ABSTRACT

Competition for market share in today's increasingly stringent, both in the business of manufacturing and business services providers. PT.Industira is a company engaged in manufacturing electric panels and metal boxes are manufactured to meet the market demand for national and international markets. Quality management system that implemented is a system of advice from external customers and internal customers. An improvement or action will be carried out only if there is a firm suggestion or proposal received. However, PT.Industira still have quality problems because of the percentage of defective products exceed the maximum limit set by the company. The Limit that set by the company which is 2% for metal box products and 6% for electrical panel products. This shows the need for an action taken by the company so that the problem can be addressed and resolved.

Improving quality production of metal box can be used six sigma method. Six Sigma can be defined as a structured methodology to improve business processes focused on reducing process variation while reducing defects. Six Sigma structure can be defined by five DMAIC phases, namely Define, Measure, Analyze, Improve, Control. However, the research conducted until improve phase. Define phase is to identify the problem. In the measure step is measuring production performance by looking at the stability of the measurement process and process capability. Analyze phase is to analyze production performance and identification of the root causes of defective product. In the improve phase will be given recommendations for improvement to reduce the number of defective products. Some tools in the seven tools is being used in research. Seven tools consist of histograms, Pareto chart, run chart, scatter diagram, control chart, check sheet, cause and effect diagram.

Based on data on the number of defective products in January to December 2012, the metal box products has a percentage of the average number of significant defects of the maximum limit of tolerance so that being the focus of research. The critical factors of the product is the suitability metal box by physically. Cause of defective products are identified using a fishbone diagram and can be caused by factors of man, machine, materials, methods and environment.

Keywords: Six Sigma, quality improvement, reduce defects, fishbone diagrams.