

ABSTRACT

CV. Gradient is Home Industry which produce various kind of product, one of them is plastic like long grip which is used as shock bracker on motor. Based on historical data of long grip production period January 2016 - February 2018, there are several types of defects that occur are short mold, striped, silver, hollow, crack, and watery. The defect product tolerance set by the company is 0.2% per month, but it is found that the average defect percentage is 0.8%. Short mold is the type of defect that has the highest defect frequency that will be focus of the research. This research uses Six Sigma approach with DMAIC stage (Define, Measure, Analyze, Improve, Control). At the define stage, there are two types of potential CTQ identified in the melting process. In the measure stage, process stability measurement using p control chart and process capability measurement is used to find DPMO and Sigma Level. In the analyze phase, root cause search for defect short mold is done by using fishbone diagram and 5 why's tools, and determine priority for improvement suggestion by using FMEA (Failure Mode and Effect Analysis). At the improve stage, the proposals include visual display creation, scheduling maintenance and screw replacement, as well as making maintenance sheet and screw replacement at certain time intervals.

Keywords: Six sigma, DMAIC, Long grip, Defect, Short mold