

On identification of the strength of the components of a parallel system under partial monitoring

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Abstract

In this study we consider a parallel system with n components. It is assumed that the lifetimes of components are independent but nonidentical. Under the assumption that the system has failed at or sometime before t , we propose a time dependent criterion which measures the probability that the k th failure in the system be the j th component, $k, j = 1, 2, \dots, n$. Several properties of the proposed measure, in connection with aging concepts, are investigated.

keywords: Reversed hazard rate; Mean past Lifetime; Mixture of Distributions; Odds Ratio; Reliability; DRHR.