PT ATMI BizDEC

TRAINING PROGRAM SYLLABUS

Industrial Maintenance for Equipment Reliability
(Program Maintenance Industri untuk Keandalan Peralatan)

1. General Information

Program Name : Industrial Maintenance for Equipment Reliability
Program Code : PM040
Duration : 32 Learning Hours (JP)
Learning Method : Blended (Theory + Case Studies + Practice)
Target Participants

- Maintenance technicians (beginner to intermediate)
- Machine operators
- Manufacturing vocational instructors

Participant Requirements

- Basic understanding of mechanics or electrical systems
- Interest in machine and facility maintenance

2. Program Description

This industrial maintenance program equips participants with the basic knowledge and skills to maintain equipment, systems, and facilities in optimal working condition. It covers maintenance strategies, mechanical and electrical systems, failure analysis, basic troubleshooting, and maintenance scheduling.

The program focuses on developing a systematic approach to inspection, maintenance, and repair to improve the reliability, safety, and service life of production assets.

3. Learning Objectives

After completing this program, participants are expected to be able to:

- Explain basic maintenance concepts and their industrial applications
- Explain maintenance strategies, planning, and scheduling
- Identify mechanical, drive, and lubrication systems
- Perform basic analysis of electrical components and wiring
- Perform basic mechanical and electrical troubleshooting
- Understand maintenance performance measurement and control
- Apply occupational safety and health (OSH) and 5R principles

4. Impact-Oriented Outcomes

Participants will be able to:

- Apply industrial maintenance concepts and strategies
- Prepare systematic maintenance plans and schedules
- Identify mechanical, drive, and lubrication systems in machines
- Analyze electrical components and wiring at a basic level
- Perform basic mechanical and electrical troubleshooting
- Measure and evaluate maintenance performance
- Apply OSH and 5R principles in maintenance work

5. Training Material Structure

No.	Module	Sub-Material	Duration	Method
1	Industrial Maintenance Fundamentals and Planning	Maintenance concepts and systems; industrial maintenance strategies; maintenance planning and scheduling; and performance monitoring and measurement	8 JP	Theory + Discussion + Case Study
2	Industrial Equipment Systems and Troubleshooting	Mechanical parts, drive and lubrication systems, electrical components, wiring, failure analysis, and basic mechanical and electrical troubleshooting	20 JP	Theory + Observation + Practice + Case Study
3	Maintenance Improvement, OSH & 5R	Maintenance performance measurement and evaluation, improvement, and the application of OSH and 5R in maintenance activities	4 JP	Discussion + Theory + Practice

6. Learning Methodology

- Instructor-led training (guided theory)
- System and component demonstrations
- Hands-on practice (inspection and troubleshooting)
- Machine failure case studies
- Problem-based learning
- Coaching during practice

7. Learning Media & Facilities

- Practice machines/equipment (if available)
- Mechanical and electrical components
- Training materials
- Basic measuring instruments
- Maintenance tools (hand tools)
- Inspection checklists
- Technical drawings and training modules

8. Evaluation & Assessment

- Pre-test and post-test (conceptual understanding)
- Practical inspection and troubleshooting assessment
- Maintenance case study assessment
- Maintenance planning assessment
- Observation of work attitude, OSH, and attention to detail

9. Training Output / Key Deliverables

Participants will produce:

- One simple maintenance plan (schedule and checklist)
- One machine inspection report
- One failure case analysis (troubleshooting report)
- A demonstration of basic maintenance practice

10. Certification

- Training Certificate (Completion Certificate)
- Competency Certificate (optional, through a competency assessment according to participant needs)

11. Instructor

Instructors are experienced practitioners and/or trainers in maintenance, mechanical engineering, electrical engineering, and industrial manufacturing.

Syllabus Approval Page
Industrial Maintenance for Equipment Reliability
Program Code : PM-040

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