



Progressive Cavity Pump (PCP) Oil & Gas Training Course

10 – 21 January 2027
Cairo (Egypt)



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Introduction:

In this progressive cavity pump PCP oil and gas program, participants will explore the fascinating world of PCPs, including their operation, maintenance, and optimization techniques, whether they are seasoned engineers looking to expand their knowledge or newcomers to the field eager to learn. It will equip them with the skills and expertise needed to excel in PCP operations.

Progressive Cavity Pumps, also known as eccentric screw pumps, are widely utilized across various industries for their versatility, efficiency, and reliability. From pumping viscous fluids in the oil and gas sector to handling delicate materials in the food and pharmaceutical industries, PCPs facilitate fluid transfer processes with precision and consistency. Understanding how these pumps operate and how to maintain them is essential for ensuring optimal performance and minimizing downtime.

This progressive cavity pump PCP oil and gas training will help participants gain in-depth knowledge of the PCP design. They will learn how PCPs work through detailed diagrams and theoretical explanations. This understanding is crucial for optimizing pump efficiency and troubleshooting.

This course aims to thoroughly understand Progressive Cavity Pumps PCPs used in the oil and gas industry, covering their design, operation, maintenance, and repair. Participants will learn about PCPs' role in oil and gas applications, optimize PCP performance, manage PCP operations, and become adept at PCP maintenance.

Targeted Groups:

The progressive cavity pump PCP oil and gas training is intended for:

- Progressive Cavity Pump Operators and Technicians.
- Engineers and Technical staff.
- Project Managers and Supervisors.
- Health and Social Care Professionals.
- Training and Development Personnel.
- Cross-Functional Teams.
- New Hires or Entry-Level Employees.
- Executive Leadership.
- Customer Service and Sales Teams.

Training Objectives:

By the end of this progressive cavity pump PCP oil and gas course, the participants will be able to:

- Understand the principles of Progressive Cavity Pump operation.
- Gain proficiency in operating and maintaining Progressive Cavity Pumps.
- Learn about the significance and principles of Person-Centered Planning PCP.
- Develop skills to facilitate person-centered meetings and planning processes.
- Explore opportunities for integrating PCP principles into pump operation tasks.

Targeted Competencies:

At the end of this progressive cavity pump PCP oil and gas training, target competencies will:

- Understand PCP components, including the stator, rotor, and drive shaft.
- Know PCP working principles, such as the progressive cavity design and pumping mechanism.
- Familiar with different types of PCPs and their applications across industries.
- Proficiency in operating PCPs safely and efficiently.
- Ability to perform routine maintenance tasks, such as lubrication and inspection.
- Skill in troubleshooting common PCP issues, such as cavitation and stator wear.
- Understand safety protocols and best practices when working with PCPs.
- Awareness of potential hazards associated with PCP operation and maintenance.
- Ability to identify and mitigate safety risks to prevent accidents and injuries.
- Know advanced techniques for optimizing PCP performance, such as speed adjustment and flow control.
- Ability to implement strategies to enhance PCP efficiency and reliability.
- Skill in maximizing equipment lifespan and minimizing downtime through proactive maintenance.

Course Content:

Unit 1: Introduction to Progressive Cavity Pumps:

- Overview of PCP technology and its applications.
- Importance of PCP in various industries e.g., oil and gas, wastewater treatment.
- Basic components and working principles of a Progressive Cavity Pump.

Unit 2: PCP Components and Maintenance:

- Detailed explanation of PCP components stator, rotor, and driveshaft.
- Maintenance procedures for PCPs, including lubrication and inspection.
- Safety precautions and best practices when operating PCPs.

Unit 3: Hands-on Training and Demonstration:

- Practical demonstration of PCP operation.
- Hands-on exercises for participants to operate and troubleshoot PCPs under supervision.
- Group discussions on common issues and solutions in PCP operation.

Unit 4: Advanced PCP Techniques and Troubleshooting:

- Advanced techniques for optimizing PCP performance.
- Troubleshooting common PCP problems e.g., cavitation, stator wear.
- Case studies and real-life examples illustrating effective PCP operation and maintenance practices.

Unit 5: Introduction to Person-Centered Planning PCP:

- Definition and importance of PCP in various settings e.g., healthcare, social services.
- Key principles of PCP: autonomy, empowerment, individualized support.

Unit 6: Facilitating Person-Centered Meetings:

- Techniques for facilitating person-centered meetings and discussions.
- Active listening skills and empathy in the context of PCP.
- Role-playing exercises to practice facilitating PCP meetings.

Unit 7: Incorporating PCP into Pump Operations:

- Exploring the intersection of PCP principles with PCP operation.
- Identifying opportunities for applying person-centered approaches in pump maintenance and operation.
- Group brainstorming session on integrating PCP principles into daily pump operation tasks.

Unit 8: Case Studies and Best Practices:

- Case studies highlighting successful integration of PCP in pump operations.
- Best practices and lessons learned from organizations implementing PCP principles in their work.
- Strategies for overcoming challenges and resistance to change in adopting PCP approaches.

Unit 9: Practical Application and Assessment:

- Simulation exercises incorporating PCP principles into pump operation scenarios.
- Group projects where participants apply PCP techniques to develop pump operation plans.
- Assessment of participants' understanding and application of PCP principles.