

100% Reduction Of OGP Inspection Waiting Time At Xyz Electronics Corporation Using Monte Carlo Simulation, Heijunka Device And Military 105e Sampling Standard

Mary Rose O. Arnejo
Department of Industrial Engineering
Cebu Institute of Technology – University
Cebu City, Philippines
maryrose.arnejo@cit.edu

ABSTRACT

Over the decades, the lean philosophy has been successfully adopted by many companies across a broad spectrum of industries. In recent years there has been a drive to adopt a more lean approach both in the manufacturing and testing of products. Performance in today's testing facilities tends to be negatively affected by a number of issues. XYZ Electronics Corporation, as the market leader and global supplier in the industry for more than sixty five years, integrated approaches to keep their proven track record of quality excellence, thus the birth of Incoming Quality Control (IQC) Department. IQC is experiencing performance issues due to volatile workload that is affecting the whole operation.

The study aims to reinforce the goal of the company towards operational excellence by addressing the performance issues and improving the capability, capacity and competency of IQC Department in terms of systems improvement.

The study made use of interview, questionnaire, observation and document analysis in order to acquire information. Monte Carlo Simulation, Queuing Theory and levelling strategy are employed to analyze the data.

After analyzing all gathered data, the results showed that the OGP equipment is over utilized due to current sample size scheme, no alternative tool used for dimension inspection and no predefined schedule per department. With these information, the researcher came up with the following solutions to address the equipment overutilization problem: implement schedule adjustments, utilization of alternative tools and design of new sampling plan.

Keywords

Incoming Quality Control, volatile workload, over utilized OGP equipment, systems improvement

Mary Rose Arnejo is a faculty of Industrial Engineering Department at the Cebu Institute of Technology - University, Cebu, Philippines. She earned her B.S. in Industrial Engineering from the same university, and is currently pursuing her Master Degree, Master of Engineering Major in Industrial Engineering. She has presented and published journal and conference papers. She has completed research projects during her undergraduate and has presented them to various conferences Her research interests include optimization, simulation, reliability, scheduling, and lean. He is member of IEOM, INFORMS, SME and IEEE.