

Evaluation of Reliability, Availability and Maintainability for Automotive Manufacturing Process

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Abstract : Toward continuous innovation and high complexity of technological systems, the automotive manufacturing industry is also under pressure to implement adequate management strategies regarding availability and productivity. In this context, evaluation of system's performance by considering reliability, availability and maintainability (RAM) methodologies can constitute for resilient operation, identifying the bottlenecks of manufacturing process and optimization of maintenance actions. In this paper, RAM parameters are evaluated for improving the operational performance of the fluid filling process. To evaluate the RAM factors through the behavior of states defined for such process, a systematic decision framework was developed. The results of RAM analysis revealed that that the improving reliability and maintainability of main bottlenecks for each filling workstation need to be considered as a priority. The results could be useful to improve operational performance and sustainability of production process.

Keywords : automotive, performance, reliability, RAM, fluid filling process

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