ABSTRACT

PT Dystar Colour Indonesia is a multinational company which are producing reactive dying. End product or reactive dying which produced by Dystar is used for a local textile company or international company.

Production process reactive dying devided by two process, sintesis process and finish process. And for every process has a goal which is for sintesa process 70% and finish process 99,7%. In fact, sintesa process can't reach the target sintesa product and only 49,64% which succeed for good products. Because of that, company have to control the quality to decrease defect products.

In this research, writer tried to control causes of defect sintesa products, especially Golden Yellow, with Six Sigma method. Six Sigma is a systematic method in controlling quality and every decision making based on fact and data. The main principal of Six Sigma is no Zero defect (3,4 DPMO). Steps of Six Sigma consists *Define, Measure, Analyze, Improve* and *Contro*l. But in this research is only done until Improve. *Define* is done to identify factors that influence to quality sintesa product and need to be improved. Next in *Measure* step, it is done measurement of quality performance in level output. After existing condition is already measured, it is continued by *Analyze* steps. In this step is trying to identify sources and root causes of quality problem to product sintesa Golden Yellow. And finally writer try to give *improvement* suggestions according to experiment design and analyzes that already done.

Based on measurement by using quality product sintesa Golden Yellow data from Februari 2005 until December 2006 so it will be known about kinds of defects, such as delta chroma dan delta hue. And from the measurement, the result of DPMO and Sigma is 2.27-Sigma and 224.826 DPMO. Resulted of value DPMO and Sigma still far from the goal of Six Sigma which is should be 3,4 DPMO and 6 Sigma (zero defect). So that with those result, it still need continue improvements and quality controlling to product Golden Yellow Sintesa.

Key words : defect of dying product, DPMO, Sigma, Critical To Quality, CTQ potential.