

Bracket assembly tail failure: Identification of causes and proposal for design improvement

Abstract

This paper is aimed to identify and solve the problem faced by S. Y. Chong Foundry. A project has been assigned on this two wheel tractor. One of the problems has been found which is located on Rotavator Cover of Two Wheel Tractor that needs to take action. The issue is that the performance of the Bracket Assy. Design is not good enough causing the bolt can't withstand the force applied and lastly breakdown. The actions are based on PDCA technique and will start by identifying the root cause by using several methods which is brainstorming, Fishbone diagram, FMEA, Why-why method and structure analysis. Once all the problems are clearly understood, the following step is to come a new design. 5 ideas of new Bracket Assembly Tail Wheel generated to improve the performance of the part. Next, all the ideas will be analyzed and the collect data will be used for comparison among the idea. Lastly, using screening and scoring method to choose the best idea and propose to the owner of the foundry. The studies will end by proposing some further activity study that can be done for quality improvement on this Bracket Assembly, Tail Wheel.

Keywords: PDC, Structural Analysis, Design Improvement.