GAS CONDENSATE & FUEL NETWORK

CONTACT US ON:

T: +9717 2042072 | Email: training@maestrouae.net

Website: www.maestrouae.net

TRAINING TITLE

GAS CONDENSATE & FUEL NETWORK

VENUE

Dubai, UAE

DURATION

5 Days

DATES

08 - 12 December 2019

PRICE

US$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet.

TRAINING INTRODUCTION

Gas condensate Design and Operations Development Practices is an intensive course for process engineers to bridge the gap between university education and practical process design and troubleshooting in a short time of five days. After participating in the course, participants will know the most important design practices and will be able to perform the necessary calculations to design and troubleshoot process units. Participants in this course will gain an understanding of fuel gas systems used in oil and gas production facilities.

TRAINING OBJECTIVES

- Vaporizer and steam drum heat balance
- Design pressure, temperature and flange class for all equipment in Stripper system üSize all pipes and nozzles in Stripper feed circuit and list hydraulic cases
- Pressures at all points between a high and low pressure separator
- Size the Stripper feed flow meter, and permanent pressure drop
- Steam consumption in ejector
- Flashing liquid flow rate through a hole in a vessel
- Control valve size in the Stripper feed circuit
- Size and layout of recycle compressor suction drum
- Feed drum elevation from pump NPSH

- Feed pump motor size
- Compressor head, horsepower and outlet temperature
- Number of Stripper feed-bottoms exchangers
- Reliefloadsforthefollowingcases;Firecase,Blockedliquidoutlet,Inletcontrolvalvefailsopen, Steam reboiler tube failure, Fractionator power failure and how the results can be quickly checked for relative accuracy

TRAINING AUDIENCE

- Vaporizer and steam drum heat balance
- Design pressure, temperature and flange class for all equipment in Stripper system size all pipes and nozzles in Stripper feed circuit and list hydraulic cases
- Pressures at all points between a high and low pressure separator
- Flashing liquid flow rate through a hole in a vessel
- Size and layout of recycle compressor suction drum
- Feed drum elevation from pump NPSH
- Feed pump motor size
- Compressor head, horsepower and outlet tem-perature
- Fuel gas system types, safe operation, monitoring, control, and plant safety management requirements found in the oil and gas industry.

TRAINING OUTLINE

Day 1:

- Introduction Simulation
- Methods for performing mass, enthalpy and entropy balances
- Flash calculation principles and common simulation pitfalls
- Vaporizer and steam drum heat balance refreshments and networking design conditions proven and consistent approach in determining design pressure and temperature, and typical mistakes made by inexperienced engineers case study
- Incinerator blockage and flooding workshop
- Design pressure, temperature and flange class for all equipment in stripper system hydraulics

Day 2:

- Piping - Pressure Drop Methods For Liquids, Gases And Two-Phase Flow, Including Flow Regimes Criteria And Methods Used For Insulation, Tracing, Hot Taps And Valving
- Determine pressures at all points between a high and low pressure separator. Flow meters orifice and nozzle sizing and installation, including liquid, gas, two phase flow, permanent pressure drop and flow rate correction methods case study
- Gasoline rundown line sizing
- Degassing system blockage
- Size the stripper feed flow meter, and determine permanent pressure drop
- Determine flashing liquid flow rate through a hole in a vessel control valves.

Day 3:

- Vessel types, sizing and rating, including level configuration, inlet piping and vessel support
- Determine size and layout of recycle compressor suction drum refreshments and networking towers
- Typical tower simulation, efficiency and flooding criteria, including derating factors
- Tray layout and clearances at feeds and draws, including reboiler types and configuration case study
- Typical pump piping, spillback options, seal and warmup systems, stuffing box pressure and NPSH requirements pump drivers
- Pump and motor efficiency, current and horsepower calculations and motor sizing workshop

Day 4:

- Compressor types, capacity control methods, anti-surge controls and head/power calculation methods workshop
- Determine compressor head, horsepower and outlet temperature exchangers
- TEMA types and guidelines, typical pressure drops and u values, effective and approach temperature, winterization and typical layouts case study
- Condensate system backup workshop
- Estimate number of stripper feed-bottoms exchangers heaters

- Heater components, startup and shutdown, dry out, decoking, soot blowing, and typical fuel gas/oil piping layout.

Day 5:

- Fuel Gas Operation
- Flow diagram, P&ID's, and types of fuel gas systems used in oil and gas production facilities.
- Fuel gas system types, safe operation, Process control and monitoring systems
- Fuel gas system supplies treated, dry, gaseous fuel for various fired equipment
- Fuel gas used to provide blanket gas to vessels and to supply gas to the pilots on the flare stack
- Fuel gas system is designed to treat gas in order to meet the requirements of the low-pressure equipment such as gas turbine generator, glycol regenerator system,compressor package, purging, and produced
- Maintenance and inspection

TRAINING CERTIFICATE

MAESTRO CONSULTANTS Certificate of Completion for delegates who attend and complete the training course

METHODOLOGY

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of "real life" issues in their organizations.
The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.