

EDITORS

ERRY YULIAN TRIBLAS ADESTA

MOHAMMAD YEAKUB ALI

AKM NURUL AMIN

DESIGN FOR MANUFACTURE

Towards Improved Manufacturability



IIUM Press

DESIGN FOR MANUFACTURE

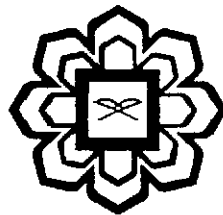
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Application of Statistical Quality Control for Quality Improvement

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1. Introduction

Quality can be divided into two main divisions; the quality of a manufactured part and the quality of service received. From a manufacturing standpoint, quality is simply conformance to specifications. It can be described as [1]:

- Fitness for use
- Conformance to specifications
- Producing the very best products
- Excellence in products and services
- Total customer satisfaction
- Exceeding customer expectation

There are two common quality-related functions within a business. One is quality assurance which is the *prevention* of defects, such as by the deployment of a quality management system and preventative activities like failure mode and effects analysis (FMEA). The other is quality control which is the *detection* of defects, most commonly associated with testing which takes place within a quality management system typically referred to as verification and validation [2-4].

Statistical Quality Control (SQC) is concerned with the application of statistical principles and techniques in all stages of design, production, maintenance and service which are directed toward the economic satisfaction of demand for the purpose of controlling quality. The techniques of SQC bring certain desirable results that cannot be achieved in any other way. In addition, the introduction of these techniques into any business often results in