PERTECNCA'S

MOTOR INSTALLATION & Commissioning training Brochure



Practical training

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COLUMN 1

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MOTOR INSTALLATION & COMMISSIONING TRAINING

The Motor Installation & Commissioning Training Program is designed to provide participants with the essential knowledge and hands-on experience required to install and commission industrial motors effectively. This course covers the entire process, from preparing for motor installation to the final commissioning and testing phases, ensuring motors are ready for operational use. Participants will gain practical skills that are critical for maintaining the reliability and efficiency of motor-driven systems in industrial settings.

What you'll learn?

- Fundamentals of industrial motor installation.
- Pre-installation requirements and site preparation.
- Techniques for safely handling and mounting motors.
- Wiring and electrical connections for motor installation.
- Alignment and leveling of motors with driven equipment.
- Motor testing and troubleshooting before commissioning.
- Steps for motor commissioning and performance verification.
- Safety protocols during motor installation and commissioning..

Course summary:

This training program is essential for technicians and engineers responsible for installing and commissioning motors in industrial environments. The course provides a detailed understanding of the installation process, including alignment, wiring, and testing, to ensure that motors operate efficiently and safely. With a focus on practical applications, participants will learn to handle various challenges associated with motor installation and commissioning. Key Takeaways:

- Mastery of motor installation techniques and best practices.
- Proficiency in commissioning and testing industrial motors.
- In-depth knowledge of safety protocols and compliance standards.
- Preparation for a career in motor installation and commissioning.

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Course syllabus:

Module 1: Introduction to Motor Installation

- Overview of motor installation requirements.
- Understanding motor specifications and installation manuals.
- Tools and equipment needed for motor installation.
- Practical session: Familiarization with installation tools and equipment.

Module 2: Site Preparation and Pre-Installation Checks

- Assessing site conditions and preparing for installation.
- Checking motor foundations and mounting surfaces.
- Verifying electrical supply and connections.
- Practical session: Conducting pre-installation checks on-site.

Module 3: Motor Handling and Mounting Techniques

- Safe handling practices for heavy industrial motors.
- Methods for mounting motors on foundations and frames.
- Using hoists and cranes for motor installation.
- Practical session: Handling and mounting a motor on a foundation.

Module 4: Electrical Wiring and Connections

- Understanding motor wiring diagrams and electrical schematics.
- Connecting motors to power sources and control panels.
- Techniques for securing and protecting electrical connections.
- Practical session: Wiring an industrial motor to a power source.

Module 5: Motor Alignment and Leveling

- Importance of motor alignment with driven equipment.
- Techniques for aligning motors using laser alignment tools.
- Leveling motors to prevent vibration and operational issues.
- Practical session: Aligning and leveling a motor with a pump.

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Module 6: Pre-Commissioning Tests

- Conducting insulation resistance tests on motor windings.
- Checking phase rotation and motor direction.
- Testing motor protection devices and control systems.
- Practical session: Performing pre-commissioning tests on a motor.

Module 7: Motor Commissioning Process

- Steps involved in commissioning an industrial motor.
- Energizing the motor and observing startup behavior.
- Adjusting motor settings for optimal performance.
- Practical session: Commissioning a motor and monitoring its startup.

Module 8: Performance Verification and Troubleshooting

- Verifying motor performance against manufacturer specifications.
- Troubleshooting common issues during and after commissioning.
- Documenting commissioning results and preparing reports.
- Practical session: Verifying motor performance and troubleshooting issues.

Module 9: Safety Protocols in Motor Installation

- Safety measures during motor handling, installation, and commissioning.
- Compliance with industry standards and regulations.
- Emergency procedures and risk management.
- Practical session: Implementing safety protocols during a mock installation.

Module 10: Advanced Installation Techniques

- Installing motors in challenging environments (e.g., hazardous locations).
- Using advanced tools and technology for motor installation.
- Case studies of complex motor installations.
- Practical session: Advanced motor installation in a simulated environment.

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.

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Practical training:

- Pre-Installation Assessment: Evaluating site conditions and motor specifications.
- Motor Handling & Mounting: Techniques for safely handling and mounting motors.
- Electrical Connections: Practical sessions on wiring motors to power sources.
- Alignment Procedures: Hands-on training in aligning motors with driven equipment.
- Motor Testing: Conducting pre-commissioning tests to ensure functionality.
- Commissioning Process: Step-by-step guide to commissioning motors.
- Performance Verification: Testing motor performance post-commissioning.
- Safety Practices: Implementing safety measures during installation and commissioning.

Career scope:

Upon completing the Motor installation & Commissioning training course, graduates can explore career opportunities in various sectors, including:

- Motor Installation Technician
- Commissioning Engineer
- Industrial Electrician
- Maintenance Engineer
- Field Service Technician
- Electrical Installation Supervisor
- Project Engineer
- Technical Consultant
- Operations Engineer
- Quality Assurance Specialist

