Abstract

The present industrial environment needs proper maintenance for effective functioning of the system underlining the need for an optimal maintenance planning. Maintenance planning is a complex and an inherently stochastic process. This paper presents maintenance planning problem for a process industry. The problem is formulated to determine which of the possible actions viz. maintenance or replacement is to be carried out for the critical components during the planning period. Maintenance is carried out by analyzing improvement in the parameters (viz. MTBF & MTTR) during the design out period. The objective is to minimize the present value of total costs that are incurred by the decision taken during the planning period. The problem is solved by hybrid genetic algorithm (HGA) technique.

Reference

Optimizing Maintenance Activities Using HGA and Monte Carlo Simulation


Index Terms

Computer Science
Industrial Applications

Key words

Maintenance planning
MTBF
MTTR
Hybrid Genetic algorithm
Optimization