

ABSTRACT

PT. Surya Usaha Mandiri is a textile manufacturer that produce ready to wear fabrics for next value added production purposes such as clothes, pants, etc. The average production achievement are eleven types of fabrics with different colors each type. In Januari to December 2015 production periods, PT. Surya Usaha Mandiri produced 5.871.162 meters fabric with 79.882 meters of defect fabric included. Based on historical records of the company, the number of defects are fluctuating and exceeded 1% as the standard of the defect that determined by the company. Based on company historical record, the Belang Lipat or striped fold defect type is the most often occurred with 32% in total defects that happened in Celup Rayon process with Cloth Press Belt as the machine in the process, and on that case, research is conducted to propose solution on the cause of Belang Lipat defect problems. This research using Six Sigma method to give any improvement proposal in order to minimize the cause of Belang Lipat defect. The steps included in Six Sigma are DMAIC (define, measure, analyze, improve, control). The step of define determining four CTQ on production process. Step of measure quantifying both of stability and capability process. Step of analyze defining the root of problems and determining the priority of improvement to minimize Belang Lipat defect. The step of improve, analyzing improvement proposal to minimize Belang Lipat defect. The improvement proposal both addressed to human factor and machine factor as the cause of Belang Lipat defect. The improvements proposal given to the company, are to applying necessary replacement and maintenance on Metal Carbon, adding optimization tools or devices on regulator pedder, conduct training for the sewing operator, and adding/ completing work instruction to the sewing workstations.

Keyword: Belang Lipat, DMAIC, CTQ, Six Sigma, Textile