

Fast, Accurate, And Reliable Continuous Analysis Of Your Natural Gas Impurities

As sources of Natural gas become more diversified i.e. Shale Gas, LNG, and Bio-gas operators must be able to ensure the composition of gas delivered – and received – is of sufficient quality per contractual agreements and pipeline quality and safety requirements. The increasing variability of the gas quality means that there is a greater need to measure the gas contaminants fast and accurately, often in remote locations with no on-site operators or maintenance personnel.

Cascade QCL/TDL Solution

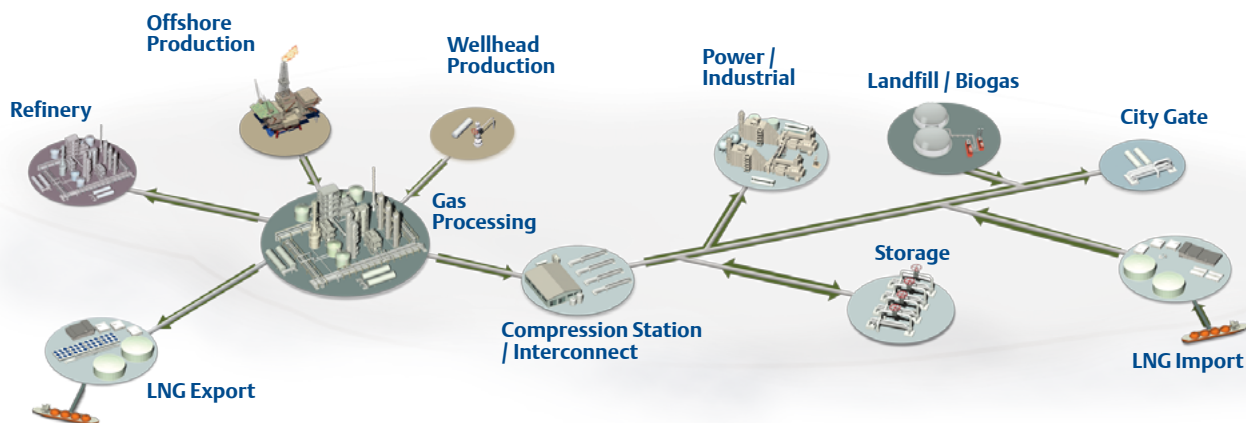
The Rosemount CT5800 QCL/TDL analyzer provides rapid, reliable, and high accurate measurement of the gas sample stream to provide real time data of natural gas impurities. The unique design provides highly accurate measurement of very low concentrations of multiple impurities in the natural gas. The device can have up to six Quantum Cascade Lasers or Tunable Diode Lasers to measure multiple combinations of your natural gas impurities i.e. H₂O, H₂S, and CO₂ simultaneously in a single analyzer.

Applications

- Offshore/Onshore Production Sites
- Gas Processing
- Custody Transfer Points
- Storage Facilities
- Distribution Network

Features and Benefits

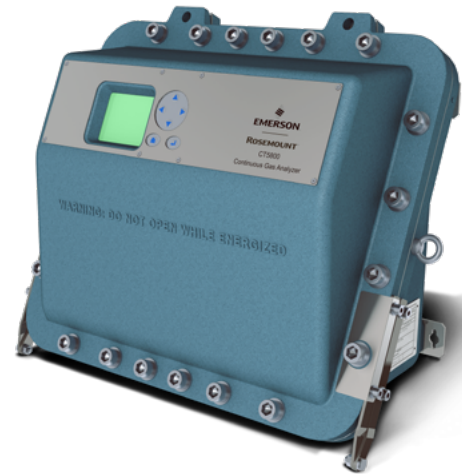
- Rapid, indirect, and interference-free surveillance and detection of impurities such as H₂O, H₂S, and CO₂ in the natural gas stream
- Complete sample cell refresh every 15 seconds, based on typical 5 liters per minute flowrate.
- Unmatched sensitivity detects trace impurities with sub ppm detection limits
- Inherently stable spectroscopic technique means outstanding reliability and stability in the most extreme of conditions
- Field mountable eliminating the need for expensive analyzer shelters and minimizes sample transport line
- No consumables and no calibration reduces cost and simplifies maintenance and upgrades
- Interchangeable modular configuration for up to six lasers
- Flameproof enclosure certified for hazardous areas
- Emerson sample handling expertise ensures the gas sample is representative and delivered timely to the analyzer



Specifications

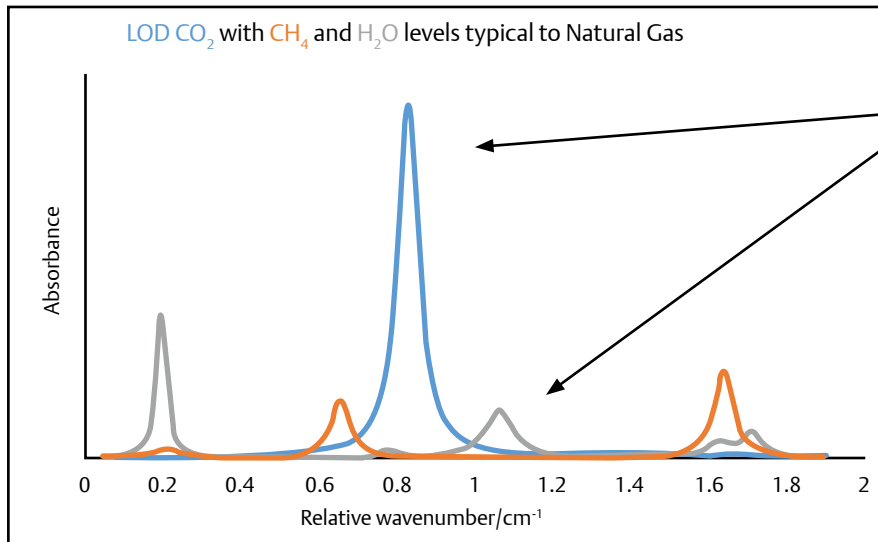
Typical Measurements - Outlet				
Components	Range ¹	LOD	UOM	Repeatability ²
H ₂ O	0-2500	5.0	ppm vol	+/- 1%
CO ₂	0-20	0.04	% vol	+/- 1%
H ₂ S (typical)	0-100	2.5	ppm vol	+/- 1%
H ₂ S (extended)	0-5000	2.5	ppm vol	+/- 1%

1 Components and ranges are indicative. Detailed specs will be provided during the ordering process.
 2 Repeatability +/- 1% of reading or the Limit of Detection (LOD), whichever is greater



LASER CHIRP TECHNIQUE – MULTIPLE MEASUREMENTS IN A SINGLE SYSTEM

Quantum Cascade Lasers are fabricated to emit light at a desired wavelength and operated using a laser chirp technique. The detector single is converted into a spectrum and the concentration of analytes is calculated.



Conversion into absorbance using Beer-Lambert law returns absolute measurements with no need for calibration

Lasers are chirped continuously scanning a spectrum of 1-3 wavenumbers in < 1 us

More than one compound can be measured in the wavelength region selected

Distinct and well differentiated absorption features of the gases minimises cross interference issues

Standard Terms and Conditions of Sale can be found on the [Terms and Conditions of Sale page](#).
 The Emerson logo is a trademark and service mark of Emerson Electric Co.
 Rosemount and Rosemount logotype are trademarks of Emerson.
 All other marks are the property of their respective owners.
 © 2017 Emerson. All rights reserved.

- [Linkedin.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)
- [Twitter.com/Rosemount_News](https://twitter.com/Rosemount_News)
- [Facebook.com/Rosemount](https://www.facebook.com/Rosemount)
- [Youtube.com/user/RosemountMeasurement](https://www.youtube.com/user/RosemountMeasurement)
- [Google.com/+RosemountMeasurement](https://plus.google.com/+RosemountMeasurement)

North America

Emerson Automation Solutions
 10241 West Little York, Suite 200
 Houston, Texas 77040 USA
 Toll Free + 866 422 3683
 T + 713 396 8880
 F + 713 466 8175
 QCL.CSC@Emerson.com

Europe Regional Office

Emerson Automation Solutions AG
 Blegistrasse 21
 CH-6341 Baar-Walterswil
 Switzerland
 T + 41 41 768 6111
 T + 41 41 761 8740
 QCL.CSC@Emerson.com

Middle East and Africa Regional Office

Emerson Automation Solutions
 Emerson FZE
 Jebel Ali Free Zone
 Dubai, UAE
 P.O.Box 17033
 T + 971 4 811 8100
 F + 971 4 886 5465
 QCL.CSC@Emerson.com

Asia Pacific Regional Office

Emerson Automation Solutions
 Asia Pacific Private Ltd
 1 Pandan Crescent
 Singapore 0512
 Singapore
 T + 65 777 8211
 F + 65 777 0947
 QCL.CSC@Emerson.com

QCL-ADS-Continuous-Analysis-Natural-Gas-Impurities