ABSTRACT

PT. Adetex Filament II & II.I is a private company which engaged in the processing of textiles in Indonesia to convert yarn into grey fabric. The type of grey fabric that be observed in this thesis is a LAD-W grey fabric. In the production process of making LAD-W grey fabric was found a waste of defect that affected the quality of the product. Based on company data, the defect rate in peri*ode January-June and November-December in 2012 is above the tolerance limit permitted by the company that's no more that 1%. Therefore it is necessary to design an improvement over the grey fabric production process in an effort to minimize waste of defect.*

In order to minimize waste of defect is used Lean Six sigma method. The phases to be taken that define, measure, analyze, improve and control phase on DMAIC and use lean tools to make improvement in the production process LAD-W grey fabric. 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 CTQ, measurement the stability and process capability. In analyze phase that determine some root causes with fishbone chart and 5 Why. Improve phase is the suggestions for improvement from the result of FMEA for improving the quality of production process of LAD-W grey fabric. Then the last phase is control which aims implementation of improve.

Based on the results of define phase, the waste to be minimized is a defect in the production process grey fabric. In measure phase is known that the performance in production process LAD-W grey fabric in 2012 is still not yet stable with Sigma level is 2,98. In analyze phase is known that the dominant defects found in the LAD-W production process is atsudan, usudan, yoko yurumi, double pick, and short pick. Then in improve phase, the improvement that are granted in design a grey fabric production process in an efforts to minimize waste defect. Some recommendations are given to minimize defect waste such as Guidance about the importance of maintaining hygiene relay valve, Cleanup relay valve regularly, Regular inspections on the conditions of the part at set up time, Change the part in specified interval time, Guidance on operator about how to set yarn tension, Procurement of visual control, Increase monitoring the operator, making installation weft Monitoring form on operators, , Guidance on operator about monitoring form, labeli/ng nylon cup, display giving tension, chages of cleaning tools, Control phase is made visual control to monitor implementation of recommendation.

Keywords: Lean six sigma, DMAIC, waste defect, value Stream mapping, fishbone chart,5Why, FMEA, 5 W+1H, visual control