

# *Minimizing Lead Time of Junction Box (Die Cast Enclosure) Assembly Line using Industrial Engineering Techniques*

Ravina Gupta\*, Ashok K Pundir\*, L Ganapathy\*, Bhaskar M Bhandarkar\*\*

## **Abstract**

Die Cast Enclosures or Junction Box are thick walled aluminum enclosures that are used for providing a protective cover around premium appliances to save them from harsh environmental conditions and provide them protection. The supply chain of this product is majorly outsourced to third party vendors. Operations such as cleaning, inspection, assembly, packaging and shipment happen at the company's place. To reduce the lead time, the entire assembly process was studied and the plant layout was analyzed. Then a detailed Time Motion Study was performed. Based on the present assembly process and schematic of the plant, some changes in the assembly process, layout and man power distribution were made. Then a pilot run of the proposed method was done and 25% of reduction in the assembly of the junction box was achieved.

\*National Institute of Industrial Engineering, Mumbai, India

\*\*Indian Institution of Industrial Engineering, Mumbai, India