

## ABSTRACT

This project is aimed to study how to minimize the defective quantity to reduce the cost of non conforming product, replacement, return scrap, rework and repair by using Statistical Process Control (SPC).

Nowadays, the quantity and customer satisfactions have become the key drive behind some of the most profound change that occurred in the world of work. The SPC is the quality control strategy to highlight the abnormal event in the production process, to identify the problem.

We apply the SPC tools and the maintenance program to decrease the defective quantity. This project is to monitor the possible defect at Out of Box Audit inspection and use the SPC tools to find out the possible root cause and solve the problem by using maintenance program, which is the preventive maintenance and the predictive maintenance.

After applying the SPC tools and the maintenance program, the main defective rate decrease from 42% to 6% making the company reach the company's defect part per million target.