

Technical Training Solution  
Pack 2019



**FEDDO**  
GROUP

Growing your Capability

Technical Training	Field Development	Subsea Systems	Subsea Pipelines	Floating Structures
Marine Risers	Flow Assurance	Advance Engineering	Renewable Energies	Integrity Management

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## 1.0 Introduction

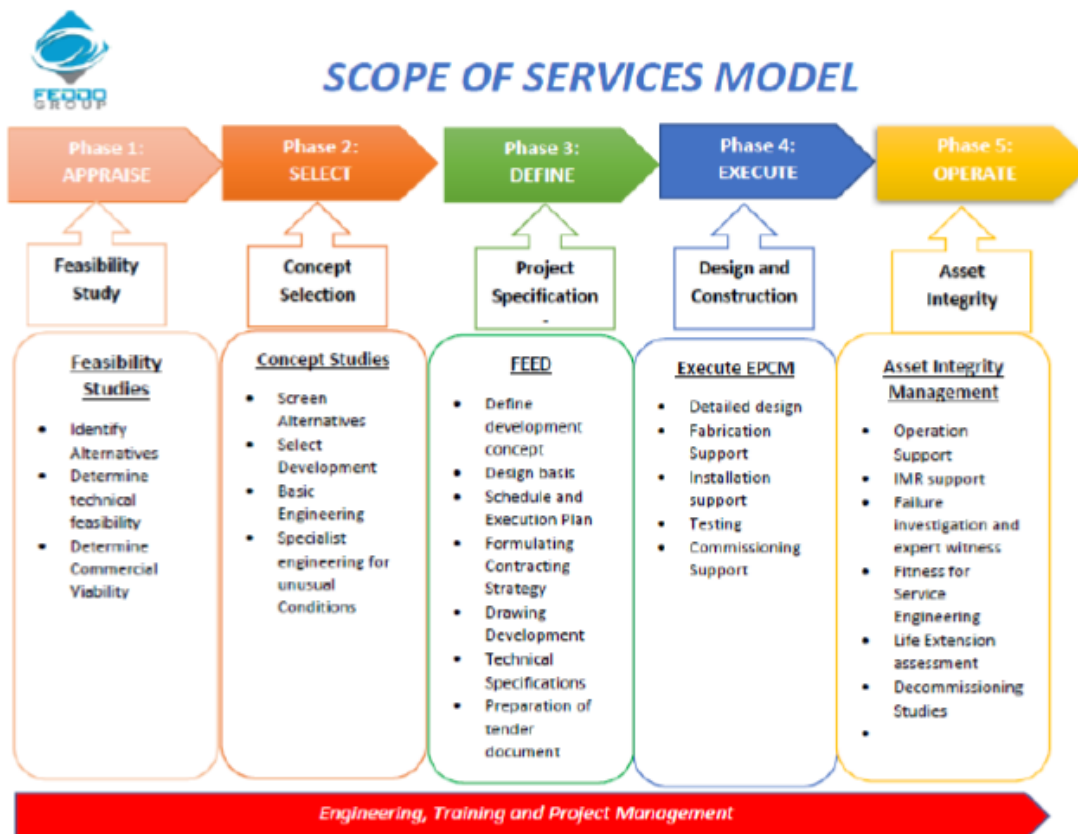
FEDDO Group was established in 2013 as a Global company, registered and headquartered in Australia (Perth)

The main aim is to serve the Energy and Mining sector, providing a range of Consulting Services to the Industry which includes both the Oil & Gas sector, Metal and Minerals and the Renewables sector. FEDDO GROUP specializes in offshore engineering, subsea field developments, subsea and Onshore pipeline systems, integrity management and pigging, life extension, decommissioning, and construction management. We also offer technical training solutions to develop skills and capabilities for the whole life of field covering every aspect of design, operation, integrity management and maintenance.

FEDDO GROUP business model works on a network of regional engineering centres which enable specialised skills, knowledge and expertise to be shared across its global operations.

Our global operational head office is located at Perth, Australia, FEDDO GROUP also has operating offices in Houston, covering the Americas, London, United Kingdom, covering Europe. and apart from these we have commercial presence (Marketing office) in Kuala Lumpur mainly for South east Asia Region; Abu Dhabi targeting Middle East Region.

It is our practice to work with client to turn complex situations into positive practical results, by bringing professional insight to support critical business decisions. We work in all phases of project development from appraise, select, define to execute and operate.



FEDDO GROUP provide system engineering comprising the following disciplines:

- **Technical Training Solution;**
- Field Development;
- Subsea Systems;
- Subsea Pipelines;
- Floating Structures;
- Marine Risers;
- Flow Assurance;
- Advance Engineering;
- Renewable Energies; and
- Asset Integrity Management.

This document provides details of our **Technical Training Solution Pack**



## 2.0 Technical Training Solution

FEDDO courses develop technical skills (e.g. Subsea, Renewable) and capabilities the whole life-of-field. FEDDO courses are interactive with plenty of quizzes, group discussions, case studies, worked examples and exercises.

Some courses also include site visits to give you get first-hand experience of the equipment and components normally only visible on the seabed.

Our courses can be taken in-house, in the classroom, online or through blended learning programmes. Designed with large, global teams in mind

Technical Training Solution Services include the following

- Seminars
- Classes
- Teaching
- Coaching & Mentoring
- Developing a Team for Client

Each training course can be organised for your specific needs and can be offered as follows:

- 1 Day Training: For Senior Management that require a basic understanding of the subject.
- 2-3 Day Training: For Middle Management and Senior Engineers who require sufficient details to provide leadership to their teams.
- 5 Day Training: For hands on details of the subject for Engineers of a range of disciplines that are involved in detailed design and systems operations.
- Developing a team for a client and fully support the team on projects and proposals till maturity, which can range from 1-2years.

Overview of the courses are outline in the following section:



## 3.0 Training Packages

### 3.1 Subsea Systems Design, Installation and Integration Management (5 days)

#### Course Overview

Subsea systems are integral in fitting all the elements of the subsea puzzle together. This Subsea Design and Installations workshop will examine a broad range of technologies relating to offshore oil and gas developments. We will take a close look at typical design considerations, from discovery to commissioning, and get a detailed understanding of the vital role that each element of the system plays. During the workshop we will examine how a typical subsea field develops over the course of time and look at alternative methods to exploit the same resources. Through various case studies we will explore the driving factors which mold the multitude of layouts we see today. We will also examine closely all the various structures that make up the subsea equipment, from Xmas Trees to Manifolds, Flowline Risers, to Umbilical Terminations, and get a good understanding processes which take place subsea. In addition, we will get a good understanding of the benefits, and limitations of subsea processing. Delegates will have full understanding of the industry terminology, learn about market drivers and discuss issues affecting subsea production.

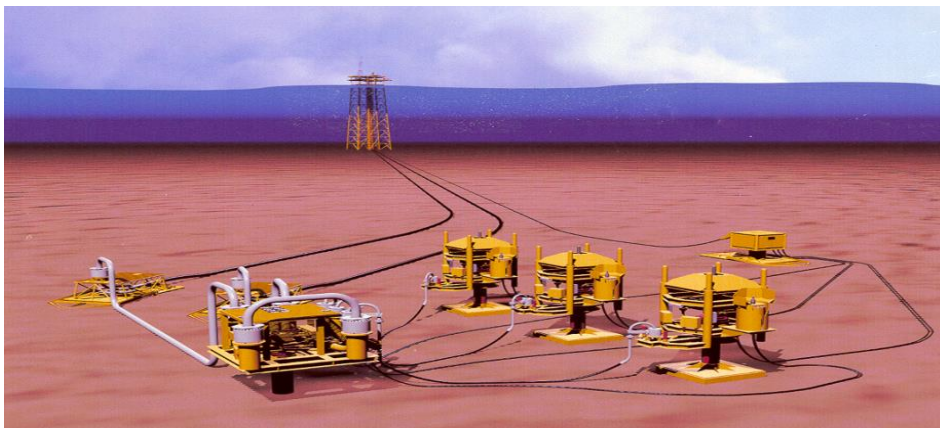
#### Key Objectives

- **Gain** complete overview of subsea production equipment and systems
- **Understand** how subsea systems are designed, installed and operated
- **Analyze** the design and installation of subsea equipment
- **Learn** about the structures and equipment involved in a subsea system
- **Get** the grips with the industry terminology
- **Understand** the technology and processes involved in subsea engineering
- **Analyze** the connection between the well and the above sea surface production facilities
- **Understand** the current development and issues affecting the subsea production around the world
- **Learn** how to remain relevant in subsea market

For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.



### 3.2 Subsea Pipeline Systems Design, Installation and Integrity Management (5 days)

#### Course Overview

This intensive Five-days foundation level course provides an understanding of the lifecycle of a pipeline, from design and construction through to operation. Subsea Pipeline, Flowline and riser link subsea structures to floating systems or shore operation centres and are essential elements of oil and gas offshore developments. Delegates will gain in all key areas including: pipeline design consideration, pipeline routing, hydraulics, mechanical design, pipe manufacturing methods and materials selection, as well as a knowledge of flow assurance, installation methods and pipeline integrity management systems. This course help engineers to understand contractors' output, design houses to apply calculations to projects, and regulation bodies to follow up-to industry codes.

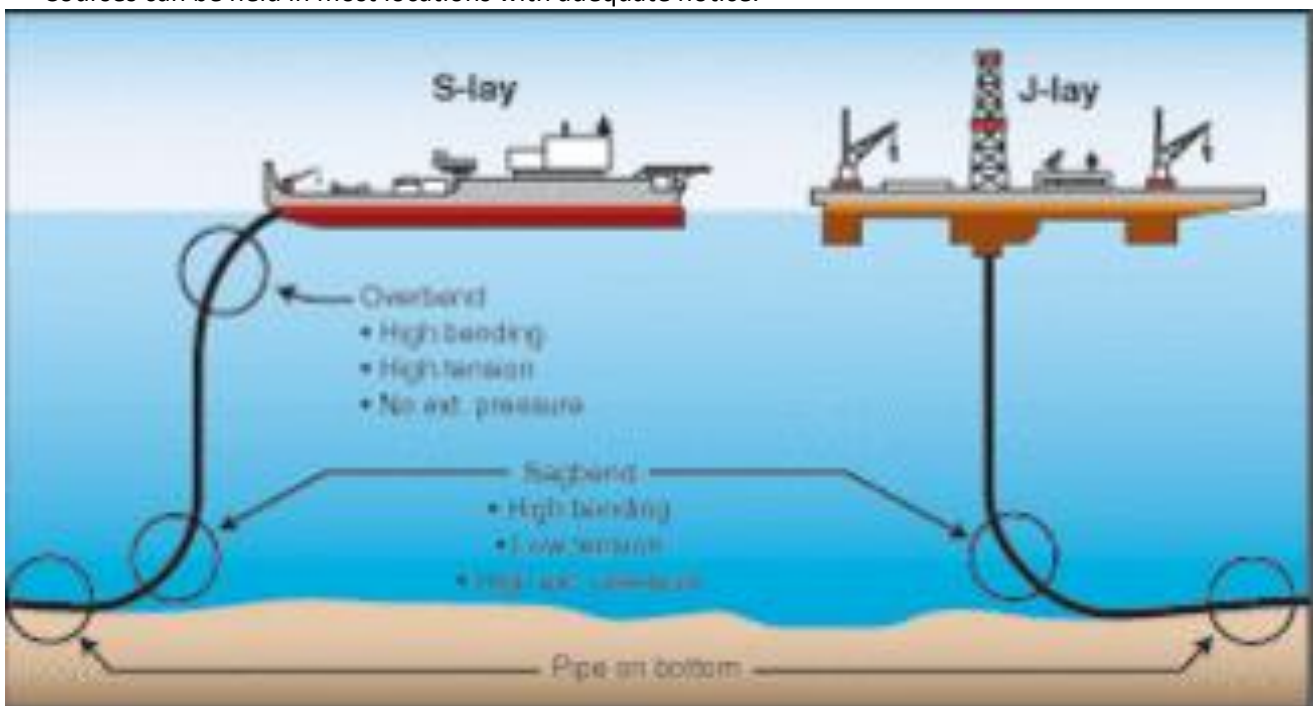
#### Key Objectives

- **Learn** how to apply mechanical and physical principles to all phases of pipeline design, construction, and operation
- **Common** sense methods and technical requirements to define pipeline routes and facilities location
- **Understand** issues affecting design, to appreciate why pipelines are made the way they are
- **Introduction** to pipeline integrity, including flow assurance and inspection
- **Understanding** of manufacturing methods material selection
- **The** importance of fluid properties and process to subsea pipeline systems and construction
- **Applying** safety and environmental regulations for a sound design
- **Practice** calculations based on industry codes

For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.



### 3.3 ASME B31.8 Gas Transmission and Distribution Piping Systems (5 Days)

#### Course Overview

This training course provides the requirements for the design, fabrication, installation, testing and safety aspects of operation and maintenance of gas transmission and distribution piping systems including gas pipelines, gas compressor stations, gas metering and regulation stations, gas mains, and service lines up to the outlet of the customer's meter set assembly.

Furthermore, the requirements of ASME B31.8 applicable to the elements of piping systems, including but not limited to pipe, valves, fittings, flanges, bolting, gaskets, regulators, pressure vessels, pulsation dampeners, and relief valves are exhaustively

During the workshop we will examine Piping System Components and Fabrication; Considerations for material specifications, pipe manufacturing and pipe joining; The pressures design formula for internal and external stress; Construction, Welding, Assembly Inspection and testing; Explain the requirements for Operation and Maintenance; Pipeline repair techniques; Elements of pipeline integrity; Explain the causes and modes of pipeline failure related to internal or external corrosion; Requirements for the offshore pipeline related to materials, inspection, testing, Operation and Maintenance procedures; Requirements for the sour gas service.

#### Key Objectives

- **Define** the scope and application of the ASME B31.8
- **Identify** the design stress and calculate the pipe wall thickness
- **General** Criteria for Piping Components which includes branches, flanges, valves, reducers and Closures
- **Explain** the Materials — General Requirements, acceptance and limitation
- **Gain** more information about the Construction, Welding, and Assembly of gas pipelines
- **Understand** and explain the causes and modes of pipeline failure
- **Identify** the required inspection and testing of the pipelines
- **Receive** the enough information about the Operation and Maintenance Procedures **Affecting** the Safety of the gas transportation Piping Systems
- **Focusing** and learning on the internal and external corrosion monitoring, control and cathodic protection
- **Explain** the Offshore Liquid Pipeline Systems related design construction inspection and testing and Sour Gas Service



For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.



### 3.4 Instrumentation and Control Essentials on Capital Oil and Gas Projects (5 Days)

#### Course Overview

A significant part of every oil/gas facility's project budget is usually spent on the implementation of the plant-wide instrumentation, control and safety system (automation). It is essential that stakeholders get things right from the beginning and also maintain this during the execution of each project, either from the operator, contractor or vendor's point of view. This course highlights the essential requirements, scope of supply and design basis to be included in engaging all design aspects and relevant participants to ensure success. Major instrumentation vendors are discussed with features of a good automation system by using industry examples. How to incorporate legacy systems and state of the art technology for Brownfield and Greenfield projects is described, also, is the essential process of vendor documentation review and engineering approval from concept stage to 'approval to construct'.

Best practices and standard procedures for verification and testing of essential instrumentation equipment and systems, before and after delivery to site is also discussed in detail. The importance of the operators' role during FEED, Detailed Design, Construction, Commissioning & Start-up is also described with practical illustrations and realistic project scenarios.

#### Key Objectives

- **Learning** the roles of a project engineering philosophy and how these translate into company specifications
- **Understand** the major instrumentation system design features and their customisation for facilities projects
- **Understand** the features and the design implications of instrumentation procurement with Major Automation Contractors
- **Learn** how to adopt international regulatory guidelines and templates on instrumentation into locally compatible equivalents
- **Analyse** technical bids, review and produce tabulation reports with clear distinction between commercial and technical items
- **Understand** how to determine non-conformance and acceptable items during the procurement of various instrumentation equipment
- **Learn** the principles of instrument vendor documentation reviews and engineering approval coding to complete design
- **Achieve** proficiency in testing instrument equipment and systems and managing their delivery to site in readiness for operations.
- 



For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.

### 3.5 Subsea Control Systems and Umbilicals (5 Days)

#### Course Overview

With the demand for oil and gas, exploration and production has moved to the harsh environment of the world's oceans. Equipment used below the water's surface must be rugged and reliable in order to meet the process demands and protect the environment. This equipment including the subsea wellhead control system requires specially designed equipment and components in order to withstand this environment. This class will examine the reliability and availability of various control systems and appreciate the issues associated with the design and manufacturing of subsea controls equipment. Subsea Production Control Systems and Umbilicals covers a broad range of activities that include System Types, Typical Equipment's, Operator Interfaces, Control Fluids, Controls Interfaces and a look at Future Technologies. This course is designed to give a clear understanding to delegates of the components of offshore production control technology. Delegates will become familiar with the parts of the system and some of the challenges involved in their installation, repair and maintenance.

#### Key Objectives

- **Understand** subsea production control systems and its principles of operation
- **Identify** the various types of control systems, their advantages and disadvantages
- **Understand** the operation of the major items of master control station, electrical power unit, hydraulic power unit, topside & subsea umbilical terminations etc.
- **Understand** the importance of the hydraulic control fluid
- **Learn** subsea control modules, connections, interface with topside equipment and umbilicals
- **Understand** the field architecture, system design and component selection
- **Analyse** key design and installation issues through case studies
- **Understand** subsea control equipment procurement, maintenance, failures and safeguarding measures

For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.



### 3.6 Piping Flexibility and Stress Analysis (5 Days)

#### Course Overview

Stress analysis is a critical component of piping design through which important parameters such as piping safety, safety of related components and connected equipment and piping deflection can be addressed. It needs good understanding & background in piping layouts, ASME Code requirements & piping design.

Piping Stress Analysis involves examining the flexibility and stiffness of a particular piping system under different loading conditions. Piping stress analysis determines the maximum stresses, displacements, forces & moments at restraints and suggests necessary modifications for satisfying the ASME Code Requirements for limits of sustained, displacement & occasional load allowable stresses.

Stress analysis helps revising the piping layout and its supports to avoid high local stresses. The course will discuss different types of stresses affecting piping flexibility, code criteria, and methods of analysis, including simple & comprehensive methods and computerized methods. The extensive use of case studies and practical exercises during the course of the discussion ensures as comprehensive coverage of the topic as possible.

#### Key Objectives

**Apply** the piping system stress analysis requirements of ASME

**B31.3** to process plant piping systems.

**Understand** how to perform piping flexibility & stress analysis

**Provide** solutions to piping loads.

**Understand** the different Methods Of Analysis

**Limit** piping stresses within the code allowable limits

**Know** different kind of Computer Programs & Analysis Methods



For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.

### 3.7 ASME B31.3 - Piping Design Management (5 Days)

#### Course Overview

This course offers detailed insight of code requirements pertaining to design of Piping components, branch connections, selection of flanges, fittings, flexibility considerations, materials requirements, fabrication, welding, NDT examination and Pressure testing. The course will cover the Piping systems typically used in Petroleum Industries, Refineries, Petrochemical plants etc. The course emphasizes understanding of 'stated' and 'implied' requirements (i.e. content and intent) of the code.

Important code requirements will be explained in a simple, straight forward manner, including the short-cut methods in designing of Pipes, Pipe fitting and Flanges. The participants would be explained in detail the mechanics of adopting and applying the code rules for day-to-day use in their professional work. Lessons are enhanced by actual in-class problem solving, directly applying the rules and equations of the B31.3 Code for various design and operating conditions. This training course is the complete answer to the demands of piping engineers to know the ASME B31.3 Pressure Piping Code and Upon completion of the training course the participant shall be a complete ASME Code Professional.

#### Key Objectives

- **Familiarize** participants with the organization and intent of the B31.3 code
- **Know** how to read the code, and interpret its stated and implied requirements
- **What** issues to take into consideration when designing process piping Pressure design of piping and piping components
- **How** to analyze piping flexibility and gauge the limitations of piping and piping components
- **Provide** participants step-by step approach to piping design, including the design optimization techniques.
- **Introduce** participants with various material selection, fabrication, erection and testing of piping systems.
- **Be** able to understand the mandatory requirements, specific prohibitions and optional stipulations given in the code and other service restrictions on piping systems.
- **How** to conduct and certify the pressure testing.
- **Understand** principles of piping integrity assessments as per API 570 and to make run-repair-replace decisions.
- **Know** how to calculate Remaining life, and MAWP of piping system



For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.

## 3.8 Flow Assurance Training Packages

### 3.8.1 Flow Assurance for Offshore Field Development (5 days)

#### Course Overview

This training course provides not only an introduction into the issue associated with the development of oil and gas fields but also provides an in depth understanding of the issues to be considered in the development of these fields.

The theme throughout this training course is Flow Assurance and Innovative Technologies.

Each day consists of lectures in the morning and a hands-on workshop in the afternoon. The workshop allows the participants to appreciate the design process associated with field developments. Various software will be available during the workshop to predict Multiphase flows through wells, pipelines and risers, as well as evaluating reservoir production profiles using alternative technologies to develop reservoirs. Further software to assess Surge and environmental safety will also be available.

The field design approach will consider an integrated solution through modelling the reservoir decline, wells, flowlines, risers and the host facility.

The participants will have a total appreciation of the methodology required to develop offshore oil and gas fields and have an understanding of all of the Flow Assurance issues and technology requirements.

#### Key Objectives

- **Provide** an understanding of Flow Assurance and issues and their mitigation techniques.
- **An** appreciation of the field design process in consideration to flow assurance through integrating the reservoir to the host facility.
- **An** understanding of the benefits and risks associated with innovative technology application to offshore field development.
- **Provide** hands on workshop sessions to appreciate flow assurance importance in field design infrastructure and operations.
- **To** ensure that the attendees understand and appreciation flow assurance and solution techniques for the design and operation of offshore/onshore fields.

### 3.8.2 Heavy Oil Fields Development and Production (5 days)

This training course provides not only an introduction into the issue associated with the development of oil and gas fields but also provides an in depth understanding of the issues to be considered in the development of this fields.

The theme throughout this training course is Flow Assurance and Innovative Technologies.

Each day consists of lectures in the morning and a hands on workshop in the afternoon. The workshop allows the participants to appreciate the design process associated with field developments. Various software will be available during the workshop to predict Multiphase flows through wells, pipelines and risers, as well as evaluating reservoir production profiles using alternative technologies to develop reservoirs. Further software to assess Surge and environmental safety will also be available.

The field design approach will consider an integrated solution through modelling the reservoir decline, wells, flowlines, risers and the host facility.

The participants will have a total appreciation of the methodology required to develop offshore oil and gas fields and have an understanding of all of the Flow Assurance issues and technology requirements.

### 3.8.3 Designing for Transient Operations in Oil, Gas and Water Pipelines (5 days)

This training course provides not only an introduction into the subject of Gas and Liquids Transients in pipeline operations but also provides an in depth understanding of the mathematical modelling required for the solution of the wave equations.

The theme throughout this training course is operational Flow Assurance for Liquids and Gas pipelines.

Each day consists of lectures in the morning and a hands-on workshop in the afternoon. The workshop allows the participants to appreciate the design process associated with pipeline operations. Various software will be available during the workshop to predict Surge and Gas Transients through pipelines.

Mathematical models are developed from first principles along with their solution techniques.

The participants will have a total appreciation of the methodology required to develop pipeline operating strategies for Gas and Liquids pipelines. and have an understanding of the pipeline Flow Assurance issues and technology requirements.

For Further information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.



### 3.8.4 Environmental Pollution Safety (3 days)

This training course provides not only an introduction into the subject of Atmospheric Pollution Safety in oil-gas operations but also provides an in depth understanding of the mathematical modelling required for the solution of gas dispersion and radiation calculation equations.

Each day consists of lectures in the morning and a hands-on workshop in the afternoon. The workshop allows the participants to appreciate the design process associated with atmospheric dispersion calculations. Various software will be available during the workshop to predict gas dispersion and radiation levels along with recommended practices.

Mathematical models are developed from first principles along with their solution techniques.

The participants will have a total appreciation of the methodology required to develop strategies for Gas dispersion and radiation design for the oil and gas industry.

For Further Information

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.



### 3.9 Renewable Energies Development

This training course provides not only an introduction into the issues associated with the development of Renewable Energies but also provides an in depth understanding of the issues to be considered in the development of these energy systems.

The theme throughout this training course is Renewable Energies and Innovative Technologies.

Each day consists of lectures in the morning and a hands-on workshop in the afternoon. The workshop allows the participants to appreciate the design process associated with renewable energy developments. Various software will be available during the workshop to predict the energy requirements, as well as evaluating the associated systems requirements for each alternative technology.

The energy development approach will consider an integrated solution through modelling the energy requirement and the energy storage requirement.

The participants will have a total appreciation of the methodology required to develop renewable energies for both commercial and domestic applications of renewable energies in order to gain an understanding of all of the renewable energies issues and technology requirements.

**For Further Information:**

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.





### 3.10 Maintenance Contracting and Outsourcing Management (5 days)

#### Workshop Overview

Maintenance contracts are being applied as a highly effective way to manage and control the relationship between the service provider and the end-user, both internally and externally. It manages the expectations of both parties, sets out the parameters of responsibility and offers performance indicators.

This training will ensure that you understand how to decide rationally what maintenance activities to outsource and what's not, how to select the best maintenance contractor and how to evaluate the delivered performance of all parties involved. You will understand the different contract types, get the most from your contracts, avoid the potential pitfalls and improve the performance of your assets. Maintenance contracts used in several branches will be discussed. Through a combination of formal lectures and group work, you will leave the seminar with the tools to improve your contracts and contract management. Experiences from different areas will be discussed. There will be many opportunities for discussion and sharing experiences.

#### Key Objectives

**Learn** how to define service levels and monitor the contractor performance

**Learn** how to develop and negotiate a maintenance contract

**Recognize** the pitfalls

**Understand** how to evaluate the delivered performance of all parties involved

**Learn** how to implement maintenance contract management

**Understand** how to decide rationally what maintenance activities to outsource and what not

**Learn** the features, functions and benefits of lean maintenance contracts

**Understand** the different types of maintenance contracts (incl. Service Level Agreements) and when/how to apply them

### 3.11 Installation Hook Up and Commissioning (3 days)

#### Workshop Overview

Efficient and successful project delivery requires thorough preparation and accurate execution during the contracting, design, procurement, construction, installation & hook-up, commissioning and start-up phases. This course addresses the completions (including installation & hook-up), commissioning and start-up element of project delivery and presents the fundamental details necessary to be adopted by all discipline engineers and project managers.

This course takes delegates through various stages of implementing commissioning work scope from inception of the project through to equipment-at-site stages and eventually to offshore start-up and hand-over to Operations. Various commissioning & hook-up strategies to meet specific project timelines, budgets and construction methods of execution are also covered together with procedures to capture and manage project risks to milestone dates and budgets. An overview of onsite construction management and inspection and test guidelines for all disciplines is also given.

With a good understanding of upstream project hook-up, construction and commissioning, participants will be better prepared to effectively function in the engineering disciplines on offshore projects regardless of the applicable, phase of the engineering project lifecycle.

#### Key Objectives

**Learning** the important definitions and terms related to this essential part of engineering projects

**Understand** the multidiscipline role and scope of completions & commissioning during each phase of project execution

**Understand** the features and the design implications of implementing a corporate 'completions framework' as part of a major project

**Learn** how to write a multi-discipline Project Execution Plan for the Hook-up and commissioning Team

**Analyse** the impact of Design Basis, Contract Types and Constructability on commissioning strategies for each discipline of an offshore project

**Understand** all the necessary workflows and required procedures in developing a completion management system for hook-up and commissioning

**Learn** the important differences in onshore completions and offshore completions for effective project execution

**Achieve** proficiency the use of available modern tools used in the implementation of on-site and off-site hook-up and commissioning

### 3.12 Sub-Surface Training Packages

#### 3.12.1 Well Test, Completions & Subsea Operations - Design & Execution (5 days Series)

FEDDO GROUP is pleased to offer a series of one-day courses on the design & management of well testing, completions and

subsea operations presented by highly experienced engineers in a style and delivery designed to appeal to all knowledge levels

- **Day 1: Well Testing**

A comprehensive introduction to this highly specialised subject. Describing the purpose and value of a well test. We take you through the design process and address the major issues supported with case study's.

- **Day 2: Completions & Subsea**

An in depth discussion of the most important aspects of the engineering and planning involved in completions and Subsea operations. The material covers major hardware such as subsea trees & controls together with the different methods of intervention; we also look at temporary

DST completions and at the critical interfaces including a discussion on compensator lock up and riser stress analysis.

- **Day 3: Subsurface Aspects of Well Test Design**

Designed to show the inputs to well testing and completions from the subsurface perspective. We examine the key aspects for field development, subsurface design objectives, test design, data acquisition and interpretation.

- **Day 4: Wellsite Operations**

What are the elements of successful well test? How is it managed? What are the pitfalls? Well test execution is a complex and hazardous operation. The instructor will step through the process of execution from mobilisation through installation, unloading and production through to well kill, decommissioning and demobilisation with particular emphasis on the hazards at each phase. The afternoon will include a thorough discussion on emergency response.

- **Day 5: Commingled Well Behaviour**

An in-depth examination of the challenges associated with understanding production from multiple layers. This course will demonstrate how to make sensible predictions using available information and how to analyse existing production data in order to optimise production.

Note: Because of the interactive nature of these courses, the agenda may vary for each session

### 3.12.2 Well Test Design & Engineering (5 Days)

This is an intensive course intended for senior, experienced personnel who will be involved with detailed well test engineering and design work. The course focuses on aspects of well test engineering, design and qualification from the reservoir to the flare tip.

The course is facilitated by a highly experienced engineer with over 35 years' experience who is also still very much active in planning, designing and supervising operations.

A comprehensive course reference book is provided to accompany this course. In addition, attendees will be provided access to the in-house well test simulator.

### 3.12.3 Commingled Well Behaviour (2 days)

This course offers an in-depth examination of commingled production, and will help make sense of the often-confusing data gathered from such wells. Presented by the author of SPE Paper

158733 on the analysis of commingled wells, the course will demonstrate how to interpret, model and forecast commingled production.

### Key Objectives

- the relative contributions of layers tend to change with time, or when the choke is changed
- counter-intuitively the most productive layer doesn't necessarily produce the most
- differential depletion develops, leading to crossflow when the well is shut in.
- if the different commingled reservoirs have differing fluid properties, the produced fluid composition varies as the layer rates evolve

#### 3.12.4 Production Log Interpretation

This course addresses production log interpretation using conventional sensors and is intended for professionals with a background in reservoir and petroleum engineering or experienced well test.

Engineers familiar with reservoir concepts. A highly recognized and experienced well test interpretation engineer with over 35 years' experience; who is also still very much active with operations facilitates this course.

#### 3.12.5 Well Test Interpretation

This course is aimed at anyone who has to plan or analyse well tests, or to make use of well test data, from experienced field engineers to reservoir/petroleum engineers and sub-surface and production team members.

This is not a traditional Pressure Transient Analysis (PTA) course. PTA concepts are introduced and the basics of well test analysis are comprehensively covered, but the focus of the course is on how to make sense of all aspects of well test data, how to understand what is going on in the well (as well as the reservoir) during a well test, and on how to plan and design the test in order to meet its objectives.

This course is facilitated by a well known well test interpretation engineer with over 35 years' experience, who is still active in well operations and who has a diverse range of well test experience.

### For Further Information:

Contact: [training@feddogroup.com](mailto:training@feddogroup.com)

Courses can be held in most locations with adequate notice.

## 4.0 Training Facilitators

The following are the profile of some FEDDO GROUP Training Facilitators:

1. **Dare Jeremiah**, a registered engineer with almost 20 years' experience in the oil and gas industry with strong technical background in the consultancy and design of complex subsea system, comprising pipelines, flowlines and associated structures, spools and hardware including Artic, Deepwater and High Pressure/High Temperature Pipeline system. He has an extensive international experience, his project experience includes all project phases and spans most of the major offshore oil and gas production regions, with a particular emphasis on Australia Pacific, Middle East, South East Asia, North Sea and West Africa region.  
Dare holds a B.Sc. from Obafemi Awolowo University and M.Sc. from University of Lagos both in Metallurgical and Materials Engineering, also hold a M.Sc. Degree (Subsea Technology Module) from University of Western Australia. He also hold Master in Business Administration (MBA) from University of Tasmania, Australia.  
Dare is vast in developing, mentoring and training Engineers, he has a passion to share his knowledge and provide major support for engineers in oil and gas industry particularly subsea and pipeline design. He is currently the Chief Executive Officer of FEDDO PTY Ltd, Perth, Western Australia.
  
2. **Gbola Boboye**, a chartered engineer with 15 years' experience in the onshore and offshore oil and gas industry has a strong technical background in the design of Integrated Control and Safety Systems (ICSS) and field instrument engineering and design for major industry players around the world. He has designed instrumentation systems for various types of facilities including – stationary offshore platforms, FPSOs., FSOs, land-based refineries, gas plants for the upstream, mid-stream and downstream sectors of the industry.  
He has extensive international experience and his project scope covers all engineering phases of major offshore oil and gas producing regions including the North Sea, Caspian Region, Middle East, South East Asia and West Africa. Gbola has been employed by and worked on major projects FLOUR, AMEC, Aker Solutions, and KBR  
Gbola holds a MEng (Hons) Degree in Electronic Systems Engineering from The University of Manchester, UK. He is also a chartered member of The Institute of Engineering & Technology (IET) and a registered member of the Institute of Measurement and Control, both from the UK  
Gbola's interpersonal and soft skills fosters an effective approach to mentoring and training Engineers, he has a passion to share his knowledge in order to promote best practices in the implementation of world-leading instrumentation and control systems.
  
3. **Dr Kashmir Johal** has over 35 years' experience in providing specialist training and advisory services for the exploitation and development of Oil & Gas fields. Technical expertise in multi-phase flow dynamics related to the design and operational analysis of subsea facilities systems in the North Sea, Gulf of Mexico and the Middle & Far East.  
Specialist expertise in areas of multi-phase transients hydrates and wax / asphaltenes issues associated with subsea deepwater and onshore field developments. An exceptional academic background and natural leadership abilities are supported by practical experience of diverse projects worldwide, along with numerous publications at key conferences.

Particular interests in developing novel and innovative technologies for subsea applications to solve difficult flow assurance problem areas and improve field development economics.

4. **Nick Last:** has over 30 years' experience having started his oil and gas industry career with Flopetrol-Schlumberger in the North Sea in the 1980's, and subsequently worked with Schlumberger as a well test supervisor, logging engineer, well test interpretation specialist, and as Location Manager in Thailand. Since leaving Schlumberger in 1993 he has become recognized as a regional subject matter expert in well test supervision, pressure transient analysis and production log interpretation. Nick has particular experience in the fluvial, stacked-sand reservoir environment that is widespread in SE Asia and Western Australia; his SPE Paper, Estimating Zonal Gas-in-Place in a Commingled Well Using Results from Production Logs (SPE 158733), addresses methodologies for reservoir characterization in this type of play.
5. **Paul Nardone:** began his career in well testing in the North Sea in the 1985, since then he has accumulated a wealth of knowledge from his experience specializing in well testing and completions operations worldwide. He has written one of the few text books on the subject "Well Testing Project Management: Onshore & Offshore Operations", published by Gulf professional publishing in 2009. He has also written numerous technical articles and presented at SPE and other industry events. Paul is a director of Well Test Knowledge International and consults to a wide range of operators globally. Paul is also an experienced course instructor providing numerous professional training courses internationally.

## 5.0 Testimonials

- *I was overwhelmed with manner at which you impart knowledge and it's a great privilege to be partaker of this Subsea System Course. This training has broadened my knowledge as a Front-End engineer. I cherish your approach and the words of encouragement during and after the training. **Front End Engineer– Shell Malaysia Limited***
- *"FEDDO GROUP is a Subsea Engineering company with core competency and expertise in man power development in Subsea Engineering and Project Management for Subsea operations. The Subsea Engineering Training provided me with end to end solutions ranging from concept definition for Subsea architectural development layout for new and existing subsea projects, subsea assets and subsea production systems, subsea controls, subsea pipelines and structures and subsea installations. Right from the training methodology to the training color coded materials provided by FEDDO; which met and exceeded my expectations. The Trainer (Dare Jeremiah) course knowledge is indescribable and cannot be compared among the equals in the subsea market, FEDDO training methodology is user friendly, adoptable and quick in knowledge transfer even to non-Engineers, Scientists and Designers" - **Senior Engineer – National Petroleum Construction Company UAE***
- *"This course covers most issue on Flow Assurance especially in Deepwater Oil and Gas Development." **SURF Project Engineer, INPEX Corporation***

- *“The training help in improving my knowledge in Flow Assurance and is relevant to my current work” **Researcher, Petronas Research Sdn Bhd***
- *“Ground Breaking topic with good quicklook check lit to help guarantee continuous flow/production” **Senior Engineer, PTTEP***
- *“K.S. Johal is great with lots of fundamental knowledge on Flow Assurance mathematical and formulae derivation. It’s like looking inside of commercial flow assurance software package.” **Reseacher, Petronas***
- *“Nick and Paul give you what you need to confidently supervise and manage a Well Test Operation from a high level. Given their combined years of experience in the area, they walk their talk. Few times I have left a training course feeling so confident and getting exactly what I expected from it. Being run through engineering theory, field application, HSE, operations, equipment, procedures, field tricks and how to read between the lines, clearly tells me that they listened to my expectations when we walked into the room on day 1. Highly recommended! “ **Javier Rhonda (Santos Completions Engineer)***
- *“A very interesting, well structured, contemporary course covering all facets of well test planning, well test objectives, operations and data gathering. I found that all the modules were relevant especially those on the current regulations, process safety, formal safety assessment and competency. The course was well presented by Nick last and Paul Nardone both of whom have many years of practical experience of well testing operations in hostile environments and were able to convey the many concepts discussed in a well organised and informal manner. I would recommend the course to engineers of any discipline wishing to become more familiar with the planning, safety issues, hardware required, and execution of a well test in today’s environment.” **Chris Murray. Field Supervisor, Metrol Technology***
- *This is Albert from Ghana we meet at the Subsea System program in Sydney and I loved every bit of the lecture. Thank you so much for your time, much appreciated. I learnt a lot from the Subsea System in Sydney and also the words of encouragement and support you gave us – **Graduate Petroleum Engineer University of New South Wales, Sydney Australia.***

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