Formation - Natural Gas Liquids Extraction

NGL-EN-P | Présentiel | 3 jours

This course provides an advanced review of the techniques involved in natural gas liquids extraction and processing

Niveau

Fondamentaux

Public

Process engineers, involved in advanced Natural Gas Liquids recovery

Objectifs

Attendees will be able to implement the following skills:

- Explain technical issues and specific constraints of natural gas liquids extraction
- Simulate main NGL extraction processes and compare process performances
- Explain NGL specifications and associated treatments

Pédagogie & ressources techniques

- Highly interactive training by industry-specialist lectures
- Process simulation using HYSYS or PROII

Évaluation des acquis

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prérequis

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Programme

NATURAL GAS & NATURAL GAS LIQUIDS PRODUCTION & VALORIZATION — 0.5 day

Field treatment of natural gas, transportation by pipe and associated quality requirements.
Natural gas monetization routes and NGLs markets.

MAIN QUALITY REQUIREMENTS — 0.25 day

Quality requirements for commercial natural gases and associated products (ethane, LPG, condensates) and associated pre-treatment: mercury removal, conversion or adsorption of mercaptans (RSH), etc.

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TECHNOLOGY USED IN THE NGL EXTRACTION UNITS — 0.25 day

Review and main characteristics of the equipment used in the NGL recovery units: plate fine heat exchangers (typical pressure drops), turbo-expander (typical efficiency, acceptable liquid ratio, enthalpy drop), demethanizer (used internals and their efficiency).

NGL RECOVERY WITH CONVENTIONAL PROCESS — 0.5 day

Needed notions of process performances and associated thermodynamics.
Process review.
Case studies:

- Simulation of expansion of a natural gas stream through a valve and a turbo-expander, impact of operating parameters on NGL recovery and products quality.
- Simulation of NGL recovery process with columns, impact of reflux on NGL recovery.

ORTLOFF PROCESS — 0.5 day

Process review.
Case study: simulation of Ortloff process, impact of reflux stream composition on NGL recovery.

CRYOMAX PROCESS — 0.5 day

Process review.
Case study: simulation of Cryomax process, comparison with Ortloff process.

NGL FRACTIONATION & ASSOCIATED TREATMENTS — 0.5 day

NGL fractionation process review.
Case study: simulation of NGL fractionation process with mercaptans, mercaptans mass balance.
NGL needed treatments (Merox or equivalent) and comparison with the adsorption process on the main gas stream.

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Pour vérifier l'accessibilité de cette formation à une personne en situation de handicap, contactez notre référent à l'adresse suivante : referent.handicap@ifptraining.com

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