Acceptance Sampling – Marketing

Title
Understanding Attribute Acceptance Sampling

Description
Acceptance Sampling is common in many industries, but understanding the underlying concepts beyond just using the tables, is becoming a lost art. This presentation explains two popular lot attribute sampling plans, Z1.4 and c=0.

The underlying theory includes taking simple random samples, understanding the role of the AQL (acceptable quality level), identifying the risks (producer and consumer), and documenting them using the operating characteristic, OC, curve.

Z1.4 is general purpose lot attribute acceptance system. It has many options, which can make selecting them very difficult. The presentation explains the choices and provides information on how to make them.

Zero Acceptance Number, c=0, plans address a perceived shortcoming of Z1.4; it is possible to accept a lot with nonconforming items in the sample. In addition, the c=0 plans require fewer choices and often have smaller sample sizes than Z.14. However, the c=0 plans have a downside that may result in rejecting a large number of lots.

The presentation includes examples to explain the methods.

BoK
CQA: E. Sampling Methods
1. Acceptance sampling plans Identify and interpret these plans for attributes and variables data. (Understand)

CQE: C. Acceptance Sampling
1. Sampling concepts Apply the concepts of producer and consumer risk, and related terms, including operating characteristic (OC) curves, acceptable quality limit (AQL), and lot tolerance percent defective (LTPD). (Apply)
2. Sampling standards and plans Identify, interpret, and apply ANSI/ASQ Z1.4 and Z1.9 standards for attributes and variables sampling. (Analyze)

Biography
Dan O'Leary has more than 30 years experience in quality, operations, and program management in regulated industries including aviation, defense, medical devices, and clinical labs. He has a Masters Degree in Mathematics. His professional experience relates to quality, reliability, post-market surveillance, and operations management. Dan is 2024 Chair of the Granite State section. Dan is the President of Ombu Enterprises, LLC, a company offering training and execution in

Operational Excellence. He is an ASQ Certified Medical Device Auditor, Quality Auditor, Quality Engineer, Reliability Engineer, and Six Sigma Black Belt.