

ABSTRACT

CV. Gradient is a manufacturing company that produces plastic using injection molding machine. Products on this research focus on spring guide with type XXX. Based on the results of observation, interview and questionnaire there are some waste found in the production process. The waste of this research is focus on waste waiting time. Methods to minimize that waste is using the concept of lean manufacturing. The research begins by doing observations and interviews to obtain data for mapping spring guide production process with value stream mapping (VSM) and process activity mapping (PAM), so the total time of non-value added because of waste waiting time is 7161.87 seconds or 57.8% of lead time. After that, the analysis of the root causes of waste waiting time defined by using 5 whys and fishbone diagram. The results of the analysis on the root causes by waste can be used to determine the design of the proposals to be made in the form of schedule maintenance of the injection molding machine using the method of preventive maintenance to reduce non-value added activity. The application of the proposed design can eliminate the waiting time and time to repair that causes of waste waiting time. Future state based on total time of non-value added is 721.87 or at 12% of lead time and retrieved from the removal of waiting activities and repair activities.

Kata kunci: *lean manufacturing, waste waiting time, value stream mapping, process activity mapping, fishbone, 5 whys, preventive maintenance.*