

## Workshop on

# "Applied Water Technology in Oil and Gas Production Separation Equipment - Selection & Sizing"

5-Days Program

## About Us

We are the training providers and deals in Technical, HSEQ, Management and Soft Skills Training.

We have highly knowledgeable and experienced local & foreign subject matter experts. Our team is highly focused and provides the best support as per your requirements and needs.

We provide a platform from where you can add value in you teams. We are highly fascinated on the development of your Technical and Management Teams.

We can provide on-site and classroom training.

## About Trainer

Dr. Sayed Operations process Trainer/ Assessor (OPITO) certified trainer from American university with over 12 years of experience in Oil & Gas field. He is a highly qualified charter senior process engineer experienced in all phases of the project Life Cycle; namely Feasibility studies, FEED, detailed Engineering, Construction, Commissioning, Start-up, Performance Testing and Plant handover (Green/Brown Fields). Currently he is associated with WASCO-Egypt as Sr. Process Engineer.

He is also a freelance trainer and have delivered over 100s of sessions in different companies like Adnoc, Qatar Gas, Aramco, Dragon Oil, Khalda, Assuit Refinery, TUV, BP, OGS etc. He is a Chartered Engineer from IChemE-UK. He has trained over 1000 of foreign professionals.

## Course Description:

This course provides an overview of the main water handling systems typically encountered in upstream (E&P) production operations, both onshore and offshore. The chemistry of the main water related problems of mineral scales, corrosion, bacteria, and oily water will be reviewed both from the theoretical and practical aspects. Produced water treatment equipment and typical water quality specifications will be reviewed as well as water injection and disposal systems. An exercise will be given to identify typical system problems and you will be able to apply the knowledge you gained to propose solutions. Emphasis will be placed on understanding and resolving operational problems in process equipment.

## Course Objective:

Upon successful completion of this course, the delegates will be able to:

- Understand and learn the basics of oilfield water chemistry
- Monitor and control corrosion, scale, and bacterial growth in produced water and water injection/disposal systems
- Implement system surveillance programs to detect potential problems before system damage occurs Produced (oily) water treatment options and related treatment equipment
- Use the knowledge gained to identify typical system problems and be able to propose solutions

## Training Content:

- Water chemistry fundamentals - Water sampling and analysis
- Fundamentals of Water Chemistry - Water treatment microbiology - Water Scaling - Corrosion and Control

- Environmental Regulations and Water Specifications
- Zero Liquid Discharge (ZLD) - Water formed scales
- Water treatment microbiology - Produced water discharge/disposal and treatment principles
- Calculation of the solubility product and co-precipitation - Scaling calculations first principles - Commercial software I - ScaleChem - Commercial software II - OLI Studio: Corrosion - Corrosion control - Gas flotation systems - Dissolved Air/ Induced Gas/ Dispersed Gas - Key Design Parameters of Flotation / Air-To-Solids Ratio - Calculation of the solubility of BaSO<sub>4</sub>/ Co precipitation of CaSO<sub>4</sub> - Produced water treating equipment -theory of operation, advantages and disadvantages, and the importance of oil droplet size - Desalting Technologies & Equipment - Electro-deionization - Gravity Separation Systems /Separators - 2 and 3 Phase - Skim Tanks / Skim Piles - API Separators - Plate Coalescers - Filtration Technologies & Mechanical filters - Ion exchange & Membrane processes
- Water injection and disposal systems - theory of operation, corrosion, scale, and biological control
- Water injection and disposal systems - theory of operation, corrosion, scale and biological control
- Treatment and Disposal of Produced Water
- Transportation Problems - De-oiling / Soluble organics removal - Desalination / Disinfection - Evaporative processes - Wastewater recycle / reuse - Course Review & Close - Case study

The  
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### Contact Us

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