

## CE模型下Weibull分布序加试验的Bayes分析

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摘要 序进应力加速寿命试验是一种最为有效而经济的寿命试验方法,随着其理论的日趋成熟,在实践中开始得到应用和推广.

本文给出了逆幂律模型下Weibull分布定时和定数场合序进应力加速寿命试验的一种Bayes统计分析,并利用Gibbs抽样方法解决了分布的形状参数取为连续先验时各参数的Bayes估计.这种先验意义更明确,实例表明这是一种非常有效的方法.

关键词 [序进应力加速寿命试验](#), [Bayes分析](#), [Gibbs抽样](#), [CE模型](#), [逆幂律](#)

分类号

## Statistical Analysis Of Progressive Stress Accelerated Life Testing Of Weibull Distributions Under Ce Model

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**Abstract** Progressive stress accelerated life test is the most efficient and economical way of life tests. It begins to be used and popularized as its theory becomes more mature. This paper gives a Bayesian statistical analysis of the progressive stress accelerated life tests of the Weibull distributions, either time censored or failure censored, the relationship between life time and stress being the inverse pow law. The Bayesian estimation is given based on the Gibbs sampling technique, which solves problem when the prior of the shape parameter is continuous. This kind of prior is more clear in meaning and the real example shows that the method proposed is efficient.

**Key words** [Progressive stress accelerated life test](#) [Bayesian analysis](#) [Gibbs sampling](#) [CE model](#) [inverse pow law](#)

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