

ABSTRACT

PT Pindad (Persero) is a state-owned company engaged in Main Equipment Armament System and commercial products. In this research, focusing on part of the Komodo MBDA vehicle that is the front door of Komodo MBDA. In the production process, there are activities that are not added value, one of those activities is the waiting activity of machine repairs and component arrivals that are included in the waste waiting. Based on the problems that occur, it is necessary to design improvements to minimize waste waiting by lean manufacturing approach.

The first step in this research is to process the primary data to describe the Value Stream Mapping (VSM) and Process Activity Mapping (PAM) which is used to map the time and process flow. The next step is to identify the root cause of waste waiting problem using fishbone diagram then conducted weighting using pareto diagram to see the dominant problem cause. After getting the weighted result from pareto diagram then found for root cause use 5 why to dominant factor. The next stage is conducted 5WHY analysis for describe the problems found in detail and determining the proposed improvement plan.

The results obtained from the proposed improvement plan are line balancing using Helgeson-Birnie method and making machine maintenance sheet to minimize waste waiting on production process.

From the proposed improvement plan obtained lead time of 102636 sec with value added activity of 65672 sec by applying line balancing to workstation afbrament, bending and assembly and making machine maintenance sheet on drilling machine so that operator can repair machine periodically.

Key word: Line Balancing, Waste Waiting, Line Balancing