

ABSTRACT

PT. Adetex Filament II & II.I is a private company engaged in the processing of textiles in Indonesia to convert yarn into grey cloth. The type of grey cloth that be observed in this thesis is a LAD-W grey cloth. In the production process of making LAD-W grey cloth was found waste waiting that affected product delivery. Based on data from company is known that the high downtime of loom machine influence to production targets and the incompatibility so resulting in the improper deliveries time in January-December 2012.

In terms of minimizing waste waiting is used lean six sigma methods. Steps that need to be done in this method is define, measure, analyze, improve, and control in DMAIC and use tools to do improvements on lean production process LAD-W grey cloth. In define phase is described SIPOC diagram and VSM which aims to define the problems that happens. In measure phase is described the determination of CTD and KPI on waste waiting. In Analyze phase will be analyzed the root causes of waste waiting. Improve phase is proposed improvement from the root causes of the previous phase which aims to minimize the cycle time. Then in the last phase is control phase, do to give a way to know if the given improvements has been done well or need further improvements.

Based on the results of the define phase, the waste which will be minimized namely waste waiting in production process LAD-W grey cloth. In measure phase the OEE is earned by using a value of 51.35% with equipment failure as the biggest loses in production process. In analyze phase is known the root causes of waste waiting that is the broken spare part, administrative delay, there is no recording of a mechanical failure, and a limited number of maintenance employees. At improve phase there are several recommendations provided in minimizing the waste waiting such as doing preventive maintenance, design the andon system, do recording of mechanical failure, and implement autonomous maintenance. Then in control phase will be done a monitoring on recommendation that has been implemented by using a monitoring form and KPI's visual control board of waste waiting.

Key words : *Lean Six Sigma, Waste, Waiting, Downtime, Preventive Maintenance, Overall Equipment Effectiveness, Autonomous Maintenance, Visual Control*