论文

冷备系统可靠性评定的统计方法

黄宝胜(1), 李国英(2)

(1)北京理工大学理学院应用数学系概率及统计教研室, 北京 100081;(2)中国科学院数学与系统科学研究院统计科学室, 北京 100080

摘要　　贮备是提高系统可靠性可行且有效的途径.关于冷备系统的

可靠性评定问题,前人

仅在设备均为指数型部件的情况给出了WCF方法.

文中对实际中常用的指数--威布

尔混合型冷备系统,提出了两种可靠性评定方法：WCF方法和

Fiducial方法,并在中小样本

下对两种方法进行了模拟研究,说明了这两种方法的实用性.
关键词　　[冷备系统](#)　[可靠性评定](#)　[WCF方法](#)　[Fiducial](#)
分类号

STATISTICAL METHODS OF RELIABILITY ASSESSMENT OF COLD STAND-BY SYSTEMS

Huang Baosheng(1),Li Guoying(2)

(1)School of Science Beijing Institute of Technology,Beijing 100081;(2)Academy of Mathematics and System Sciences, Chinese Academy of Sciences, Beijing 100080

Abstract To improve the reliability of complex systems, stand-by systems are often adopted. So far, the reliability assessments of cold stand-by systems are studied only for those that consist of components with exponential life. In this paper, we study the reliability assessments of cold stand-by systems consisting of two components with exponential life and Weibull life respectively. Two methods, the WCF approximation and a Fiducial inference method, are proposed. The practicability of the two methods under medium and small sample sizes is shown by simulation studies.

Key words　[Cold stand-by systems](#)　[reliability assessment](#)　[WCF method](#)　[Fiducial inference](#)

DOI:

通讯作者