Stochastic Analysis of a Repairable Cold Standby System Attacked by Poisson Shocks Considering Inspection and Post Repair

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Abstract

This paper investigated the stochastic analysis of two-dissimilar unit cold standby system considering repair, inspection, post repair under Poisson shocks. The serverman, is called when the operative unit fails. The shocks can attack the operative unit. The repaired unit is sent for inspection to decide whether the repair is satisfactory. If the repair is found unsatisfactory, then the unit is again sent for post repair. Some reliability measures of the system such as system reliability, mean time to system failure (MTSF) and steady state availability are derived. Graphical representations are presented to illustrate the theoretical results.

References

2. Shengqiang Chen, Xianyun Meng, and Yutian Chen. Analysis of a cold standby system with an unreliable repair facility and vacation under poisson shocks. Journal of Information &


Index Terms

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Keywords

Poisson shock, cold standby system, mean to system failure, steady state availability.