

MOTOR SHOP ASSESSMENTS PLUS MOTOR REPAIR TEST INTERPRETATION)
3-DAYS (INTERACTIVE WORKSHOP)

COURSE DESCRIPTION

In this three-day interactive workshop we cover motor repair shop evaluation considerations regarding alternating and direct current motor repairs/rebuilds; emphasizing industrial motor repair standards, motor repair procedures, plus motor repair testing and test data interpretation. Students learn how to properly evaluate motor repair shop capabilities and expertise in accordance with industry standards and motor owner expectations. A first-rate motor repair shop tour on the third course day gives students the opportunity to see the important motor shop procedures covered in the classroom. After completing this workshop, students will know how to conduct a thorough motor repair shop assessment and how to effectively determine the motor shop's capability and expertise.

IS THIS COURSE FOR ME?

This workshop is a perfect fit for motor owners and motor repair shop personnel who are responsible for selling, purchasing, removing, installing, maintaining, troubleshooting, repairing, testing, and managing alternating and direct current motors. Trainees, intermediate and advanced maintenance and motor repair technicians, reliability maintenance personnel, field service engineers, technicians, group leaders, supervisors, account managers, sales reps, motor shop managers, maintenance supervisors, electrical and mechanical engineers, and senior management officials will greatly benefit from this workshop.

CLASSROOM VS. SHOP/LAB TIME

This workshop is designed for two-days of classroom instruction and one-half day of hands-on demonstrations at a first-rate motor shop in Tampa, FL. The class size should be limited to 12 people.

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| <p>I. DC Motors</p> <ul style="list-style-type: none"> ⇒ DC Motor Repair Standards ⇒ DC Motor Nameplates ⇒ DC Motor Construction (Shunt, Series, Compound) ⇒ DC Fields; Testing and Data Interpretation ⇒ DC Armatures; Testing and Data Interpretation ⇒ DC Motor Load Testing (Torque vs. Horsepower) ⇒ DC Motor Repair Documentation <p>II. ⇒ AC Motor Repair Standards</p> <ul style="list-style-type: none"> ⇒ AC Motor Nameplates ⇒ AC Induction Motor Construction ⇒ AC Wound-Rotor Motor Construction ⇒ AC Synchronous Motor Construction ⇒ AC Stator Winding Testing and Data Interpretation ⇒ AC Stator Rewind Procedures and Testing ⇒ AC Laminated Core Testing and Data Interpretation ⇒ AC Rotor Bar Testing and Data Interpretation ⇒ AC Synchronous Rotor Testing and Data Interpretation <p>III. Mechanical Motor Components</p> <ul style="list-style-type: none"> ⇒ Antifriction Bearings ⇒ Sleeve Bearings ⇒ Shaft and Housing Repairs ⇒ Dynamic Balancing Procedures and Documentation ⇒ Motor Base Flatness Evaluation and Documentation ⇒ Vibration Analysis and Documentation | <p>IV. Motor Repair Standards (Testing and Data Interpretation)</p> <ul style="list-style-type: none"> ⇒ Insulation Resistance Tests (IEEE 43) ⇒ Polarization Index (IEEE 43) ⇒ High-Potential Testing (NEMA MG1) ⇒ Step-Voltage Testing (IEEE 95) ⇒ Surge Testing Form-Coil Stators (IEEE 522) ⇒ Surge Testing Armatures (EASA) ⇒ Winding Resistance Tests (API 541) ⇒ Winding Inductance Tests (IEEE 1415) ⇒ Laminated Core Testing (IEEE 432, IEEE 1415) ⇒ Air Gap Variance and Deviation (IEEE 113, API 541) ⇒ AC and DC Voltage Drops (IEEE 113, EASA) ⇒ Air Gap and Rotor Bar Acceptance Testing (IEEE 1415) <p>V. Motor Repair Shop Considerations</p> <ul style="list-style-type: none"> ⇒ Motor Repair Specifications ⇒ Motor Repair Checklists ⇒ Motor Repair Shop Capability Assessments ⇒ Motor Repair Shop Compliance Audits ⇒ Motor Repair Shop Quality Program and Documentation ⇒ Motor Repair Shop Safety Program and Documentation ⇒ Motor Repair Shop Employee Training Program ⇒ Motor Repair Shop Facilities and Equipment ⇒ Motor Repair Shop Equipment Calibration |
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