



Asia Masters Center

Optimizing Equipment Maintenance & Replacement Decisions





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Optimizing Equipment Maintenance & Replacement Decisions

➔ Course Objective

- Identify equipment failures, and the impact on plant reliability
- Understand the cost-effectiveness of Preventive / Predictive Maintenance program
- Apply techniques of optimisation of various maintenance activities
- Define criteria for work-crew size, spare parts and equipment replacement
- Make the important decision on the basis of the cost and benefit analysis
- Incorporate safety objectives to the equipment repair or replacement optimisation

➔ Target Audience

- Operation, Technical Production & Service Professionals
- Technical Professionals responsible for maintenance and repair of equipment
- Professionals involved in inspection and reliability
- Technical Professionals dealing with risk assessment and integrity analysis
- Technicians dealing with regulating and metering and other measurements



Course Outline

➤ **DAY 1**

➤ **Physical Asset Management & Failure Analysis**

- Physical Asset Management
- Maintenance Management: Preventive / Predictive Approach
- Nature and Modes of Equipment Failure
- Failure Modes & Effect Analysis (FMEA)
- Analysis of Component Failure data using the Weibull Distribution
- Censored Data, the 3-Parameter Weibull, and the Kolmogorov-Smirnov Test

➤ **DAY 2**

➤ **Preventive Maintenance & Spare Parts Replacements**

- Reliability and Availability Concept: MTBF & MTTR
- Reliability Improvement through Reduction of Downtime
- Maintenance Performance Quantification
- Preventive Maintenance & Spare Part Handling
- Spare Parts Provisioning: Prediction Models and Techniques
- Management of Change: In-Kind Spare Parts

➤ **DAY 3**

➤ **Equipment Inspection & Fitness for Service**

- Condition Monitoring & Inspection
- Risk Based Inspection (RBI)
- Risk Matrix: Management and Mitigation Measures
- Reliability Improvement through Inspection
- Inspection Scope & Frequency
- Fitness for Service Analysis (FFS)



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➤ **DAY 4**

➤ **Economics of Maintenance, Repair & Replacement**

- Management of Maintenance Resources
- Effective Use of CMMS
- Maintenance Organization Analysis : Crew size
- Equipment Repair or Replacement Decision
- Economic Aspect of Maintenance Outsourcing: Subcontract
- Economic Aspect of Equipment Replacement

➤ **DAY 5**

➤ **Total Productive Maintenance & Safety**

- Capital Investment in Equipment and Maintenance: ROI
- Total Productive Maintenance
- Safety in Maintenance Work
- KPI and OEE: Leading and Lagging Indicators
- Summary and Conclusions
- The design of financial models for forecasting and decision-making

➤ **The Feature Of Asia Master Training And Development Center**

- we pick up the customer from the airport to the hotel.
- we give the participant training bag includes all the necessary tools for the course.
- Working within groups to achieve the best results.
- All our courses are confirmed and we do not postpone or cancel the courses regardless of the number of participants in the course.
- We can assist you in booking hotels at discounted prices if you wish to book through us.
- We offer the certificate from Asia Masters Center for Training and Administrative Development.

➔ **The Cost Of The Training Program Includes The Following:**

- 1) Scientific article on flash memory.
- 2) Training Room.
- 3) Training.
- 4) Coffee break.
- 5) The training bag includes all the tools for the course.



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Price (USD)

Communicate with the training department
to know the participation fees

➤ **There are offers and discounts for groups**

The details of the bank account

Bank name: CIMB Bank Berhad

Account name: Asia Masters Center SDN. BHD

Bank account number: 80-0733590-5

Swift code: CIBBMYKL

IBAN: Null