

Quality evaluation strategies in modern manufacturing and its Applications

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ABSTRACT:

Nowadays smart manufacturing is booming towards the advances in the need of the customer requirements. Acceptance sampling plans is one of the major part in statistical quality control which are widely used to control the quality variations and maintain standards in production units even in the smart production. Depending on the product, some time its not feasible to inspect all item due to time and cost hence a properly screening and evaluating methods to be done before marketing to safe guard both the producer and consumer. The data pertaining to those studies follows certain lifetime probability distributions. In this article, Exponential - Poisson distribution is studied when the products are aligned to check the occurrence of defects present or not. Here an reliability sampling plans can be studied with STDS plan, to safeguard both the producer and consumer risk. Few designing methods are given for the industrial shop floor conditions with suitable real time applications are provided for easy selection of the tables.

Keywords: Acceptance sampling plan, Zero-Inflated Poisson distribution, Producer and consumer.