

## Performance Evaluation of Sand Casting Manufacturing Plant with WITNESS

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**Abstract :** This paper discusses a simulation study of automated sand casting production system. Therefore, the first aims of this study is development of automated sand casting process model and analyze this model with a simulation software Witness. Production methodology aims to improve overall productivity through elimination of wastes and that leads to improve quality. Integration of automation with Simulation is beneficial to identify the obstacles in implementation and to take appropriate options to implement successfully. For this integration, there are different Simulation Software's. To study this integration, with the help of "WITNESS" Simulation Software the model is created. This model is based on literature review. The input parameters are Setup Time, Number of machines, cycle time and output parameter is number of castings, avg, and time and percentage usage of machines. Obtained results are used for Statistical Analysis. This analysis concludes the optimal solution to get maximum output.

**Keywords :** automated sand casting production system, simulation, WITNESS software, performance evaluation

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