

Training - Maintenance Management



GESMAIN-EN-P



Face-to-face only



5 days

This certifying course aims to bring elements related to the implementation of a modern and adapted maintenance policy (such as the risk-based maintenance policy), to define a continuous improvement of reliability, to consider failure direct and indirect costs, to be able to manage maintenance contracts as well as unit shutdowns or turnarounds

IFP Training Certificate

Advanced Certificate

Level

Skilled

Public

Maintenance engineers and managers from process industries, as well as production managers concerned by operation costs and equipment management

Objectives

Attendees will be able to implement the following skills:

- Know the proven maintenance policies (TPM, RCM, RBM, key performance indicators, preventive maintenance tools...) in order to be able to set goals in terms of company global efficiency
- Implement reliability measurement, analysis and improvement techniques (reliability indicators, assessment matrix, failure tree, FMECA, Pareto, Weibull...)
- Know the necessary elements to define a subcontracting policy as well as to efficiently manage shutdowns
- Through various unexpected group exercises, to remind that multidisciplinary and reactivity are part of maintenance managers' jobs

Pedagogical & technical resources

- Applications and case studies illustrating the techniques studied
- Active pedagogy based on participants' experiences
- Short scenarios of the most frequent and the most serious key equipment failures, proposed by the trainer and analyzed by the group. Participants shall use their technical knowledge, reasoning skills, multidisciplinary and operational capacities

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsible

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the

Program

MAINTENANCE POLICY & OBJECTIVES

0.5 day

Integration of the maintenance policy to the plant policy. Financial, technical and workforce objectives.
Current methods and trends: criticality analysis, TPM, RCM, RBM, maintenance program optimization based on criticalities (redundancy, utilization rate, impact on production, age...), risk analysis, local conditions.
Different types of maintenance and respective importance: planned preventive, condition-based, predictive, corrective.

Importance of condition-based and predictive maintenances in modern maintenance policies, and particularly data importance (from SAP, PI, site report, root causes...) for the use of efficient methods (RED, e-monitoring...).
Application of the methods studied: criticality ranking, emergency levels, spare parts management.

RELIABILITY MEASUREMENT & FOLLOW-UP

1 day

Descriptive statistics: reliability and reliability indicators, equipment performance monitoring in terms of availability, MTBF, MTTR...

Statistical functions and their applications to preventive maintenance. Main models, application to the search for preventive control optimization, equipment redundancy studies, standby equipment management.
Pareto law, identification of bad-actors.

RELIABILITY ANALYSIS & IMPROVEMENT METHODS

1 day

FMECA (Failure Modes, Effects and their Criticality Analysis). Areas of application, basic techniques, probability assessment, common methodological errors. Action plan.

Failure trees, method principle.

RCM - Overall policy. Interest of the decision logics.

TPM - Total Productive Maintenance (global involvement to maintain the production tool).

Concept of asset integrity management as a SECE (Safety and Environment Critical Element).

Concept of machine learning: failure prediction by accumulation and cross analysis of process and equipment data.

MAINTENANCE COSTS & FAILURE COSTS

1 day

Overall failure costs versus direct costs (materials, spare parts, repair contractors...) and indirect (shortfall in production or injection, quality defect, reputation...). Notion of cost efficiency: overall effectiveness, adaptation to petroleum industry and practical calculations.

Life Cycle Cost (LCC). Application to the choice of investments; application to the search for optimum equipment life duration.

Spare parts managements. Cost of inventory. Unsuitability of some conventional stock management calculations, cost of risk.

Computerized maintenance management.

System (CMMS) and related processes.

OUTSOURCING & SUBCONTRACTING

0.5 day

Purpose, condition for efficiency. Why outsourcing? Which abilities to be kept? How to keep control?

Different types of contracts. When to use them? How to combine them?

Concepts of General Maintenance Operation Contract (GMOC), Maintenance and Inspection Engineering Contractor (MIEC).

Comparison between specific maintenance contract ("Specific Maintenance Contract" (SMC), "Original Equipment Manufacturer" (OEM)) and integrated maintenance contract ("Integrated Services Provider" (ISP)).

SHUTDOWN MANAGEMENT

0.5 day

Detailed preparation. Cost control. Planning. Identification of critical operations.

Work management. Worksite organization. Responsibilities. Decision-making. Safety goals. Acceptances and commissioning. Quality management and safety. Procedures. Reports and updates.

IMPROVEMENT PLANS

0.5 day

From failure management to equipment management.
Lowering the tolerance threshold to defects and operators' involvement.
Maintenance plans by equipment item and equipment type.
Improvement plans, key performance indicators, dashboards. Maintenance audits.

TROUBLESHOOTING

The trainer regularly proposes short operational scenarios that are analyzed by the group. These are related to practical problems that maintenance managers may face on an Oil & Gas site (pump cavitation, compressor pumping, a defect on a control loop or safety system...).

To solve these problems, participants must use their technical knowledge, reasoning skills, multidisciplinary and operational capability.

Sessions

Pau - From 11/16/2026 to 11/20/2026

4360 €/HT

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com