

# Management and Strategy Institute, LLC.

## TPM Concept Certified (TPMC)

### Course of Study

#### Introduction

Total Productive Maintenance (TPM) is an all-inclusive approach to equipment maintenance that strives to achieve perfect production (zero defects). This means that equipment is expected to have zero breakdowns, slow runs, or defects. TPM also values a safe working environment with a zero accident policy.

TPM is a concept with the aim to maximize the productivity of facilities by transferring the responsibility for regular maintenance to employees. It consists of 8 pillars, each containing approaches to eliminate losses and waste. The TPM Concept certification, offered exclusively through the Management and Strategy Institute, is designed to show you the basic concept is Total Productive Maintenance and test you on those concepts.

The TPMC exam is a timed (30 minute), online exam. It has a required passing score of 70%.

#### Competencies

This course of study covers the following competencies:

##### **Definition of TPM**

- What is TPM and why is it used.
  - Learning Outcome: The Student will be able to define TPM

##### **TPM Breakdown**

- TPM (Total Productive Maintenance) is an all-inclusive approach to equipment maintenance.
  - Learning Outcome: Understand the basic description of Total Productive Maintenance.

##### **Why Total Productive Maintenance**

- Why should a company introduce TPM in the workplace.
  - Learning Outcome: understand the initial situations that lead to the implementation of TPM in the workplace.

## Benefits of TPM

- Understand the benefits of TPM.
  - Learning Outcome: Understand direct & indirect benefits.

## 8 Pillars of TPM

- There are 8 pillars of TPM and they outline how a Total Productive Maintenance process is laid out.
  - Learning Outcome: Understanding Continuous Improvement, Autonomous Maintenance, Preventative Maintenance, Training & Education, Start-up Monitoring, Quality Management, TPM in Administration, Safety & Health.

## 5S

- 5S focuses on the effective organization of the workstation.
  - Learning Outcome: Understand the concept of 5S.

## Kaizen

- Kaizen in the business sense today means to improve all facets of your organization and the processes within it using incremental but continual improvement.
  - Learning Outcome: The student understands non-value added activities.

## Key Figures of TPM

- There are 6 key figures with TPM
  - Learning Outcome: Understand Productivity, Quality, Costs, Delivery, Safety, Multitask.

## Losses in Production

- The TPM concept deals with the search for losses and waste within the production process with the aim of zero defects.
  - Learning Outcome: Understand examples of minor defects.

## Overall Equipment Effectiveness (OEE)

- The main objective of TPM is to increase the Overall Equipment Effectiveness of plant equipment.
  - Learning Outcome: Understand  $\text{Performance} \times \text{Availability} \times \text{Quality} = \text{OEE}$ .

## **Six Major Losses**

- OEE loss categories (Availability Loss, Performance Loss, and Quality Loss) can be further broken down into what is commonly referred to as the Six Major Losses.
  - Learning Outcome: Understand the 6 major losses and the OEE categories of Availability, Performance, and Quality.

## **Implementation of TPM**

- 12 Steps to implementation.
  - Learning Outcome: Understand the 12 steps to implementation.

## **Roles within a TPM Process**

- Roles that are required within TPM.
  - Learning Outcome: Understand individual roles.

## **Sustainment**

- Basic understanding of sustainment.
  - Learning Outcome: Understands the need to sustain the TPM gains.

## Learning Resources

### **Recommended:**

Material included with your purchase is recommended reading.

- Free online training material provided by MSI. The material includes everything you will need to learn to pass the exam. This material is included for free with the purchase of your exam. It is in digital form, and available immediately after payment.

### **Optional:**

This material is not required, however it will assist you in becoming TPM Certified.

- Steve Borris (Jan 2006), Total Productive Maintenance: Proven Strategies and Techniques to Keep Equipment Running at Maximum Efficiency, ISBN-13: 978-0071467339
- Terry Wireman (May 2004), Total Productive Maintenance, ISBN-13: 978-0831102104

## Preparing for Success

In order to successfully complete the TPM exam, you will need to make sure you have the appropriate resources to support your learning.

- A quiet location, free from distraction.
- Internet access.
- Current (newest) version of Internet Explorer, Firefox, or Chrome browser.
- Take study notes while going through the training.
- When you are ready to take the exam, you should allot 30-minutes of time.

## Frequently Asked Questions

### What happens if I fail the exam?

- You are given two additional attempts to pass the exam at no additional cost.

### Will I receive Professional Competency Units (PCU's)?

- Yes, the TPM Concept certification exam awards 5 PCU's upon passing of the exam.