

Course No. 1342

Total Productive Maintenance (TPM) Training Course

MAINTENANCE ENGINEERING
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Total Productive Maintenance (TPM) Training Course provides a structured and practical approach to improving equipment reliability, asset performance, operational efficiency, and workforce involvement in maintenance excellence. The course enables organizations to establish a collaborative operating culture in which maintenance, operations, engineering, quality, and management teams share responsibility for sustaining equipment condition and reducing performance losses.

Total Productive Maintenance is particularly valuable for government entities, ministries, public sector organizations, banks and financial institutions, oil and gas companies, utilities, manufacturers, transport operators, and large corporations that depend on critical assets, facilities, equipment, and infrastructure. TPM supports a shift from relying solely on maintenance teams to building broader ownership of equipment condition, early defect detection, safe operation, and disciplined daily care.

This Total Productive Maintenance Training Course covers the principles of TPM, its core pillars, equipment loss analysis, autonomous maintenance, planned maintenance, focused improvement, quality maintenance, skills development, early equipment management, and safety and environmental integration. Participants will understand how TPM connects with preventive maintenance, predictive maintenance, reliability engineering, quality management, operational excellence, and continuous improvement.

The course also explores maintenance and operational performance measures, including Overall Equipment Effectiveness, equipment availability, performance rate, quality rate, recurring failures, minor stoppages, reduced speed losses, and start-up losses. Participants will learn how to use these measures to identify priority improvement areas and focus resources on the losses that have the greatest effect on equipment and operational performance.

Through practical exercises, case discussions, and implementation planning, participants will gain the capability to develop a realistic TPM roadmap for their organization. The course supports executives in setting direction, governance, and success measures, while providing managers, engineers, supervisors, technicians, and operators with practical methods for maintaining equipment condition, eliminating defects, strengthening teamwork, and supporting sustainable operational improvement.

Objectives

- Analyze the principles of Total Productive Maintenance and their relationship to reliability, productivity, quality, safety, and asset management during the course.
- Assess current equipment and operational performance to identify losses, recurring failures, stoppages, and priority improvement opportunities.
- Apply the Overall Equipment Effectiveness concept to analyze availability, performance, and quality in practical course scenarios.
- Develop an initial TPM implementation plan that reflects the needs of a site, department, facility, or operational area.
- Evaluate major equipment losses and classify them according to breakdowns, setup and adjustment, minor stoppages, reduced speed, defects, and start-up losses.
- Design autonomous maintenance activities that define cleaning, inspection, lubrication, tightening, and operator responsibilities.
- Improve planned maintenance programs by linking failure history, asset criticality, equipment condition, and maintenance work planning.
- Apply focused improvement methods to analyze recurring performance losses, identify causes, and develop defect elimination actions.
- Develop visual standards and operating procedures that support early identification of abnormalities and prevent equipment deterioration.
- Strengthen collaboration between operations, maintenance, engineering, quality, and management through clear roles, routines, and performance reviews.
- Assess TPM performance using measurable indicators, including Overall Equipment Effectiveness, maintenance compliance, equipment condition, and loss trends.
- Develop a time-bound action plan to implement or improve Total Productive Maintenance practices after the course.

Who Should Attend

The Total Productive Maintenance Training Course is designed for maintenance managers, reliability managers, engineering managers, operations managers, asset managers, production managers, facilities managers, plant managers, quality managers, and technical services leaders. It is particularly relevant for executives, directors, and decision makers responsible for asset availability, equipment performance, operational productivity, product or service quality, business continuity, maintenance budgets, and operational risk.

The course is suitable for maintenance engineers, reliability engineers, mechanical engineers, electrical engineers, instrumentation and control engineers, process engineers, maintenance planners, schedulers, supervisors, technicians, operators, quality inspectors, condition monitoring specialists, and continuous improvement professionals. It supports personnel working in oil and gas, energy, utilities, manufacturing, mining, transport, water, food and beverage, pharmaceuticals, facilities management, and other environments that depend on critical equipment and operational assets.

HSE, supply chain, procurement, materials management, learning and development, human resources, digital transformation, project management, and operational excellence professionals may also benefit. The course is especially valuable for teams facing recurring equipment failures, unplanned downtime, low equipment performance, weak coordination between operations and maintenance, or a need to build a more proactive and accountable equipment care culture.

Learning Outcomes

- Explain the role of Total Productive Maintenance in improving asset reliability, equipment availability, operational performance, quality, and safety.
- Differentiate between conventional maintenance, Total Productive Maintenance, autonomous maintenance, planned maintenance, and focused improvement.
- Calculate the components of Overall Equipment Effectiveness and interpret availability, performance, and quality results.
- Identify and classify major equipment losses that affect asset performance and operational productivity.
- Assess equipment condition and recognize defects and abnormalities that may lead to deterioration or failure.
- Develop practical autonomous maintenance tasks covering cleaning, inspection, lubrication, tightening, and early problem detection.
- Prepare planned maintenance programs based on asset criticality, failure history, equipment condition, and operational requirements.
- Apply focused improvement tools to analyze recurring losses and develop practical actions to eliminate their causes.
- Develop visual standards and checklists that help teams maintain basic equipment conditions and identify abnormalities.

- Establish performance indicators for Overall Equipment Effectiveness, downtime, maintenance compliance, equipment condition, and work quality.
- Facilitate performance reviews between operations, maintenance, engineering, and quality teams to monitor improvement actions.
- Produce an initial TPM implementation plan with priorities, responsibilities, milestones, and success measures.

Course Outline

DAY 01

Total Productive Maintenance Foundations and Operational Excellence

- The Total Productive Maintenance concept, objectives, and contribution to reliability, asset management, productivity, and quality.
- The evolution of maintenance strategies and the relationship between TPM, preventive maintenance, predictive maintenance, proactive maintenance, and reliability engineering.
- The core TPM pillars and the role of leadership, management, technical teams, and operational teams.
- Equipment ownership culture and collaboration between operations, maintenance, engineering, and quality.

PRACTICAL APPLICATION OR DISCUSSION

Assessing maintenance maturity, operational challenges, and major losses within participant organizations.

DAY 02

Overall Equipment Effectiveness and Loss Analysis

- Understanding Overall Equipment Effectiveness and its three components: availability, performance, and quality.
- Breakdown losses, setup and adjustment losses, minor stoppages, reduced speed losses, process defects, and start-up losses.
- Data requirements for OEE measurement and the role of CMMS, operational records, production data, and equipment history.

DAY 02 — CONTINUED

- Trend analysis and Pareto analysis for identifying equipment performance priorities.

PRACTICAL APPLICATION OR DISCUSSION

Calculating Overall Equipment Effectiveness and analyzing losses for a selected asset, system, or production line.

DAY 03

Autonomous Maintenance and Basic Equipment Conditions

- Autonomous maintenance principles and the role of operators in cleaning, inspection, lubrication, tightening, and early abnormality detection.
- Maintaining basic equipment conditions and identifying contamination sources, hard-to-access areas, and recurring defects.
- Visual management standards, checklists, control points, abnormality tagging, and effective escalation processes.
- Developing operator capability, defining responsibility boundaries, and coordinating with maintenance teams.

PRACTICAL APPLICATION OR DISCUSSION

Designing an autonomous maintenance checklist for a critical asset or operational area.

DAY 04

Planned Maintenance, Focused Improvement, and Defect Elimination

- Planned maintenance and its role in preventing failures, improving work readiness, and extending asset life.
- Reviewing recurring failures, applying root cause analysis, improving maintenance plans, and strengthening inspection standards.
- Focused improvement methodology and multidisciplinary teams for addressing priority equipment and process losses.
- Defect management, corrective and preventive actions, action ownership, and effectiveness verification.

DAY 04 — CONTINUED

PRACTICAL APPLICATION OR DISCUSSION

Analyzing a recurring equipment loss and developing a measurable focused improvement plan.

DAY 05**TPM Sustainability, Governance, and Implementation Planning**

- Workforce capability development, role-based training, and competency requirements for sustained TPM implementation.
- Early equipment management and integrating maintainability, reliability, accessibility, and operability requirements into new assets.
- Safety, environmental responsibility, and quality assurance as integral components of Total Productive Maintenance.
- TPM performance measures, governance, management reviews, communication, recognition, and continuous improvement.

FINAL WORKSHOP, ACTION PLAN, OR IMPLEMENTATION EXERCISE

Developing a 90-day TPM implementation plan with priorities, roles, milestones, performance indicators, and review mechanisms.

Register or Request More Information

Course page: <https://quest-training.com/courses/total-productive-maintenance-tpm-training-course>

Website: <https://quest-training.com>

Email: info@quest-training.com

Phone: +905016771440