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Reliability Optimization of Entropy Based Series-Parallel System Using Global Criterion Method

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ABSTRACT

In this paper, we have considered a series-parallel system to find out optimum system reliability with an additional entropy objective function. Maximum system reliability of series-parallel system is depending on proper allocation of redundancy component in different stage. The goal of entropy based reliability redundancy allocation problem is to find optimal number of redundancy component in each stage such a manner that maximize the system reliability subject to available total system cost. Global criterion method is used to analyze entropy based reliability optimization problem with different weight function of objective functions. Numerical examples have been provided to illustrate the model.

KEYWORDS

reliability, series-parallel system, redundancy, entropy, global criterion method

Cite this paper

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