
Sales Gas Specification Training Course: Dehydration, Dew Point Control and NGL Recovery

18 – 22 January 2027
Trabzon





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Programme Summary

Sales gas specification is the subject of this one-week training course for operations, process and asset leaders at gas plants, ending in a gas plant performance review pack for one plant. Gas that leaves a plant outside its water, hydrocarbon or composition limits is rejected or downgraded, yet the units that control those limits are often run by habit. The programme links dehydration, dew point control, liquids recovery and refrigeration to the specification, applying each tool to a plant of the participant's own. Mars Training Centre UK delivers this programme on sales gas specification to mixed-organisation cohorts.

The Business Case

A gas plant earns by delivering gas that meets a buyer's limits at the lowest running cost. Where sales gas specification is managed by reacting to off-limit readings, plants over-treat, lose recoverable liquids and learn of drift only after a delivery is questioned. Leaders who connect each unit to a measured limit can see where margin is lost and answer buyers with data.

- Delivery Quality: Improves as water and hydrocarbon dew points are held inside agreed limits.
- Liquids Margin: Improves as recovery is matched to feed composition and market need.
- Energy Use: Falls as regeneration, refrigeration and compression duty follow measured demand.

Principles and Evidence Base

- ISO 13686: The standard on natural gas quality designation frames the specification work in Session 1.
- ISO 6327: The method for determining the water dew point of natural gas supports the dehydration work in Session 2.
- ISO 6974: The standard on natural gas composition by gas chromatography underpins the composition and recovery work in Sessions 1 and 3.
- Phase behaviour: Reading dew point and condensation from composition guides the design logic in Sessions 2 to 4.

Intended Participants

- Operations managers who run gas treatment and processing trains.
- Process engineering leaders who set operating windows for dehydration and recovery units.
- Asset managers who answer for plant margin and delivery quality.
- Laboratory leads who report gas composition and dew point.
- Commercial leaders who agree gas quality terms with buyers.

Typical functions include gas processing plants, field production, pipeline gathering and export terminals.



Learning Outcomes

1. Participants will be able to evaluate sales gas specification limits against plant measurements.
2. Participants will be able to diagnose causes of high water dew point in a dehydration unit.
3. Participants will be able to construct operating targets for hydrocarbon dew point control.
4. Participants will be able to assess natural gas liquids recovery against feed composition and value.
5. Participants will be able to prioritise energy and chemical actions by effect on delivery quality.
6. Participants will be able to justify a gas plant performance review to senior management.

Programme Structure

Day 1: Sales Gas Specification and Gas Quality

Which limits must gas meet at delivery, and how are they measured?

- Sales Gas Specification Sheet
- Gas Composition Analysis Review
- Delivery Point Quality Log
- Off-Limit Event Register
- Gas Plant Block Flow Diagram

Day 2: Dehydration and Water Dew Point Control

Why does water carry through a dehydration unit, and how is it found?

- Glycol Dehydration Performance Check
- Molecular Sieve Bed Cycle Review
- Regeneration Duty Assessment
- Water Dew Point Trend Chart
- Hydrate Risk Screening Table

Day 3: Hydrocarbon Dew Point and Liquids Recovery

How is liquid dropout controlled while recoverable liquids are captured?

- Phase Envelope Reading Guide
- Low Temperature Separation Review
- Natural Gas Liquids Recovery Balance
- Fractionation Column Check
- Liquids Value Comparison Table

Day 4: Refrigeration, Compression and Plant Energy

How do refrigeration and compression duty affect quality and running cost?



- Refrigeration Cycle Efficiency Check
- Compression Train Duty Map
- Heat Integration Review
- Plant Energy Use Ledger
- Chemical Loss Log

Day 5: Applying the Tools to One Gas Plant

Do the specification, dew point and recovery tools support one plant review?

- Applying the Session 1 Sales Gas Specification Sheet
- Using the Session 2 Water Dew Point Trend Chart
- Testing the Session 3 Natural Gas Liquids Recovery Balance
- Checking the Session 4 Plant Energy Use Ledger
- Completing the Gas Plant Performance Review Pack

Methodology

The programme uses a case analysis method built on anonymised plant logs, laboratory results, composition data and delivery records from gas processing and treatment sites. Participants work in peer groups on a shared plant, challenge each other's readings and receive written facilitator feedback on each exercise set.

- Suggested activity: Tracing a rise in water dew point from the delivery point back to the unit that caused it.
- Suggested activity: Reading a phase envelope to judge whether liquid dropout is likely.
- Suggested activity: Comparing two recovery settings on liquids value and energy use.

Capstone Output

Each participant completes a gas plant performance review pack for one plant. It holds a sales gas specification sheet, a water dew point trend chart, a liquids recovery balance, an energy use ledger and a ranked action list. The pack is used at work to brief senior management, set operating targets and prepare buyer quality talks.

Frequently Asked Questions

Is sales gas specification suitable for leaders who are not process engineers?

Yes. Sales gas specification assumes some operations, asset or commercial experience and builds dew point and recovery reasoning step by step.



Which standards does sales gas specification rest on?

Sales gas specification rests on ISO 13686 for gas quality, ISO 6327 for water dew point and ISO 6974 for composition by gas chromatography.

How is the pack from sales gas specification used at work?

You use the gas plant performance review pack to brief senior management, set operating targets and prepare buyer quality talks.

How does sales gas specification differ from general gas plant operations training?

Sales gas specification centres on holding delivered gas inside quality limits, while general gas plant operations training centres on start-up, shutdown and routine running.