

## **ABSTRACT**

CV. Gradient is a company engaged in the manufacturing of injection plastic. Production system of CV. Gradient is make to order, so the product specifications produced varies according to customer orders and one of the products that are produced are Spring Guide XXX. Based on the results of observation, interview, questionnaire data processing results and there are several waste found on the production floor Spring Guide XXX, namely waste defects, waiting time, and motion. The issue became the focus of discussion in this study is a waste defects. According to the data firm, the average percentage of defects in Spring Guide XXX is 0.38 % and the highest value of defects occurred in November 2016 is 0.68 %. The two main factors that are suspected to be the cause of waste defect are man factor and method. So it needs to be given to the proposals of improvements in order to reduce waste defects by using the methods of lean manufacturing. The research began by doing observation and interviews to obtain primary data research which further processed to describes the SIPOC Diagram, Value Stream Mapping (VSM), and Process Activity Mapping (PAM). Identification and analysis of the root causes of the question of waste defects will be identified and analyzed by fishbone diagram and 5 Whys. The results of the analysis of the root causes the question of waste defects can be used to determine the proposed improvements to be made, namely in the form of andon and work instructions.

Keywords : Lean manufacturing, waste defects, andon, and work instructions