

ABSTRACT

Lafarge Roofing Indonesia Co. is one of Lafarge Group division which leads major of market in U.S, Europe, and Asia. Lafarge Roofing Indonesia Co. is a company which is working in manufacturing of construction material area especially tile. As a manufacturing company, Lafarge Roofing Indonesia Co. always has a problem with 5 percent defect product from its production capacity, so it needs to do some quality control effort to reduce or omit defect product.

According to that reason, the writer tries to control defect product with Quality Control Method by using Six Sigma. 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 *Control*. But in this research is only done until *Improve*. *Define* is done to identify factors that influence to quality product Elabana tile and need to be improved. Next in *Measure* step, it is done measurement of quality performance in level output and level process. 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 Elabana tile. And finally writer try to give *improvement* suggestions according to analyzes that already done.

Based on measurement by using quality data from July 2005 until April 2006 so it will be known about potential cause of defect (CTQ potential). There are 16 CTQ potential such as sticky, raw material, mortar, making head, cutting knife, colour, GEP, racked, dirty, curing room, low strength, pre depalleter, depalleter, dry stacked, forklift, and others. After this writer will able to know about the existing performance like following table :

Measurement at :	Value of DPMO	Capability of Sigma
Level Output	11115	3,79
Level Proses Wet Stack	6982	3.96
Level Proses Dry Stack	2946	4.25

Value of Sigma and DPMO will show also about the COPQ of the company which is around 25- 40 % of sales. 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 Elabana tile at Lafarge Roofing Indonesia Co.

Key words : tile, defect, DPMO, Sigma, Critical To Quality, CTQ potential.