

# **A Study For The Identification And Elimination Of Lean Manufacturing Wastes At The Pharmaceutical Production Plant Improvement By The Implementation Of Lean Manufacturing Practice (Takt Time) In An Automobile Assembling Plant**

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## **Abstract**

This study is conducted at the production plant of a pharmaceutical company. The selected production facility was facing the increase in wastages due to certain reasons which were to be diagnosed keenly and reduced it up to least possible level of overall productions. The main goal of this research is to identify the lean wastes at the plant because these wastes are responsible for lower the productivity, increase the cost, reduce the profit of organization, and reduce the efficiency of workers & machines, less competitive in global market and ineffective utilization of resources. The elimination of such wastes is the ultimate outcome of this research. Initially the gemba walk is conducted at the selected production line. The flow diagram of the production line is constructed. The standard lean manufacturing wastes sheets are adopted for the identification of lean wastes. The major causes of the identified lean wastes were identified by the detailed analyses with Ishikawa diagram. The defect waste, motion waste, waiting waste and over processing waste are identified as the most deadly wastes at the selected production line. The activities which created the wastes are identified and measured. The corrective actions are suggested for the reduction or elimination of the identified lean wastes.

**Keywords:** lean, pharmaceutical, production plant, lean wastes

## **Biographies**

**Muhammad Ali Khan Nagar** is working currently as Assistant Professor in as Department of Industrial Engineering and Management from Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan. He has almost 16 years teaching experience the undergraduate level and few years at post graduate level. He has also supervised more than a dozen students at undergraduate level and a few at post graduate level. He is also PhD scholar in the same department. He has completed the Master of Engineering in Industrial Engineering and Management from the Department of Industrial Engineering and Management from Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan. He has also completed his PGD in Industrial Engineering and Management from the Department of Industrial Engineering and Management from Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan. He has also completed his MBA in Industrial Management

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