MTA

Motor Health Maintenance

Program focus on AC motor mechanical and electrical maintenance typically includes instruction on motor fundamentals, safety, diagnostics, repair, and predictive maintenance techniques. Equip technician with essential skills to safely inspect, maintain & troubleshoot AC Induction Motor.

Target Audiance

Courses are often tailored for industrial technicians, maintenance staff, and engineers

Learning Outcomes:

- Identify common AC motors, components & intepret nameplate data
- Safely perform Lockout/Tagout (LOTO) for motor driven system
- Conduct a basic operational inspection (sight, sound, touch)
- Conduct a electrical & mechanical troubleshooting AC motor
- Recognize common signs of motor failure and know when to report them
- Use basic tool for motor health check
- Interpret basic vibration and temperature data from a wireless sensor dashboard to identify potential motor faults

Course Content:

- Motor Fundamental & Safety
- Hand's on Electrical/Mechanical of Motor Health troubleshooting
- Maintenance Workshop
- Introduction of VFD motor control
- Predictive Maintenance

Training Details:

2 Days

9.30am - 5.00pm

Skilllab Training Center, Perai Penang

9 participant

Target Audience : Maintenance Technician, Junior Engineer, Equipment Operator

Training Provider :
MTA Skilllab Sdn Bhd

CERTIFICATION PROVIDED

Training Tool Provided

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Course Outline

Day 1

Session 1: Introduction & Safety

- Objective and the role of Maintenance (Reactive/Preventive/Predictive)
- Electrical Safety: Lockout/Tagout (LOTO) procedures for motors and starters.
- Mechanical Safety: Handling rotating parts, proper tools, and personal protective equipment (PPE)
- Safe work practices for inspection and testing.

Session 2 : Motor Fundamental & Type

- Basic principle of motor operation.
- Common motor type in industry
- Motor nameplate decoding (Quiz Exercise)

Session 3 : Hand's on Lab 1 - Electrical Testing

- Visual Inspection: Terminations, condition of conduit, physical damage, and cleanliness
- Insulation Resistance Testing
- Winding Resistance Test: Checking for balanced windings using a low-resistance ohmmeter.

Session 4: Hand's on Lab 2 Bearing Maintenance

- Bearing Types
- Proper Lubrication & bearing remover
- Identify bearing failure

Course Outline

Day 2

Session 5: Hand's on Lab 3 Shaft Coupling Installation

- Type of drive coupling
- Proper installation variety shaft coupling and alignment

Session 6: Hand's on Lab 4 Shaft Coupling Maintenance

- Type of shaft coupling
- Parallel / Angular Alignment
- Different type of shaft alignment
- Method: Initial check/measure Gap/Assess Alignment/Roughing in

Session 7: Introduction of VFD

- VFD function and parameter
- Maintenance of VFD

Session 8: Predictive Maintenance & Data Collection

- Explain the evolution from reactive ("fix it when it breaks") to preventative ("lubricate every 3 months") to predictive maintenance
- Demo: Show vibration sensor and explain what it measures (vibration in g's/velocity, temperature in °C).
- When to Act vs. When to Report: Using Dashboard to detect unbalance pattern of escalating issues to a senior technician.

Course Review/Q&A/Feedback

Award Certificate of Completion