Best Technology Solutions (BTS)

Topside Jacket Fabrication Works in Major Shipyards

Why Choose this Training Course?

Fabrication and Load-out are two critical phases of any offshore development projects before the sail-away and offshore installation happens. This course aims to provide the participants with a comprehensive overview of Upstream Project Engineering, Fabrication, Erection, Assembly, Lifting, Load-out and Sea-Transportation.

With a good understanding of fabrication, load-out and transportation, the participants will be better prepared to function in the fabrication and construction department, as field and discipline engineers, project engineer, cost estimating engineers, fabrication contract admin executives, CSR, Construction supervisors, or fabrication planning engineer.

This training course will feature:

- Overview of field development planning (FDP) and project management
- Fabrication shop engineering and drawings
- Fabrication techniques

- Cutting and welding
- Blasting and painting
- Erection and assembly techniques
- Cranes and lifting techniques
- Load-out techniques, preparations and ballasting
- Sea-fastening engineering and implementation
- Overview of offshore transportation and marine vessels
- Post-fabrication activities

Training Objectives

What are the Goals?

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

- Understand what entails in field development planning (FDP) and project management
- Understand how the fabrication shop drawings are generated in the fabrication yards

- Understand fabrication, cutting and welding, blasting and painting, erection and assembly techniques in the fabrication yards
- Understand the cranes and lifting techniques
- Understand Erection, Loadout techniques and sea-fastening implementation at Fabrication yards
- Understand the selection of the major support marine vessels and major installation equipment for offshore installation works.
- Fully understand the structure and topsides installation techniques
- Fully understand what are involved in mobilization of marine vessels, construction crew, marine crew and construction equipment

Target Audience

Who is this Training Course for?

This BTS training course is suitable to a wide range of professionals but will greatly benefit:

- Field Engineers
- Construction Supervisors

- Project Engineers
- Operations Engineers
- Work pack Engineers
- Structural Engineers
- Met ocean Engineers
- Pipeline Discipline Engineers
- Subsea Equipment Engineers
- Various Discipline Engineers (structural, piping, equipment, electrical, instrumentation)
- Maintenance Engineers
- Contract Administrators, Buyers and Procurement Executives
- Cost Estimating, Project Control and Planning Engineers
- Managers and executives who are new to fabrication works of Topsides and Jacket fabrication works in shipyards.

- Other Engineers and technicians who need to update their current Oil and Gas industry experience and wanting to move to Offshore Field development Projects

Training Methods

How will this Training Course be presented?

Relevant international and typical client engineering standards will be referred to during the course. Basic engineering formulas and calculations, flowcharts and diagrams will be used to illustrate the principles and steps required for each part of the work. Real-life project examples as well as video clips will be used to demonstrate the fabrication and load-out techniques and to aid the familiarization and learning of the participants.

Daily Agenda

Day One: Introduction to Topsides and Jacket Fabrication Works in Major Shipyards

- Introduction to the fabrication of Topsides and Jacket fabrication Works
- Pre-course assessment test
- Identify and set the expectations of the course participants
- Learning objectives of the fabrication course
- Overview of Field Development Planning (FDP)

- Project Management team (PMT), roles & responsibilities
- Contracting, subcontracting and Procurement activities
- Fabrication yard layout, load-out methods, workshops and major equipment types
- Fabrication loading considerations, foundation preparation and preliminary works

Day Two: Work Involved in Fabrication Phase

- Fabrication Engineering and Calculations
- Planning and scheduling
- Fabrication cost-time-resource (CTR) estimating
- Fabrication, erection and assembly of major structures, substructures
- Pipeline procurement, concrete coatings, pipeline load out and transportation

Day Three: Fabrication Works at the Yards for Topside and Jacket Structures

- Blasting and painting activities
- Fabrication, erection and assembly of topsides and living quarters modules

- Typical manpower and fabrication equipment planning and management
- Skid and Package Equipment
- Procurement,
- Factory Acceptance Testing,
- Delivery, storage and preservation ,
- Installation, site-testing and acceptance
- Yard Pre-Commissioning activities

Day Four: Fabrication of Jacket Structures, Transportation and Loadout

- QA/QC in Fabrication
- HSE in Fabrication
- Weight control and weighing of structures in fabrication
- Jacket commissioning, trial fitting and ship loose items management
- Testing, inspection, NDT, repairs
- Welding and welder qualifications
- Pile and conductors

- Make-up and fabrication
- Transportation arrangement consideration and load out

Day Five: Load-out Planning / Execution / Insurances

- Load-out planning, engineering for substructures and topside
- Load out execution, ballasting techniques and calculation
- Insurances, commercial and warranty surveys
- Post-project activities and learning
- Post-course assessment test