461, Indonesia
[b]Department of Mechanical Engineering, PATLITE Indonesia, Batamindo Industrial Park, Batam 29433,Indonesia,
*Corresponding author: istardi@polibatam.ac.id

ABSTRACT

Productivity increased can be achieved by reducing the standard time that is used in a production process, especially due to human movement and replace by automation system. In this, changing a design and development of semi-automation of taping machine Brother Hitap BT-61 to be full-automation are presented. By implementing the control of PLC and Electro Pneumatic system on the mechanic system of feeding, taping, and pick up process. This project can contribute high added value, such as increasing of productivity from 95.66% become 97,09%, reducing defects from 0.65% to be 0.01% of sample products chassis RH that is used for revolving lights fabrication. Also, it can avoid working accident during machine operation. Based on the calculation of cost saving, this project needs 8.5 months of return of investment period.

Keywords: automation, productivity, quality, plc, auto taping