

ABSTRACT

PT Nikkatsu Electric Works is manufacturing company engaged in electrical product like transformer, economic energy lamp, and ballast export and domestic. The problem that being faced by PT Nikkatsu Electric Works is the lack of production targets not achieved because the high number of defects in ballast export's production process. PT Nikkatsu Electric Works record the number of defective product ballast export in 2012 period is 32.447 or average 1,5% and 2013 period is 25.816 or average 1,23%. Current defect condition is very far from the company defect tolerance is 0,2%.

Six Sigma methods used to solve the problems. Six Sigma consist of Define, Measure, Analyze, Improve and Control (DMAIC). In define phase do the identification of ballast export's production and determine the Critical to Quality (CTQ). From CTQ identification, ballast export has six types of defect product, they are putus,kontak, tinggi, rendah, case kena chemical, and case rusak. In measure phase do the calculation of process capability and stability. In Analyze phase do the analysis of defect focus with FMEA method, and get the putus defect as focus in this research, an do the analysis of root cause of putus defect using 5 why's and fishbone diagram.

In the Improve phase, proposals given based on the analysis and 5W1H method with the goal of reducing the broken defects. The improvement are design the material desk, make air cisculation with fan and exhaust, give reward to operator, design caution of setting tention, design the visual control tools ie stopper in machine jig.

Keywords : Six Sigma, CTQ, Quality Improvement, Putus Defect.