



**WE STRIVE TO CREATE END-TO-END
SOLUTIONS THAT MEET OUR CLIENTS'
NEEDS AND EXCEED THEIR EXPECTATIONS**



5 Day Artificial Lift & Production Optimization



Dr. Rajan N. Chokshi

B.E. Chemical Engineering
M. Tech Chemical Engineering
PhD. Petroleum Engineering

The objective of this course is to:

- Provide an awareness of the fundamentals of production by introducing fluid flow, flow correlations, PVT/Black Oil, and discussing the inflow performance relationship (IPR), vertical lift performance (VLP), nodal analysis, and pressure gradient curves.
- Introduce applications of major forms of artificial lift like gas-lift (GL), reciprocating rod lift (RRL), electrical submersible pumping (ESP), progressing cavity pumping (PCP), hydraulic jet and piston pump (HJP), plunger and capillary injection.
- Provide knowledge to the participants about the entire lift system - from downhole to the surface - and relevant components for GL, RRL, ESP, PCP, HJP, and Plunger.
- Discuss challenges facing lift applications.
- Introduce digital oilfield and related aspects specific to artificial lift.
- Explore the importance of downhole monitoring and surface measurements.

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Artificial Lift & Production Optimization



Ever increasing demands related to cost savings and efficiency improvement require that the existing as well as planned oil and gas production assets are fully and optimally utilized. Since most all oil and gas wells require artificial lift for the majority of their productive life, the artificial lift systems are important part of production operations for the entire lifecycle of an asset. Careful selection, design and operation of artificial lift equipment is extremely important for profitability. Efficient and cost-effective production workflows involve field management using digital oilfield concepts. Understanding of these important production concepts are a must in order to profitably exploit the existing assets to the fullest extent.

WHAT WILL YOU LEARN?	WHO WILL BENEFIT?
<p>On completion of this course you will be able to fully understand the following:</p> <ul style="list-style-type: none">• A thorough treatment of artificial lift techniques for production optimization.• The basics as well as advanced concepts of each form of artificial lift systems from downhole to the surface including real-time optimization equipment and software.• Using appropriate software tools, how lift components are designed and analyzed.• Challenges facing lift applications.• Artificial lift selection and life cycle• How digital oilfield tools help address these challenges. Recent advances in real-time approaches to the production monitoring and lift management from field case studies.	<p>The following oil & gas company personnel will benefit from the knowledge shared in this course.</p> <ul style="list-style-type: none">• Production engineers and field operators• Reservoir engineers• Completion Engineers• Drilling and facilities engineers working in integrated project teams• Anyone who is interested in learning about selection, design, analysis and optimum operation of artificial lift and related production systems.• Project and asset managers interested in expanding their understanding of the effects of artificial lift on the performance of their assets.

**YOUR PARTNER FOR SUCCESS
IN OIL AND GAS INDUSTRY**

Artificial Lift & Production Optimization



SYSTEM ANALYSIS & GAS-LIFT

- Pre-test
- Multiphase flow
- Inflow / Outflow Performance
- Artificial Lift Systems: Basics, Why/What/How.
- Continuous Gas-lift Overview
- Applications, Pluses/Minuses
- Mandrels
- Valves
- Well Performance Curve; Design example
- Troubleshooting & Surveillance
- Optimization Approaches

RECIPROCATING ROD LIFT

- RRL Chain, Pump Motion, Applications, Pluses/Minuses
- Pump
- Dynamometer cards
- Surface Pumping Units
- Rod Strings & Rod Life
- Optimization using RPC, VFD
- Design example
- Special conditions: gas interference, deviated wells, heavy fluids

ELECTRICAL SUBMERSIBLE PUMPS (ESPs)

- ESP Overview, Applications, Pluses/Minuses
- Pump
- Intake
- Gas Separator
- Seal
- Motor
- Cable
- Surface Equipment
- Basic ESP Design
- Well Performance Curve and Design considerations
- Example
- ESP Problems
- Automation

PCP, HYDRAULIC LIFT, GAS WELL DELIQUIFICATION

- PCP Overview, Applications, Pluses/Minuses
- PCP Pump Fundamentals
- Surface Equipment
- System Design considerations, Example
- Alternative configurations

- Hydraulic lift basics; applications, Pluses/minuses
- Pumps
- Surface Equipment
- Non-Traditional Uses
- Gas Well Deliquification Problem

CAPILLARY, PLUNGER LIFT, DIGITAL OIL FIELD

- Capillary applications, pluses/minuses
- Chemical Delivery
- Selection considerations
- Special applications in Shale, long perforations
- Plunger lift applications, pluses/minuses
- Plungers, BHA
- Surface setup
- Selection
- Digital oil field: What & Why
- Components
- Data Management
- DOF Case study
- Artificial lift selection: lift life-cycle and lift changeovers
- Post-test

Move your business in the right direction with the
knowledge and training it takes to succeed

COURSE LEADER



Dr. RAJAN N. CHOKSHI

Dr. Chokshi works as an artificial lift and production 'Optimizer' for Accutant Solutions, a consulting firm out of Houston, USA. He has over 30 years of work experience in petroleum and software industries. He has worked at ONGC of India, The University of Tulsa artificial lift projects, CEALC and ConnectShip (consulting and software firms) and Weatherford (a global service company) in a variety of roles from petroleum engineer, research engineer, software developer, project manager, trainer, senior consultant, and a senior business leader. He has worked on many petroleum and software projects globally in the areas of multi-phase flow, artificial lift, production optimization, well performance improvement and real-time production monitoring.

Dr. Chokshi has taught many courses and conducted workshops for practicing professionals around the globe in public and private forums. He has co-authored over fifteen SPE papers. He has led the development of a semester-long curriculum and taught for senior-level university students in artificial lift and production optimization at Texas Tech and Missouri S&T universities. He led and guided industry experts in developing digital content like animations, iPad app, iBooks and webinars. He has delivered several SPE webinars.

Dr. Chokshi was an SPE Distinguished Lecturer for the 2015-2016 year. He has co-chaired an SPE artificial lift workshop. He serves on the SPE global committees for training and for the production awards.

EDUCATION

- B.E. in Chemical Engineering, Gujarat University, India
- M.Tech. in Chemical Engineering, IIT, Kanpur, India
- Ph.D. in Petroleum Engineering, The University of Tulsa, OK, USA

SELECTED RECENT PUBLICATIONS

- Importance of Downhole Measurements, Visualization and Analysis in Producing Unconventional Wells
- Consideration for Optimizing Artificial Lift in Unconventional
- Service Industry & University Collaboration in Teaching Production Optimization with Artificial Lift
- Unified Mechanistic Model for Steady-State Two-Phase Flow: Horizontal to Vertical Upward Flow
- Experimental Study and the Development of a Mechanistic Model for Two-Phase Flow Through Vertical Tubing

PORTFOLIO OF COURSES

- 1-Day to 5-Days – Artificial Lift and Production Optimization
- 1-Day to 5-Days – Gas-Lift for Production Optimization
- 1-Day to 3-Days – Reciprocating Rod Lift
- 1-Day – Artificial Lift and Digital Oil Field
- 1-Day – Artificial Lift Selection for Shale and Tight Reservoirs
- 1-Day – Reciprocating Rod Lift for Shale and Tight Reservoirs
- 1-Day – Gas-Lift for Shale and Tight Reservoirs

COURSES DELIVERED IN

USA, UK, Canada, Mexico, Venezuela, Colombia, UAE, Kuwait, Saudi Arabia, Oman, Bahrain, Libya, India.

We offer more than Knowledge Sharing.
We offer a partnership to share in
your vision.

Please complete the following Form and e-mail it to mianma@OGKnowledgeShare.com OR Submit the same details via the **Event Registration** on the website www.OGKnowledgeShare.com. We will then send you additional course details along with a detailed course registration Form.

Course Name	<input type="text"/>		
Course Venue	<input type="text"/>	Course Date	<input type="text"/>
Company	<input type="text"/>		
First Name	<input type="text"/>	Last Name	<input type="text"/>
Title	<input type="text"/>		
Email	<input type="text"/>	Phone	<input type="text"/>
Address	<input type="text"/>		
City	<input type="text"/>	State	<input type="text"/>
Postal Code	<input type="text"/>	Country	<input type="text"/>

Full payment is due within 14 days from date of invoice and before the course commences. Delegates will not be allowed entry to the course if any payments are outstanding. A confirmation letter and invoice will be sent to you on receipt of your booking.

You may substitute delegates at any time as long as reasonable advance notice is given to O&G Knowledge Sharing Platform. For any cancellation received in writing not less than twenty (20) working days prior to the date of the training course, you will receive a full refund less US\$ 150 administration fee and any related bank or credit card charges.

Delegates who cancel the registration less than twenty (20) working days of the date of training course, or who do not attend the course, are liable to pay the full course fee and no refunds will be granted.

In the event that KSP cancels or postpones the course for any reason, the delegates will be given choice to (a) request full refund less applicable credit card or bank charges, (b) attend the same course at the rescheduled date at the same or other venue or (c) receive credit note to be used by any employee of the same company for any other course offered by KSP, which must occur within one year from the date of postponement.

COMPANY GAURANTEE

If Company Payment is selected as the Billing Method, an official letter from the company, signed by HR or responsible Management, stating names of the delegates who will attend the course and the total course fee payment guaranteed by the company to be paid within 30 days upon receipt of invoice from KSP shall be submitted ten (10) working days before the start date of the course.

CHARGES AND FEES

1. For Payment by Direct Telegraphic Transfer, client has to bear both local and oversea bank charges.
2. For credit card payment, there is additional 4% credit card processing fee, which shall be added to the course fee.

COURSE FEES & VENUE

Middle East – US\$ 3,500

All Other Locations – US\$ 3,950

The fees is per participant. Hotel accommodation and travel costs are not included in the fees. The Fees includes refreshments, lunch and course material. Course is held preferably in a 5-star hotel. The final venue selection will depend upon the number of delegates attending the course and availability of the venue. All delegates will be informed about the venue two weeks before the course start date.

Providing the resources of a large firm
while maintaining the personalized service
and cost-effectiveness of a small firm.