



Training

in offshore Produced Water Treatment technologies, system operation, and maintenance.

Course objective

The course aims to provide fundamental knowledge of offshore produced water treatment processes and technologies for oil removal. The participants are getting familiar with the installed Produced Water Treatment Unit, its operation (including start-up, shutdown, troubleshooting), and maintenance.

Who should attend?

Engineers, operators, and technicians working on production units.

Upon completion of the course, participants will know the following:

- Fundamentals of produced water deoiling
- Principles of cyclones and eductors and their use in water treatment
- Optimal operation of main equipment
- How to monitor performance of process
- Startup and shutdown
- Equipment maintenance and maintenance schedule for the main equipment

Deliverables

- Training documentation
- Training execution
- Workshop participation

Location

Selected NOV training centers or client preference. Training can also be offered online.

Duration

2 days

Contact

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Training course includes

- Training by experienced technology personnel
- 2 days training for up to 10 trainees
- Hard and soft copies of training material in English

Course content

Welcome

- Safety moment
- Review of agenda
- Course objectives
- Introduction of participants and their expectations

Overview of produced water treatment

- Production separators – the first stage of the produced water treatment process
- Fluid properties relevance for system performance
- Operating properties affecting performance of the system
- Production chemistry considerations
- Recycle stream handling

Focusing in on the technologies

- Understanding the details of hydrocyclone separation
- Understanding the details of gas flotation
- Eductors and their application in gas flotation technologies
- Understanding the details of produced water degassing

Project documentation

- Process design basis
- Project and regulatory performance requirements
- Technical and functional description
- Review of process/utility flow diagrams
- Main equipment P&IDs, datasheets, and GAs
- Package layout
- Cause and effects

Operation

- Process safety
- Operational philosophy
- Key modes of operation
- Field instrumentation
- System control philosophy
- Utility consumption index
- Start-up and shutdown
- Troubleshooting

System performance monitoring

- Sample points
- When and where to sample
- Sampling for performance monitoring
- Analytical methods
- Solids and their effect on produced water deoiling
- Problems that can occur

Maintenance

- Inspection and maintenance schedule
- Maintenance procedures
- Material handling
- Spare parts management

Evaluations

- Q&A session
- Review – have the learning objectives been met
- Evaluation of course

