Bi-Objective optimization of a job shop with two types of failures for the operating machines that use automated guided vehicles

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PII: S0951-8320(17)30833-5
DOI: 10.1016/j.ress.2018.01.018
Reference: RESS 6096

To appear in: *Reliability Engineering and System Safety*

Received date: 12 July 2017
Revised date: 21 January 2018
Accepted date: 25 January 2018

Please cite this article as: Behzad Karimi , S.T.A. Niaki , Hassan Haleh , Bahman Naderi , Bi-Objective optimization of a job shop with two types of failures for the operating machines that use automated guided vehicles, *Reliability Engineering and System Safety* (2018), doi: 10.1016/j.ress.2018.01.018

Highlights

- A bi-objective reliability optimization via simulation is proposed for a job shop
- The failure times of the parallel machines in a shop follow either an exponential or a Weibull distribution
- A simulation approach is taken to estimate the reliability of the shops having machines with Weibull failures
- NSCS and MOTLBO algorithms are designed to solve the problem
- AHP-TOPSIS is used to rank the algorithms in terms of five performance metrics.