



PERTECNCA'S

WINDING & REWINDING TRAINING BROCHURE



Practical training



Post training assistance

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WINDING & REWINDING TRAINING

The Winding & Rewinding Training Program is crafted for individuals interested in mastering the techniques of electrical motor winding and rewinding. This course covers the fundamental principles and advanced practices needed to repair and maintain motors used in various industries. Participants will learn to diagnose issues related to windings, execute rewinding processes, and ensure motors operate efficiently and reliably.

What you'll learn?

- Fundamentals of electrical motor windings.
- Types of windings used in AC and DC motors.
- Techniques for diagnosing winding faults.
- Step-by-step guide to motor rewinding.
- Safety practices in motor winding and rewinding.
- Tools and equipment used in the rewinding process.
- Quality control and testing of rewound motors.
- Preventive maintenance for motor windings.

Course summary:

This comprehensive training program focuses on developing expertise in winding and rewinding AC and DC motors. Participants will gain hands-on experience in dismantling motors, analyzing winding issues, and applying precise rewinding techniques. The course ensures that trainees are equipped to deliver high-quality maintenance and repair services, essential for prolonging the lifespan and performance of electrical motors.

Key Takeaways:

- Mastery of motor winding and rewinding techniques.
- Ability to diagnose and repair winding faults.
- Proficiency in using specialized tools and equipment.
- Understanding of safety and quality standards in rewinding.

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Course syllabus:

Module 1: Introduction to Motor Windings

- Basics of electrical motor winding.
- Overview of AC and DC motor windings.
- Identifying different winding configurations.
- Practical session: Understanding winding patterns.

Module 2: Tools and Equipment for Winding

- Essential tools for winding and rewinding.
- Usage of winding machines and accessories.
- Safety protocols in using winding tools.
- Practical session: Hands-on with winding tools and equipment.

Module 3: Diagnosing Winding Faults

- Common winding issues and their causes.
- Techniques for diagnosing winding faults.
- Analyzing insulation breakdowns and short circuits.
- Practical session: Fault diagnosis in AC and DC motor windings.

Module 4: Preparing for Rewinding

- Motor disassembly and preparation for rewinding.
- Cleaning and inspecting motor components.
- Evaluating the condition of the motor core and armature.
- Practical session: Preparing motors for the rewinding process.

Module 5: AC Motor Rewinding Techniques

- Understanding AC motor winding configurations.
- Step-by-step guide to rewinding AC motors.
- Applying insulation and varnishing techniques.
- Practical session: Rewinding a single-phase AC motor.

Module 6: DC Motor Rewinding Techniques

- Understanding DC motor winding configurations.
- Step-by-step guide to rewinding DC motors.
- Proper placement of brushes and commutators.
- Practical session: Rewinding a shunt-wound DC motor.

Module 7: Insulation and Quality Control

- Types of insulation materials used in winding.
- Techniques for ensuring proper insulation during rewinding.
- Quality control methods for rewound motors.
- Practical session: Insulation testing and quality checks.

Module 8: Rewinding Complex Motor Types

- Rewinding techniques for special motor types (e.g., multi-speed, servo motors).
- Challenges in rewinding complex motor configurations.
- Practical session: Rewinding a multi-speed motor.

Module 9: Testing and Validation of Rewound Motors

- Methods for testing rewound motors.
- Load testing and performance validation.
- Troubleshooting issues in rewound motors.
- Practical session: Performance testing of a rewound motor.

Module 10: Preventive Maintenance for Motor Windings

- Importance of preventive maintenance for motor longevity.
- Techniques for maintaining winding integrity.
- Scheduling and performing routine maintenance.
- Practical session: Preventive maintenance tasks on motors.

Module 11: Evaluation and Certification

- Comprehensive assessment of theoretical knowledge and practical skills.
- Written exams covering automotive mechanics principles and procedures.
- Practical exams on diagnosing, maintaining, and repairing motor vehicles.
- Certification upon successful completion of the course.
- Opportunities for advanced training in specialized automotive systems.

Practical training:

- Winding Analysis: Identifying and analyzing various winding types.
- Disassembly: Safely dismantling motors for inspection.
- Rewinding Process: Step-by-step execution of motor rewinding.
- Winding Techniques: Applying different winding configurations for AC and DC motors.
- Insulation Practices: Ensuring proper insulation during the rewinding process.
- Testing & Validation: Conducting tests to validate the performance of rewound motors.
- Quality Control: Implementing quality control measures in rewinding.
- Field Projects: Working on real-world rewinding projects in an industrial setting.

Career scope:

Upon completing the Winding & Rewinding training course, graduates can explore career opportunities in various sectors, including:

- Motor Rewinding Technician
- Electrical Maintenance Engineer
- Winding Specialist
- Motor Repair Technician
- Industrial Electrician
- Technical Consultant
- Workshop Manager
- Maintenance Supervisor
- Quality Assurance Inspector
- Field Service Engineer

