

Single Sampling Plans for Reliability Inspection when Time-to-Failure is Rayleigh Distributed

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Abstract

In this paper we construct single sampling plans for reliability inspection using a combination between the attributive method already standardized (see Kirkpatrick, 1970 [11], pp. 354 – 415) and a specific failure behaviour of underlying units submitted for testing.

This method establishes a link between the fraction defective (p) of the batch and the hazard rate function assumed to be a Rayleigh one – that is a linearly increasing form. Some examples and all tables needed for operational purposes are given.

Key Words: hazard rate, AQL (Acceptable Quality Level), Rayleigh distribution, sampling scheme.