RELIABILITY ASSESSMENT OF UREA MANUFACTURING PLANT

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Abstract

In this paper, the authors have analyzed mathematically an industrial problem related to urea manufacturing plant for its reliability assessment by employing Boolean function technique. The authors have used algebra of logics and Boolean function technique for the purpose of formulation of mathematical model and its solution. Reliability and M. T. T. F. for the system have evaluated. Some particular cases have also given to improve practical utility of the model. Graphical illustration followed by a numerical example has appended in last to highlight the important results of study. It is observed that reliability of the system decreases rapidly in case, when failures follow Weibull time distribution, while it decreases smoothly and in better way when failures follow exponential time distribution.

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