

Role of Discrete Event Simulation in the Assessment and Selection of the Potential Reconfigurable Manufacturing Solutions

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Abstract : Shifting from a dedicated or flexible manufacturing system to a reconfigurable manufacturing system (RMS) requires a significant amount of time, money, and effort. Therefore, it is vital to verify beforehand that the potential reconfigurable solution will be able to achieve the organizational objectives. Discrete event simulation offers the opportunity of assessing several reconfigurable alternatives against the set objectives. This study signifies the importance of using discrete-event simulation as a tool to verify several reconfiguration options. Two different industrial cases have been presented in the study to elaborate on the role of discrete event simulation in the implementation methodology of RMSs. The study concluded that discrete event simulation is one of the important tools to consider in the RMS implementation methodology.

Keywords : reconfigurable manufacturing system, discrete event simulation, Tecnomatix plant simulation, RMS

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