

Introduction



This course aims to achieve a balance between academic theory and practical operations. Learning is achieved through a mix of lectures and case studies. The course creates an experiential learning environment where understanding of the subject is gained through application of knowledge to real world examples.

This course aims towards improving your operational effectiveness through increased awareness in the critical principles of gas plant processing with a focus towards improving operational safety and effectiveness.

Program Designed For

Course Designed For production operators and production supervisors with minimum of 3 years experience.

Duration

5 Days

Your Instructor

Nick Nee

Hans Groot

Minimum Pax

10 Pax



Course Contents



Day 1	Day 2
<p>Gas Composition</p> <ul style="list-style-type: none">• Associated/non-associated gasses, Standard conditions, LNG, NGL, LPG <p>Reservoir</p> <ul style="list-style-type: none">• Formation data: Location, size, volume, permeability Performance data: accurate well testing to define FTHP• CITHP, Fluid temperature, Fluid flow performance Fluid data: accurate sampling is essential to define gas composition (up to C7+, H2S, CO2, N2, H2O, Hg, etc.) <p>Physical Properties</p> <ul style="list-style-type: none">• Phase behavior (single component), retrograde condensation, basic thermodynamics compressibility factors <p>Gas Wells</p> <ul style="list-style-type: none">• Exploration and Development Drilling, Well Completion, Well safeguarding and maintenance	<p>Gas Treatment</p> <ul style="list-style-type: none">• Why treatment: pressure reduction, gas infrastructure, condensation prevention and corrosion prevention• Low temperature separation (LTS) process: Process facilities including process control, JT effect, Refrigeration, Glycol regeneration, discussion of operating problems

Course Contents



Day 3	Day 4
<p>Gas Treatment</p> <ul style="list-style-type: none">• Glycol Absorption process, including glycol regeneration, Process facilities including process control and discussion of operating problems• Case study: define the minimum required lean glycol percentage for an absorption gas plant to achieve a specified water dew point• Adsorption process including process facilities	<p>Gas Treatment</p> <ul style="list-style-type: none">• Gas compression, Gas compressors facilities <p>Gas Transport / Pipeline Operations</p> <ul style="list-style-type: none">• Condensate / water dewpoints, liquid hold-up, corrosion prevention, pigging, pressure drop, Reynolds number

Course Contents



Day 5

Gas Contracts

- First draft prepared by seller, Seller owns metering facilities, Delivery point at downstream flange metering station, Ownership changes at delivery point, Buyer responsible to safeguard his facilities, No liability for seller downstream delivery point, Gas quality: (temperature, pressure, dewpoints, composition, standard test methods)

HSE In Operations

- Permit to work procedure, Safeguarding equipment / facilities, Plant change procedure