

# Doubling burn-in policy with applications to degradation data

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## Abstract

In the current competitive marketplace, manufacturers need to screen weak products in a short period of time. For highly reliable products, if quality characteristics exist whose degradation over time can be related to the lifetime of the product, the degradation model can then be constructed based on the degradation data. In burn-in test, we propose a degradation model based on a stochastic mixture process. Then, we propose a doubling burn-in policy to determine the optimal cutoff point and test stopping time. Several data sets are used to illustrate the proposed burn-in procedure.

Keywords: burn-in, degradation model, highly reliable products, mixture process