عنوان مقاله:

Bi-level Model for Reliability based Maintenance and Job Scheduling

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خلاصه مقاله:

Many defects in manufacturing system are caused by human resources that show the significance of the human resources in manufacturing systems. Most manufacturers attempt to investigate the human resources in order to improve the work conditions and reduce the human error by providing a proper work-rest schedule. On the other hand, manufacturer deal with machine scheduling based on demand and work type. The mentioned scheduling would be effective if both are simultaneously implemented; then, we confront integrated human- machine systems which work with minimum cost, machine failure and human errors. Considering this fact, we propose a bi-level mixed integer nonlinear model to minimize the machine scheduling costs such as earliness-tardiness cost and interruption cost in the upper level and human error in lower level according to performance shaping factors (PSFs). Several numerical instances are implemented by the proposed model to show the model effectiveness to obtain the best work schedule for human resources and machines in manufacturing systems.

کلمات کلیدی:

scheduling, Human error, Bi, Level, optimization

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