Exploring the Applications of Lean Manufacturing Practices in Automobile Industry

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Abstract

The purpose of this paper is to explore the applications of lean manufacturing practices in the Automobile Industry. It is observed that unlike many other industries lean practices are more popular in automobile industries. It is the fact also that despite this popularity, many companies are still unaware about the appropriate selection of relevant lean practices for their industry. This paper identifies and discusses the applications of most relevant lean practices for Automobile Industry.

The following research is based on thirty five (35) papers which were published in well repute journals, books, databases and conference proceedings. In initial search ninety seven (97) papers were collected added in data pool. Later on, scrutiny was done according to the objectives of the research and thirty five (35) papers were found most relevant to the research.

The lean practices are extracted after thorough study of the final pool of thirty five (35) papers. This paper summarizes all mentioned lean practices into Forty (40). Furthermore, the deep study is conducted and most successful Ten (10) lean practices are identified for further discussion. The identified Ten (10) lean practices are discussed in detail and their applications are further elaborated by relevant case studies.

It is very important for industry practitioners to be aware of the applications of relevant lean manufacturing practices. In addition to this, industry practitioners must be aware also about the limitations and lean road map before starting the lean implementation process. Hence, this paper could provide valuable insights to Automobile Industry practitioners.

The findings from this case study are limited to focus areas of automobile industry and cannot be generalized for others in automobile and/or other industry/services sectors.

This paper is based on a comprehensive literature review which gives an opportunity to Lean Manufacturing researchers and Automobile Industry practitioners to understand most relevant Ten (10) Lean manufacturing practices in depth. In addition, highlighting the other thirty (30) relevant Lean Manufacturing practices and their applications in current literature and developing an agenda for future research, will save time and effort for readers looking to research in the area of Lean Manufacturing Practices in Automobile Industry.

Keywords

Lean manufacturing, review, industry, automobiles, lean practices

Acknowledgements

Biographies

Muhammad Ali Khan currently works as Assistant Professor in the Department of Industrial Engineering and Management, Mehran UET, Jamshoro, Sindh, Pakistan. He has sixteen years university teaching experience. He has supervised more than a dozen theses at undergraduate level. He is pursuing his PhD in the same department. He has completed his Bachelor of Engineering, Post Graduate Diploma and Master of Engineering in Industrial Engineering and Management. He has also completed his MBA in Industrial Management from IoBM, Karachi, Pakistan. He has authored various research papers for conferences and journals. He has participated in many professional seminars, workshops, symposia and trainings. He is registered with Pakistan Engineering Council and many other professional bodies. He does research in diversified fields of Industrial Engineering. The current projects are related to Lean manufacturing, Six Sigma, Project management, Operations management; MIS and Entrepreneurship. He has also earned various certifications in his areas of research.

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