



PERTECNCA'S

PUMP REPAIR & MAINTENANCE TRAINING BROCHURE

- ✓ Practical training
- ✓ Post training assistance

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PUMP REPAIR & MAINTENANCE TRAINING

The Pump Repair and Maintenance Training Program is designed to provide participants with in-depth knowledge and practical skills required for repairing and maintaining various types of pumps used in industries such as agriculture, manufacturing, and water management. This program focuses on the fundamentals of pump operation, advanced troubleshooting, repair techniques, and preventive maintenance strategies to ensure pumps operate efficiently and with minimal downtime.

What you'll learn?

- Comprehensive understanding of different pump types and their functions
- Diagnostic techniques for identifying pump failures and issues
- Advanced repair methods for restoring pump functionality
- Preventive maintenance practices to enhance pump lifespan
- Safety protocols and compliance in pump repair and maintenance

Course summary:

This intensive training program covers everything from the basics of pump operation to the most advanced repair techniques. Participants will engage in hands-on learning, focusing on the practical aspects of diagnosing problems, conducting repairs, and implementing maintenance schedules. By the end of the course, participants will have the skills to maintain and repair pumps effectively, reducing operational costs and improving system reliability.

Key Takeaways:

- Mastery of pump repair techniques and maintenance strategies
- Ability to diagnose and solve complex pump-related problems
- Expertise in extending the operational life of pumping systems
- Knowledge of safety standards and industry regulations
- Practical experience in repairing and maintaining various pump types

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Course syllabus:

Module 1: Introduction to Pump Systems

- Overview of pump types: centrifugal, diaphragm, submersible, etc.
- Basic principles of pump operation and fluid dynamics
- Components and functions of common pump systems
- Applications of pumps across different industries

Module 2: Troubleshooting Pump Issues

- Common pump problems: leaks, cavitation, vibration, and more
- Diagnostic tools and techniques for pinpointing issues
- Step-by-step guide to troubleshooting pump systems
- Identifying root causes of pump failures

Module 3: Disassembly and Component Repair

- Safe procedures for disassembling pumps
- Inspection and assessment of pump components: bearings, seals, impellers
- Techniques for repairing worn or damaged parts
- Reassembly and testing of repaired pumps

Module 4: Advanced Pump Repair Techniques

- Welding, machining, and fabrication methods for pump repair
- Reconditioning and upgrading old or obsolete pumps
- Repairing motor-driven and mechanically driven pumps
- Case studies on complex pump repairs

Module 5: Preventive Maintenance Strategies

- Developing preventive maintenance plans for pump systems
- Best practices for regular inspections and maintenance
- Lubrication, seal replacement, and alignment techniques
- Monitoring performance and predicting maintenance needs

Module 6: Energy Efficiency in Pump Maintenance

- Techniques for optimizing pump energy consumption
- Implementing variable frequency drives (VFDs) for speed control
- Upgrading to energy-efficient motors and components
- Assessing and improving the overall efficiency of pump systems

Module 7: Safety Protocols in Pump Repair

- Safety standards for working with pumps and pressurized systems
- Handling hazardous materials during pump repair
- Compliance with industry regulations and guidelines
- Emergency response and shutdown procedures

Module 8: Practical Pump Repair Projects

- Real-world pump repair projects, from start to finish
- Collaboration on diagnosing and repairing a complex pump system
- Hands-on application of advanced repair techniques
- Testing and commissioning repaired pumps

Module 9: Maintenance of Specialized Pumps

- Techniques for maintaining and repairing high-pressure pumps
- Repair and maintenance of submersible and slurry pumps
- Special considerations for pumps in corrosive or abrasive environments
- Handling unique challenges in specialized pump systems

Module 10: Evaluation and Certification

- Comprehensive assessment of technical and practical skills.
- Written exams covering theoretical knowledge of pump systems.
- Practical exams on installation, operation, and maintenance.
- Certification upon successful completion of the course.
- Opportunities for advanced training and specialization.

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Practical training:

- Disassembly & Reassembly: Hands-on experience in taking apart and reassembling pumps.
- Component Repair: Techniques for repairing or replacing critical pump components.
- Troubleshooting: Real-world scenarios for diagnosing and fixing pump failures.
- Preventive Maintenance: Developing and implementing maintenance schedules.
- Efficiency Optimization: Strategies for improving pump performance and efficiency.

Career scope:

Upon completing the Pump repair & maintenance training course, graduates can explore career opportunities in various sectors, including:

- Pump Repair Technician
- Industrial Maintenance Specialist
- Agricultural Equipment Technician
- Water Management Systems Specialist
- Mechanical Maintenance Engineer
- Utility Services Technician



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