

ADVANCES IN CHEMICAL ENGINEERING & TECHNOLOGY

April 13th – 16th 2020 Muscat, Oman



Last date for Registration :
31st March 2020

Trainer

Dr. Hussain H Ahmed

MBE, Bsc, MSc, PhD, PGCE,
MSc Eng. Management;
MChemE, MSPE



Dr. Hussain is a qualified petroleum engineer who has both the qualifications and the experiences in dealing and managing risk in oil & gas, petroleum projects and contracts. Dr. Ahmed has over 38 years of petroleum engineering experiences and knowledge both in the field of research, training and lecturing. In the Oil & Gas industry (Upstream & downstream) offshore & on-shore in Europe and the Middle East. BSc in Petroleum Engineering, PhD in Petroleum reservoir Engineering, Heriot-Watt University, Edinburgh. Develop risk templates and risk management procedures for various clients. Coach and mentor personnel in risk management principles and processes using the Bowtie methodology and ISO 31000 standards. "Because of his high standards and best quality services He has been awarded by her majesty the queen by the MBE award" Developed risk management strategies (Risk Manuals) for oil & gas operators to provide guidance on project lifecycle risk assessment, risk profile evaluation and risk reduction. Conduct technical and financial analysis of Liquefied Natural Gas (LNG) storage, distribution and transportation systems. Technical Due Diligence: Calculate CAPEX, OPEX, maintenance, repair and decommissioning costs to ensure accurate valuation of offshore oil & gas assets (e.g. subsea pipelines and platforms). This service is performed for banks during project financing, part payment and repossession of assets. Quantify and analyze business performance improvements and risk reduction following a CAPEX or OPEX decision. One of the objectives of CBA is to evaluate if cost of implementing a solution is grossly disproportionate to level risk reduction achieved. Develop customized risk management solutions to drive the decision making process. One of the objectives of RBDM is to evaluate potential business proposals from risk based perspective. Successfully obtained approval for risk assessment studies for oil & gas facilities from regulatory agencies in Singapore, UK and Norway. Conduct safety studies like HAZID, HAZOP, QRA, Vulnerability Analysis, FERA, SGIA, EERA and TRIA.

Introduction

Chemical Engineering is a branch of engineering which is concerned with the design, construction, and management of factories in which the essential processes consist of chemical reactions, petrochemicals processes, food & drink industry, Pharmaceutical factories, and oil & Gas. Due to the diversity of the materials dealt with, the practice, for more than 50 years, has been to analyse chemical engineering problems in terms of fundamental unit operations or unit processes such as the grinding or pulverising of solids for example. It is the task of the chemical engineer to select and specify the design that will best meet the particular requirements of production and the most appropriate equipment for the new applications.

This short training course will enable the participants to have a better understanding of the processes and operations treated by chemical engineering, the trainees will be gain awareness with regard to the variables of operations and how to control them. There will be many case studies to learn from and to share the experience of qualified chemical engineers.

Objectives

Upon completion of this short course, the participants will learn and understand all terms, treatments operations and processes covered by chemical engineering. They will be able to assess and define the operating variables, they will have a better understanding of how to apply chemical engineering terms, and differentiate between chemical processes and operations. They will also gain knowledge on problem solving and be aware of health and safety issues related to the job of chemical engineers.

Target of audience:

- Chemical Engineers
- Chemists
- Chemical Scientists
- Chemical engineering Students
- Chemical Industries
- Chemical engineering Associations and Societies
- Biochemical engineers
- Polymer engineers
- Chemical Companies
- Petroleum Engineers
- The people who are specialized with geologists, geophysicists, reservoir engineers, production engineers, Chemical Engineers.

Syllabus

Track 1: Chemical Engineering

Sub tracks:

- o Applications of Chemical engineering
- o Plant Utilities
- o Inorganic and Physical Chemistry

Track 2: Catalysis Engineering

Sub tracks:

- o Chemical Kinetics and Catalysis
- o Catalysis and Pyrolysis
- o Catalysis and Zeolites
- o Environmental Catalysis
- o Industrial catalysis

Track 3: Chemical Reaction Engineering

Sub tracks:

- o Electrochemical processes and reactors
- o High pressure technology and processes
- o Multiphase flow and reactors
- o Micro-reactors

Track 4: Process Heat Transfer

Sub tracks:

- o Heat Exchangers
- o Thermal Resistance
- o Climate Engineering
- o Fin (extended surface)
- o Heat Transfer Coefficient
- o Conduction, Convection and Radiation

Track 5: Mass transfer as separation processes

Sub tracks:

- o Drying
- o Extraction
- o Distillations
- o Diffusion MRI
- o Vapor Liquid Equilibrium
- o Absorption and Adsorption
- o Humidification and Air Conditioning
- o Diffusion and Mass Transfer Coefficients
- o Double diffusive convection and Drag force

Track 6: Separation Techniques

Sub tracks:

- o Solid phase extraction chromatography
- o Oil water separation
- o Winnowing
- o Flotation – Dissolved air flotation, Froth Flotation, Deinking

- o Zone refining
- o Elutriation

Track 7: Transport Phenomenon

Sub tracks:

- o Momentum transport
- o Energy transport
- o Mass transport

Track 8: Thermodynamic Process

Sub tracks:

- o Chemical thermodynamics
- o Thermodynamics material science
- o Thermodynamics physics
- o Molecular thermodynamics
- o Applied thermodynamics
- o Modern thermodynamics

Track 9: Fluid Mechanics

Sub tracks:

- o Refrigerators and Air Conditioners
- o Nuclear power plants
- o Heat Engines
- o Operating Various Instruments
- o Hydroelectric Power Plants
- o Thermal Power Plants
- o Fluids as a Renewable Energy Source
- o Hydraulic machines
- o Automobiles

Track 10: Material Sciences

Sub tracks:

- o Material science
- o Material Engineering
- o Material Structure

Track 11: Environmental and sustainable chemical engineering

Sub tracks:

- o Solid waste management
- o Environmental integrated management and policy making
- o Environmental friendly materials
- o Environmental auditing; Environmental impact assessment
- o Environmental economics, policies and management

Track 12: Polymer Technology

Sub tracks:

- o Polymer Material Science and Engineering
- o Applications of Polymers
- o Polymers in Biotechnology, Medicine and Health
- o Polymer Physics

Track 13: Water Technology & Innovations

Sub tracks:

- o Water Treatment Technology
- o Waste water treatment technologies
- o Computer applications in water treatment

Track 14: Biochemical Engineering

Sub tracks:

- o Biochemistry
- o Cell culture Engineering
- o Biochemical and Bio Molecular Engineering
- o Biosensors and Biodevices
- o Environmental Bioengineering
- o Biofuels

Track 15: Petroleum Engineering

Sub tracks:

- o Advances in Petroleum Engineering
- o Petrochemical engineering
- o Fuels and Refining
- o Petroleum Geology
- o Petroleum Engineering and its Industrial Application
- o Petroleum Additives: Synthesis and Application
- o Petroleum Exploration & Field Management

Track 16: Chemical Applications in Producing Oil and Gas

Sub tracks:

- o Enhanced oil recovery
- o Fracturing fluids
- o Oilfield chemistry
- o Chemicals used in oil and gas production
- o Nano-technologies used in oil and gas production

Track 17: Coal and Natural Gas

Sub tracks:

- o Clean coal options
- o Production of SNG from coal
- o Coal processing
- o Oil and gas diversification
- o LNG market - Issues and trends

Track 18: Recent advances in Petrochemistry

Sub tracks:

- o Teaching, Assessment, and Learning in University and Industries
- o Technology, Simulation, and Education
- o Continuing Professional Development
- o Continuing Education

Track 19: Environmental Engineering

Sub tracks:

- o Earth Science and Structure
- o Global Warming
- o Environment and Pollution

Track 20: Crystallization.

Sub tracks:

- o Nucleation
- o Cooling crystallization
- o Evaporative crystallization
- o Industrial crystallization
- o Thermodynamic properties of crystallization
- o Crystallization equipment
- o Unit operations for crystallization

Track 21: Advances in Renewable Chemicals

Sub tracks:

- o Chemical engineering in metal refining
- o Chemistry in nanotechnology
- o Chemistry in computing
- o Biomedical applications of chemical engineering

Track 22: Modelling simulation and optimization

Sub tracks:

- o Simulation
- o Agent-based model
- o Monte Carlo method
- o Individual-Based Models
- o Simulation-based optimization
- o Uncertainty Quantification

Track 23: Electrochemistry and Electrochemical Engineering

Sub tracks:

- o Theoretical and Computational Electrochemistry
- o Physical and Analytical Electrochemistry
- o Photo electrochemistry
- o Electrochemical Energy

Track 24: Health, Safety, and Environment

Sub tracks:

- o Fire Warden Team
- o Safety Committee Members
- o Material Safety Data Sheet
- o Safety Inspections

ADVANCES IN CHEMICAL ENGINEERING & TECHNOLOGY

April 13 th – 16 th 2020 Muscat, Oman

Sales Contract

Event Code: ACET001

Please complete this form and mail to : registration@roycelinks.com

Office: +91 9900920705

Registration Details

Print out this document fill in all fields and send the scanned copy of this form.

☐ Ms: ☐ Mrs: ☐ Mr Surname:..... ☐ Ms: ☐ Mrs: ☐ Mr Surname:.....

Name: Name:

Job Title:..... Job Title:.....

Email: Email :.....

Organization Details

Country:

Organization:..... Phone:.....

Contact Person:..... Fax:.....

Email: Address:.....

City:..... Nature of Business:.....

Country:..... Website:.....

Authorization

Booking is invalid without a signature:

Signatory must be authorized on behalf of contracting organization.:

Name:.....

Date:

Signature:.....

Fees

☐ **USD 4000** per delegate

20 USD Administration Charges will be applied.

Payment Method- Bank Transfer

Terms and Conditions

Registrant substitution is permitted. Cancellations of confirmed registrants must be in writing and received by Royce Links at least (15) days prior to the first day of the event. No refund or credit will be issued for cancellations received (15) days or less prior to the event.

"No-shows" will be billed for the entire registration fee. Royce Links reserves the right to cancel any training event if minimum attendance requirement are not fulfilled.

The payment is due immediate from execution of this sales contract. In the event of the training being postponed, cancelled or abandoned, due to an act of war or terrorism, or for any other cause, beyond the reasonable control of Royce Links Limited. (Any such occurrence, a force majeure event), Royce Links Ltd. shall be under no liability in any way whatsoever, in respect of any expenditure, or any other liability or loss incurred by the client and shall be entitled to retain all sums paid by the client, pursuant to this contract up to such point. Royce Links takes no responsibility for injury to any delegates of clients attending the event.

In the event that Royce Links cancels the event due to internal reasons, a credit note will be provided instead of reimbursement, which is valid for one year as a CREDIT NOTE.