

# **Improvement of Test Cell Utilization Using Six Sigma Methodology**

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## **Abstract**

This paper uses the six sigma methodology in order to reduce the time, effort and unnecessary costs that were involved in the loading and unloading operations of the engines which are manufactured and exported from the plant of the leading industry during this period of 2014-15. This paper includes implementation of new techniques and mechanisms to combine or improve the different processes in the test cell in order to reduce time and improve the number of engines to be tested per day. The Engine Test Cell is an apparatus to test the engines manufactured so as to confirm that its performance meets the performance standards that are required from it. The three stages of testing includes, Loading of engine to test cell of non-value added items, identifying the test run-time and unloading of engine from test cell to storage area of non-value added items. This proposal also aims at reduction of the Non value added time in the entire testing process which is not required by the customer. Different techniques like Tooling master, process combination and Mistake proofing (Poka Yoke) have been used in order to achieve the required time, effort and cost reduction. It was concluded that NVA time reduction and process combinations leads to the proper delivery of product to the customers through the implementation of six sigma.