



**Automotive Industry Development Centre Eastern Cape SOC Ltd**  
Your partner in becoming globally competitive

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## **LEAN (World Class Manufacturing) TOOLS WORKSHOP**

Lean Manufacturing Tools are widely used tools in the manufacturing industry. They are aimed at using the most effective methodologies and techniques to achieve excellent performance on a consistent basis to meet the objectives of the customer in a very cost effective manner by focusing on waste reduction or elimination.

The AIDC EC offers Lean Tools Workshop over 5 consecutive days. The workshop entails:

- Theory Lecturing
- Concept Exercises
- Real Life Exercises (if hosted on-site)
- Simulations
- Lean Games
- Audio and Visual examples

At the end of the 5 days candidates will write an exam to test knowledge. Candidates will also be required to complete one project using one or more of the tools that will improve processes within their organisation. On successful completion of the exam and the project, the candidate will be issued with the certificate.



## **Course Content**

The course content of the Lean Tools Workshop is aligned to the SAQA Unit Standard 377360 (Discuss Just in Time (JIT) and Lean Manufacturing). Please note that AIDCEC has applied for the accreditation of this unit standard.

### **1. Introduction**

- 1.1 Background and History
- 1.2 Lean Thinking
- 1.3 Process Definitions

### **2. Lean Principles**

- 2.1 What is Lean
- 2.2 How Lean Works
- 2.3 Philosophy and Key Concepts
- 2.4 Core Principles of Lean
- 2.5 Benefits of Lean Thinking

### **3. Value Stream Mapping (VSM)**

- 3.1 Process Mapping, Value Streams
- 3.2 Common Failure Modes of VSM
- 3.3 VSM Limitations
- 3.4 Conducting a Value Stream Map

### **4. 8 Wastes**

- 4.1 Identifying Waste
- 4.2 The 8 Waste
- 4.3 Philosophy for Long Term Waste Reduction



## **5. Lean Elements**

- 5.1 Organisation
- 5.2 Metrics
- 5.3 Organisation
- 5.4 Logistics
- 5.5 Manufacturing Flow
- 5.6 Process Control

## **6. 5S & Workplace Organisation**

- 6.1 What is 5S?
- 6.2 5S Process Steps
- 6.3 Maintaining 5S

## **7. Visual Management**

- 7.1 What is Visual Management
- 7.2 Key Factors for Visual Management Implementation
- 7.3 Types of Visual Management
- 7.4 Benefits of Visual Management
- 7.5 Examples of Visual Management
- 7.6 Steps for Implementing Visual Management
- 7.7 Levels of Visual Management Boards

## **8. Material Replenishment System (MRS)**

- 8.1 Just in Time (JIT)
- 8.2 MRS Overview
- 8.3 Kanban
- 8.4 Two Bin System
- 8.5 Supermarket
- 8.6 Pull System



## **9. Standardised Work**

- 9.1 Basic Definitions
- 9.2 Why do we need Standardised Work
- 9.3 Elements of Standardised Work
  - 9.3.1 Standardised Work Sequence
  - 9.3.2 Takt Time
  - 9.3.3 Line Balancing
  - 9.3.4 Standardised Work in Process
  - 9.3.5 One Piece Flow
  
- 9.4 Standardised Work Tools
  - 9.4.1 Standardised Work Chart
  - 9.4.2 Standardised Work Combination Table
  - 9.4.3 Standard Work Instruction
  - 9.4.4 Time Observation Sheet

## **10. Total Productive Maintenance**

- 10.1 Basic Concepts

## **11. Quick Changeover – SMED**

- 11.1.1 Background
- 11.1.2 Benefits of SMED
- 11.1.3 Basic Concepts
- 11.1.4 The SMED Process

## **12. Theory of Constraints (TOC)**

- 12.1.1 Key Steps
- 12.1.2 Significance of Bottlenecks
- 12.1.3 TOC Concepts (Drum, Buffer and Rope)

## **13. Jidoka and Poka Yoke**

- 13.1.1 Zero Quality Control



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13.1.2 Poka-Yoke

## **14. Continuous Improvement**

14.1.1 Kaizen – What is Kaizen?

14.1.2 Kaizen Approach

14.1.3 How to Kaizen?

14.1.4 How to Make a Perfect Process

14.1.5 Sustaining Change

## **15. Exams**