

STOPPING PROCEDURE FOR TESTING A SYSTEM ASSUMING IMPERFECT REMOVAL OF DEFECTS

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SUMMARY

This paper considers a series system of m components such that upon observing the failure of a component, the fault that caused the failure will be removed with a constant probability p . A component's failure process depends on the residual number of faults and the constant failure rate contribution of a fault. The system will be assigned tasks to perform with random completion times. At the end of an initial testing period, the length of the second testing stage is obtained based on observed data and a desired system reliability. Large-sample properties of the stopping time and the system reliability estimator will be established.

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