

Well Casing & Cementing Technology

Course general description:

Comprehensive training in well casing design, installation, and cementing operations for oil and gas wells. The course emphasizes industry-best practices and provides guidance on how to address and resolve potential problems

Audience:

This course is designed for:

1. Drilling engineers
2. Completion engineers
3. Well integrity specialists
4. Field supervisors
5. Cementing service providers.

Course objectives:

By end of the course participants will:

1. Master casing design principles
2. Understand cement slurry properties
3. Learn cementing operations procedures
4. Develop troubleshooting skills
5. Apply quality control methods.

Course duration:

5 days

Course location:

Dubai

Course contents:

Day 1: Casing Fundamentals

1. Overview of casing types, functions, API specifications, and material selection.
2. Details on casing connections, thread types, and running procedures.
3. Understanding casing accessories, including float equipment, centralizers, and scratchers.

Day 2: Casing Design

1. Load analysis: burst, collapse, and tension considerations.
2. Design factors, including temperature effects and quality assurance.
3. Well integrity principles and barrier philosophy.

Day 3: Cementing Fundamentals

1. Basics of cement chemistry, slurry properties, and additives.
2. Laboratory testing, quality control, and mix water requirements.
3. Techniques for primary and stage cementing and displacement mechanics.

Day 4: Cementing Operations

1. Job planning, equipment requirements, and pre-job preparation.
2. Cement placement techniques, pressure monitoring, and post-job evaluation.
3. Remedial cementing: squeeze operations and plug placement.

Day 5: Review and Assessment

1. Analysis of case studies for practical application.
2. Problem-solving exercises and final assessment.

Methodology:

- 50% lectures & concepts
- 10% Videos
- 15% Case studies
- 15% Exercises
- 10% Discussions

Course code: (TDRL004)