



Under the Patronage of  
**H.E. Bakheet S. Al-Rashidi**  
Minister of Oil & Minister of Electricity & Water  
State of Kuwait

HOSTED BY



البتروك الوطنية  
**KNPC**  
إحدى شركات مؤسسة البترول الكويتية  
A Subsidiary of Kuwait Petroleum Corporation

# GAS COMPRESSION & TREATMENT STATIONS

10 - 11 MARCH 2019 | THE REGENCY HOTEL, STATE OF KUWAIT



Two Days Workshop

CONDUCTED BY



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## WORKSHOP DESCRIPTION

Compressor stations are an integral part of the export gas pipeline network that moves dehydrated gas from individual producing gathering centers to downstream facilities for further processing and/or to the end users. As dehydrated gas moves through a pipeline, distance, friction, and elevation differences slow the movement of the gas, and reduce pressure. Compressor stations are placed strategically within the gathering and transportation pipeline network to help maintain the pressure and flow of gas to market

Associated gas within a gathering system can arrive at a compressor station at a variety of pressures depending on the pressure of the wells feeding the system and the distance gas travels from the wellhead to the compressor through the connected GCs. Regardless of the incoming pressure, the gas must be regulated or compressed to transmission pressures and in some cases, additional equipment needed to filter and remove liquids from the gas stream and perform required pre-conditioning processing before dispatching.

## WORKSHOP OBJECTIVES

Solid knowledge of basic principles of fluid flow characteristic through gas compressors, Optimization of the operation of different types of compressors and turbines for efficient control in safety base behavior. Have an understanding of Centrifugal and positive displacement compressors and their related components

Demonstrate the advantages, limitations, and range of applications for each gas turbine, compression w/wo load sharing control, gas dehydration and condensate treating units. Participants will be able to understand gas compression facilities and exported gas and condensate qualities to meet downstream requirements. Participant is expected to have a good understanding of Gas turbo machinery operating principals, capacity control means, safe guards, operation constrains and limiting factors, guidelines for efficient process units troubleshooting.

## POTENTIAL PARTICIPANTS

Chemical and petroleum engineers involved with the design and operation of gas processing facilities with 2 years' experience in the gas processing. Also for production and processing personnel involved with associated gas mechanical separation, gas & HC liquid dehydration, fuel gas conditioning through dew pointing degree control.

# WORKSHOP PROGRAM

## KOC Gas Compression & Treatment Stations

### Day 1

### Gas Compression station operation & Control

**Module 1** - Introduction to KOC Gas Business

**Module 2** - Overview of GC's up stream gas operation

**Module 3** - Typical Gas booster station arrangement

**Module 4** - Centrifugal Compressor main component

**Module 5** - Comp. Operating Envelop

**Module 6** - Capacity Control means

**Module 7** - Influence of Suction condition on Cent. Comp

**Module 8** - Gas Turbine basic operation

### Day 2

### Gas Turbine & Treatment units

**Module 9** - Gas Turbine main component

**Module 10** - Factors affect gas turbine performance

**Module 11** - TEG Gas Dehydration

**Module 12** - Gas dehydration Troubleshooting

**Module 13** - Condensate Handling Units

**Module 14** - Condensate treatment troubleshooting

**Module 15** - Export gas & condensate quality

**Module 16** - Case Studies

# INSTRUCTOR







**Abdul Rahman Hassan**  
Senior Gas Processing Engineer

Hold B.Sc. and M.S. degrees in gas compression – Turbo machinery, 20 Years of Process Engineering Experience in Various Capacities in Multinational Work Environment (Egypt, Qatar and Kuwait), Experience includes Process Design & Engineering in EPC contracts for Oil & Gas facilities, Hydrocarbon products Pipeline projects and Heavy Duty/Jet Gas Turbine Turbo expander/Turbo Compressor facilities, modernization & retrofit projects. Commissioning , Start-up support & facilities troubleshooting - de-bottlenecking for Oil & Gas facilities , Flare System Design, Project Scheduling, Commissioning, Process Simulation, Project documentation review and Standard Operating procedures generation , Effective participation in HAZOP/HAZID study, Risk Assessment (RA) & RCA technique , having long experience in gas processing and compression facilities , NGL fractionation columns ,LNG specifications, SRU, amine sweetening, gas dehydration using solid/liquid descant, LPG storage & treatment.

## For more information, Please contact:

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