



Lean Manufacturing

INTRODUCTION

Lean manufacturing (LM) is introduced with a particular emphasis on the identification and elimination of all forms of waste from the production system. Hence, the definition of lean is associated with the practice of discerning the value added activities from non-value added activities (waste). LM is viewed from two perspectives, philosophical and practical. From the philosophical perspective, LM is viewed as an overall organizational philosophy. On the other hand, the practical perspective sees LM as a set of management practices, tools and techniques.

COURSE DESCRIPTION

This course is designed to familiarize participants with the concept of LM. At first, this course will introduce the principles of LM and the basics of Lean thinking and discusses the fundamental definitions associated with LM and the characteristics of the Lean enterprise. Then, this course will focus on the practical view of LM by identifying the major practices and techniques that are commonly adopted to achieve a successful transformation towards lean enterprise. It emphasizes on the implementation procedures of each practice and the potential achievements from applying it. Finally, the course will present the key performance measures that could be used to assess the progress of implementing LM.

Learning outcomes

By the end of this course, students will be able to:

- Apply the principles of Lean in their own organizations in order to develop the appropriate culture for continuous improvement.
- Assess the situation of their manufacturing processes and identify the need for adopting a specific Lean practice.
- Follow the appropriate steps in implementing each practice with the aim to achieve the targeted benefits.
- Evaluate the improvements achieved as a result of transforming to lean.

Course Outline

1. Introduction to Lean Manufacturing

2. Principles of Lean Manufacturing

- Value
- Value Stream
- Flow
- Pull
- Perfection

3. Basics of Lean Thinking

- Muda, Mura and Muri
- Kaizen: developing a culture of continuous improvement
- Continuous process improvement
- Hoshin planning and policy deployment
- Standardization
- Involvement and suggestion systems

4. Lean Manufacturing Implementation practices

- Value Stream Mapping
- Root Cause Analysis

- Scientific Thinking
- Industrial Housekeeping (5S)
- Single Piece Flow
- Cellular Manufacturing
- Just-In-Time (JIT)
- Pull System (Kanban)
- Lot Size Reduction
- Set-up Time Reduction (SMED)
- Production Leveling (Heijunka)
- Autonomation (Jidoka)
- Error Proofing (Poka-Yoke)
- Total Productive Maintenance (TPM)
- Visual Management

5. Lean Enterprise Culture

6. Key Lean-related measures

- Quality
- Delivery
- Cost
- Financial impact
- Competitive impact

Who Should Attend

- Personnel working within the design, manufacturing and manufacturing support functions (Materials, Quality, Engineering)
- Manufacturing leaders who are responsible for establishing manufacturing standards.

COURSE DURATION: 10 Days

TRAINING HOURS: 50 hrs

MINIMUM NO. OF TRAINEES: 15

LANGUAGE : English

