TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000396

PROD003 – Gas Lift

Gas lift is one of the most flexible and cost-effective artificial lift techniques, the success of any gas lift system depends on an adequate and reliable source of lift gas.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

Gas lift is one of the most flexible and cost-effective artificial lift techniques, the success of any gas lift system depends on an adequate and reliable source of lift gas. Injecting gas into the produced flow stream reduces fluid density so the bottomhole pressure will once again lift fluids to the production facility. Reliable, low-cost gas lift systems can extend well life and improve the economics of well development. Gas lift products and solutions include full range of gas lift valves, side pocket mandrels, and tools, including wireline retrievable products, tubing retrievable products, and special application products.

This course covers the design, operation, diagnosis, and optimisation of gas lift systems including a review of gas lift equipment, valve operation and the unloading process. You will gain an appreciation of the key concepts involved in the application of gas lift methods and a practical understanding of their operation and optimisation.

Who it is for and how it helps

This course is designed for production engineers and operations staff responsible for designing gas lift installations and/ or performing surveillance and optimization on wells using gas lift.

What you will learn

- Select the appropriate gas lift systems and equipment
- Design continuous-flow gas lift systems
- Analyze operating gas lift systems
- Increase production from your wells using gas lift technology and optimization
- Improve the economics of gas lift operation

Curriculum

Modules 01–04

01 Gas lift concepts and equipment

- Well and reservoir performance fundamentals
- Oil composition and fluid characterisation
- Gas lift concepts and theory
- Advantage and limitation of gas lift
- Gas lift performance curves and depth of injection
- Multiphase flow and multiphase flow correlations
- Teardown and inspection of gas lift equipment
- Well integrity issues

02 System nodal analysis

- General system analysis
- Inflow performance relationship
- Inflow performance prediction
- Reservoir drive mechanism
- Outflow performance
- Flow pattern
- Stability of flow and minimum lifting rate
- Outflow performance prediction
- Design of tubing

03 Gas Lift equipment

- Gas lift valve component
- Types of gas lift valves
- Checks, latches, and mandrels
- Installation and removal

04 Valves mechanism

- Closing force
- Opening force
- Test rack opening pressure

Curriculum

Modules 04–08 · Module 04 — continued

- Gas passage

05 Fundamental of gas lift design

- Continuous flow gas lift design and re-design
- Effect of temperature
- Intermittent lift methods and design

06 Gas lift system evaluation

- Gas lift survey procedure
- Gas lift survey objective
- Problems and solving

07 Production optimization

- Surging production
- Reasons for surging
- Surging solving
- Optimization curve

08 Trouble shooting gas lift wells

- Gas lift system selection
- Gas rate control and measurement
- Instability and heading
- Analysis and diagnostic techniques
- Well testing for gas lift wells
- Unloading procedures
- New technology in gas lifting systems

Participation and contacts

Joining the programme

Contact the Academy and quote course code 000396 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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