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Acceptance sampling based on truncated life tests for generalized Rayleigh distribution

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Abstract

This paper considers the problem of an acceptance sampling plan for a truncated life test when the lifetime follows the generalized Rayleigh distribution. For different acceptance numbers, confidence levels, and values of the ratio of the fixed experiment time to the specified mean life, the minimum sample sizes necessary to ensure the specified mean life are found. The operating characteristic values of the sampling plans and producer's risk are discussed. Some tables are presented and the use of the tables is illustrated by a numerical example.

Keywords:

Consumer's risk | generalized Rayleigh distribution | operating characteristic curve | producer's risk | truncated life tests

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