

ABSTRACT

This research was conducted on the production process of the fuel tank line of the welding department of PT. Astra Honda Motor (AHM). This research was conducted because of the large amount of waste generated by the welding department in the production process. One example of the waste produced is a product defect which reaches 7% of the total production. The data collection method used is field observation and secondary data obtained from sources. Data processing is carried out using two tools, namely Value Stream Mapping (VSM) and Failure Mode and Effect Analysis (FMEA). VSM is used to map the flow of the production process and identify which processes waste a lot of time. In addition, VSM is also used to propose improvements to the production process. While FMEA is used to analyze the effects that arise from the waste and to determine the priority level of which waste should be minimized. The results of this study showed that based on the current state map of VSM, the total lead time was 1210 seconds with a total non-value added (NVA) time of 532 seconds, and the process cycle efficiency (PCE) of 10.91%. Based on FMEA, the most common wastes are defect waste and waiting waste. After repairing the VSM future state map, the total lead time and total NVA time were reduced to 860 seconds and 332 seconds, respectively. The PCE value also increased by 4.44%, to 15.35%.

Key word: Lean manufacturing, waste, VSM, FMEA, fuel tank