

ELECTRICAL SUBMERSIBLE PUMPS

PRD010

COURSE DESCRIPTION

This course deals with topics related to sucker components and systems of electrical submersible pumps (E.S.P). It covers the development of electrical submersible pumps, outline of systems range, components, completions, variable speed controllers, sizing – implications – data requirements, operation and troubleshooting.

COURSE GOAL

To enhance the participant's knowledge, skills, and abilities necessary to understand the components and systems of electrical submersible pumps (E.S.P)

COURSE OBJECTIVES

By the end of this course, participant will be able to:

- Explain the history and development of electrical submersible pumps.
- Outline of systems range.
- Be familiar with variable speed controllers.
- Understand operation conditions and troubleshooting methods.

WHO SHOULD ATTEND

- Supervisors.
- Production engineers.
- Mechanical engineers.
- S. Operators.

COURSE DURATION

5 Working Days

COURSE OUTLINES

- History & development of electrical submersible pumps.
- Outline of systems range.
- Components.
 - Centrifugal pump.
 - Electrical motor.
 - Seal section.

- Cable.
- Gas separator.
- Controllers.
- Completions.
- Variable speed controllers.
 - Sizing – Implications – Data requirements.
 - High water – Oil ratio.
 - High gas – Oil ratio.
 - Effects of viscosity on ESP's.
 - Productivity index.
 - Inflow performance ratio.
- Operation and troubleshooting.

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