

# ADVANCED CASING DESIGN



**DRPT113**

**COURSE TITLE**

Advanced Casing Design

**COURSE DATE/VENUE**

03rd – 07th Feb 25'

London, UK

**COURSE REFERENCE**

DRPT113

**COURSE DURATION**

05 Days

**DISCIPLINE**

**Drilling, Reservoir & Petroleum Training**

**COURSE INTRODUCTION**

This 'Advanced Casing Design' course covers the subject related to structural mechanics of down hole tubular. Various topics like material aspects, connection selection, performance properties, load cases, design factors etc. will be covered under the same.

**COURSE OBJECTIVE**

**Upon successful completion of the course, the participants will have ability to:**

- Conduct casing design calculations for different load cases via different methods
- Appreciate the effects of temperature and wear on casing design
- Understand how corrosion can reduce casing life/performance, recognize signs of corrosion

**COURSE AUDIENCE**

- Operation Engineers
- Project Engineers
- Site Drilling Engineers
- Drilling Supervisor

## **COURSE CONTENT**

### **DAY1**

- Introduction to Casing
- Casing Profiles and Drilling Scenarios
- Tubular Range Lengths & Colour Coding
- Mechanical Properties of Steel

### **DAY2**

- Connections, API, Proprietary
- Tension, Compression, Internal Yield Pressure
- Collapse, Yield Strength and threshold
- Fundamental Design Principles

### **DAY3**

- Tubular Selection - Costs, Service Load Cases
- Standard Load Cases
- Service Life Design Load Equations
- Load Capacity Diagrams
- Introduction to TDAS / EXP

### **DAY4**

- Casing Wear, Landing Considerations for Long Strings to Prevent Buckling
- Liner Buckling Due to Set Down (Compression)
- Compression and Burst, String to String Load Transfers, Multi String Affairs, Shock Rebound Loads, Trapped annulus pressure build up, and other trapped fluid concepts
- Well head growth
- Kick Tolerance
- Torque and Drag, Casing floatation, ERD applications
- API Standards Overview

## **DAY5**

### CASE STUDY

## **COURSE CERTIFICATE**

**TRAINIT ACADEMY** will award an internationally recognized certificate(s) for each delegate on completion of training.

## **COURSE FEES**

£5,750 per Delegate. This rate includes participant's manual, Hand-Outs, lunch, coffee/tea on arrival, morning & afternoon of each day.

## **COURSE METHODOLOGY**

The training course will be highly participatory and the course leader will present, guide and facilitate learning, using a range of methods including formal presentation, discussions, sector-specific case studies and exercises. Above all, the course leader will make extensive use of real-life case examples in which he has been personally involved. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Case studies & Practical Exercises
- 10% Role Play
- 10% Videos, Software or Simulators (as applicable) & General Discussions