SAMPLING PLAN METHODOLOGY - ANSI / ASQ Z1.4 & Z1.9

Introduction

A simple method for choosing a sample size from a population is through what quality engineers refer to as the square root of N plus one sampling rule. This rule is apparently not statistically motivated nor is it mentioned by sampling theorists and practitioners. As a matter of fact, Sampling plans are used to make product disposition decisions. They decide which lots of product to accept and release and which lots to reject and either rework or discard.

Ideally, a sampling plan should reject all "bad" lots while accepting all "good" lots. However, because the sampling plan bases its decision on a sample of the lot and not the entire lot, there is always a chance of making an incorrect decision.

The behavior of a sampling plan is described by the sampling plan's Operating Characteristic (OC) curve. To select a statistically valid sampling plan, the objective of the inspection should be determined based on past performance, other controls that are in place, potential failure modes and so on. Then the Acceptable Quality Level (AQL) of the sampling plan should be documented to demonstrate that the sampling plan meets this objective. Hence a correct sampling plan will provide a better protection on decision making.

This course is designed to meet such protection where participants will learn the correct way of taking sampling. Two Sampling Plans namely, Inspection by Attributes (ANSI/ASQ Z1.4) and Inspection by Variables (ANSI/ASQ Z1.9) will be covered with application.

Duration

2 days | 9am – 5pm | 14 hours

Who should attend

This course is suitable for technical and medical professionals such as managers, engineers, engineering assistants and people involved in production, manufacturing, quality, and maintenance of the product.

Course Fees

Member: S$684.52
Non-Member: S$758.64

All fees stated are inclusive of Registration Fee and 9% GST

Award of Certificate

Certificate of Completion will be issued to participants who have attended at least 75% of thecourse.

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Course Contents

1. Three aspect of Sampling Plan
2. Advantages of Sampling
3. Types of Distribution
   - Binomial And Poisson
4. Important consideration of forming a lot
5. Operating Characteristics (OC) Curve Study
   - Plotting and interpreting
6. Other characteristics of OC Curve
7. Producer's risk and Consumer's risk
   - Study of AQL and LTPD
8. Study of Average Outgoing Quality (AOQ)
9. Average Total Inspection
10. Design of Sampling Plan
11. Sampling Plan for Producer's Risk
12. Sampling Plan for Consumer's Risk
13. Tables for Inspection by Attributes (ANSI/ASQ Z1.4)
14. Types of Sampling Plan
15. Sampling Procedures of Applying ANSI/ASQ Z1.4
    - Level I, II and III study
16. Switching Rules
17. 4 Important Features of ANSI/ASQ Z1.4 Table
18. Tables for Inspection by Variables (ANSI/ASQ Z1.9)
19. Sampling Procedures of Applying ANSI/ASQ Z1.9
20. Standard Deviation Methods
    - Single and Double Specification Limits

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