

A worker wearing a white hard hat and a dark jacket is standing in an industrial facility, looking at a tablet. The background is filled with complex machinery, including pipes, valves, and large cylindrical tanks, all in shades of grey and orange. The scene is dimly lit, with a blueish tint.

NATURAL GAS

Proven technologies for critical measurements

With extensive experience and continuous product development, AMETEK Process Instruments provides a comprehensive portfolio of specialized solutions, utilizing advanced technologies to provide vital analysis across the full range of natural gas processes.

From drilling to gas processing and transmission to the production of liquefied natural gas (LNG), we have the process instrumentation to ensure natural gas meets quality specifications and tariff requirements for gas treating, processing, transmission, and end use as a fuel or feedstock.

To find out more or request a quote, visit our website today

931/932

MEASURES: H₂S, Optional COS, CS₂, NH₃, SO₂, H₂, CO₂

RANGE

H₂S: ppmv ranges to high percent levels
H₂: 0 to 5% or 0 to 10%
Other components and ranges are available upon request

ACCURACY

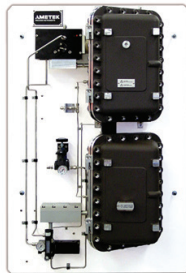
Standard range (UV): ±1% of full scale
Optional (TCD) H₂ sensor for TGTU applications: ±2% on a 0 to 10% range; ±4% on a 0 to 5% range
Optional (IR) sensor for THC, CO₂: application specific, consult factory

PROCESS

Drilling Wells, Sweetening, Transmission Pipelines, Underground Storage, LNG

APPLICATION

Amine and Glycol Contactor Efficiency, Transmission Sales Gas Quality, Custody Transfer Tariff Limits, Feed Gas Quality for LNG Liquefaction



TECHNOLOGY: UV/TCD/IR

933

MEASURES: H₂S, COS, CH₃SH

RANGE

H₂S: 0 to 3 ppmv min.; 0 to 100 ppmv max.
COS: 0 to 15 ppmv min.; 0 to 500 ppmv max.
MeSH: 0 to 9 ppmv min.; 0 to 250 ppmv max.

ACCURACY

Standard range: ±2% of full scale
Low range: ±5% of full scale

PROCESS

Sweetening, Transmission Pipelines, LNG, Underground Storage

APPLICATION

Amine and Glycol Contactor Efficiency, Transmission Sales Gas Quality, Custody Transfer Tariff Limits, Feed Gas Quality for LNG Liquefaction



TECHNOLOGY: UV/IR

5100P

MEASURES: Moisture

RANGE

0 to 2500 ppmv

ACCURACY

±4 ppmv, or ±2% of reading, whichever is greater

PROCESS

Dehydration, Transmission Pipelines, Underground Storage

APPLICATION

Glycol Contactor Efficiency, Transmission Sales Gas Quality, Custody Transfer Tariff Limits



TECHNOLOGY: TDLAS

5100HD

MEASURES: CO, CO₂, O₂, H₂O, H₂S

RANGE

H₂O: 0.25 to 60 lbs
CO₂: 0-50 ppmv to 0-100%
H₂S: 0-300 ppmv to 0-100%

ACCURACY

H₂O: ±4 ppmv or ±2% of reading, whichever is greater
CO₂: range dependent
H₂S: range dependent

PROCESS

Dehydration, Sweetening, Transmission Pipelines, Underground Storage, LNG

APPLICATION

Amine and Glycol Contactor Efficiency, Transmission Sales Gas Quality, Custody Transfer Tariff Limits, Feed Gas Quality for LNG Liquefaction



TECHNOLOGY: TDLAS

5100

MEASURES: CO₂, H₂O, H₂S

RANGE

0.25-60 lb/MMscf/4-1900 mg/m³
(5 to 2500 ppmv)
Other ranges available

ACCURACY

±4 ppmv or ±2% of reading,
whichever is greater

PROCESS

Sweetening, Dehydration,
Transmission Pipelines,
Underground Storage

APPLICATION

Amine and Glycol Contactor
Efficiency, Transmission Sales Gas
Quality, Custody Transfer Tariff Limits



TECHNOLOGY: TDLAS

241CE II

MEASURES: Hydrocarbon
Dew Point Temperature

RANGE

Cooling capability: Typically 60°C
below the temperature at the
analyzer installation
Highest measurable dew point:
Application dependent, typically
15°C below the temperature at
the analyzer installation

ACCURACY

Hydrocarbon dew point
temperature ±1°C

PROCESS

Dehydration, Drilling/Wells,
Transmission Pipelines, LPG & NGL
Fractionation

APPLICATION

Glycol Contactor Efficiency,
Dryer Efficiency & Breakthrough,
Custody Transfer Tariff Limits,
Liquids Separation



TECHNOLOGY: Chilled Mirror

Chanscope II

MEASURES: H₂O and
Hydrocarbon Dew Point
Temperature

RANGE

Dew point temperature ranges:
-29°C to ambient, with liquid
propane; -62°C to ambient, with
liquid carbon dioxide; -129°C to
ambient, with optional liquid
nitrogen chiller

ACCURACY

±0.2°C at 40°C to -90°C

PROCESS

Dehydration, Transmission
Pipelines, LPG & NGL
Fractionation, Underground
Storage, Drilling/Wells

APPLICATION

Glycol Contactor Efficiency,
Transmission Sales Gas Quality,
Custody Transfer Tariff Limits,
Liquids Separation



TECHNOLOGY: Chilled Mirror

Model 13

MEASURES: H₂O and Hydrocarbon
Dew Point Temperature

RANGE

Dew point temperature
range dependent on which
thermometer is chosen

ACCURACY

±0.25°C

PROCESS

Dehydration, Transmission
Pipelines, LPG & NGL
Fractionation, Underground
Storage, Drilling/Wells

APPLICATION

Glycol Contactor Efficiency,
Transmission Sales Gas Quality,
Custody Transfer Tariff Limits,
Liquids Separation



TECHNOLOGY: Chilled Mirror

3050-OLV

MEASURES: H₂O

RANGE

0.1 to 2,500 ppmv
Readout capability in ppmw, lb/mmscf, mg/Nm³, and dew point temperature in °C or °F (requires process pressure as an input)

ACCURACY

±0.1 ppmv or ±10% of reading, whichever is greater

PROCESS

Dehydration, Transmission Pipelines, Underground Storage

APPLICATION

Glycol Contactor Efficiency, Transmission Sales Gas Quality, Custody Transfer Tariff Limits



TECHNOLOGY: QCM

3050-SLR

MEASURES: H₂O

RANGE

0.1 to 100 ppmv.
Readout capability in ppmw, lb/mmscf, mg/Nm³, and dew point temperature in °C or °F (requires process pressure as an input)

ACCURACY

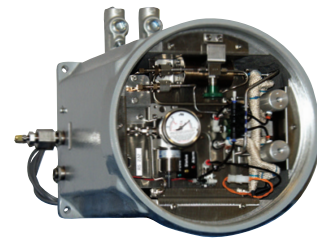
±0.03 ppmv or ±10% of reading, whichever is greater

PROCESS

Dehydration, Transmission Pipelines, LNG

APPLICATION

Glycol Contactor Efficiency, Dryer Efficiency & Breakthrough, Custody Transfer Tariff Limits, Feed Gas Quality for LNG Liquefaction



TECHNOLOGY: QCM

3050-DO

MEASURES: H₂O

RANGE

0.02 to 100 ppmv
Readout capability in ppmw, lb/mmscf, mg/Nm³, and dew point temperature in °C or °F (requires process pressure as an input)

ACCURACY

±0.02 ppmv or ±10% of reading, whichever is greater

PROCESS

Dehydration, LPG & NGL Fractionation, LNG

APPLICATION

Dryer Efficiency and Breakthrough



TECHNOLOGY: QCM

3050-TE

MEASURES: H₂O

RANGE

0.01 to 100 ppmv
Readout capability in ppmw, lb/mmscf, mg/Nm³, and dew point temperature in °C or °F (requires process pressure as an input)

ACCURACY

±0.01 ppmv or ±10% of reading, whichever is greater

PROCESS

LNG, LPG & NGL Fractionation

APPLICATION

Feed Gas Quality to Turbo Expander



TECHNOLOGY: QCM

303B

MEASURES: H₂O

RANGE

0 to 1000 ppmv
(0-2000 ppmv range with reduced sample flow)

ACCURACY

±0.5 ppmv or ±5.0% of reading, whichever is greater

PROCESS

Dehydration, Transmission Pipelines, Underground Storage, LNG

APPLICATION

Glycol Contactor Efficiency, Transmission Sales Gas Quality, Custody Transfer Tariff Limits, Feed Gas Quality for LNG Liquefaction



TECHNOLOGY: P₂O₅

IPS-4

MEASURES: HC, NH₃, H₂O, CO₂, Cl₂, FeCl₃, CH₃I, SO₂, H₂S, NO, NO₂, ClO₂, NOx, H₂S in rich amine, ASTM color standards, Bisphenol-A, Ethylene Glycol

RANGE

ppmv/ppmw to 100%, application dependent

ACCURACY

UV: ±1% of full scale range
IR: ±2% of full scale range
Dual Bench: ±2% of full scale typical

PROCESS

Gas Sweetening

APPLICATION

Rich Amine



TECHNOLOGY: UV/NDIR