

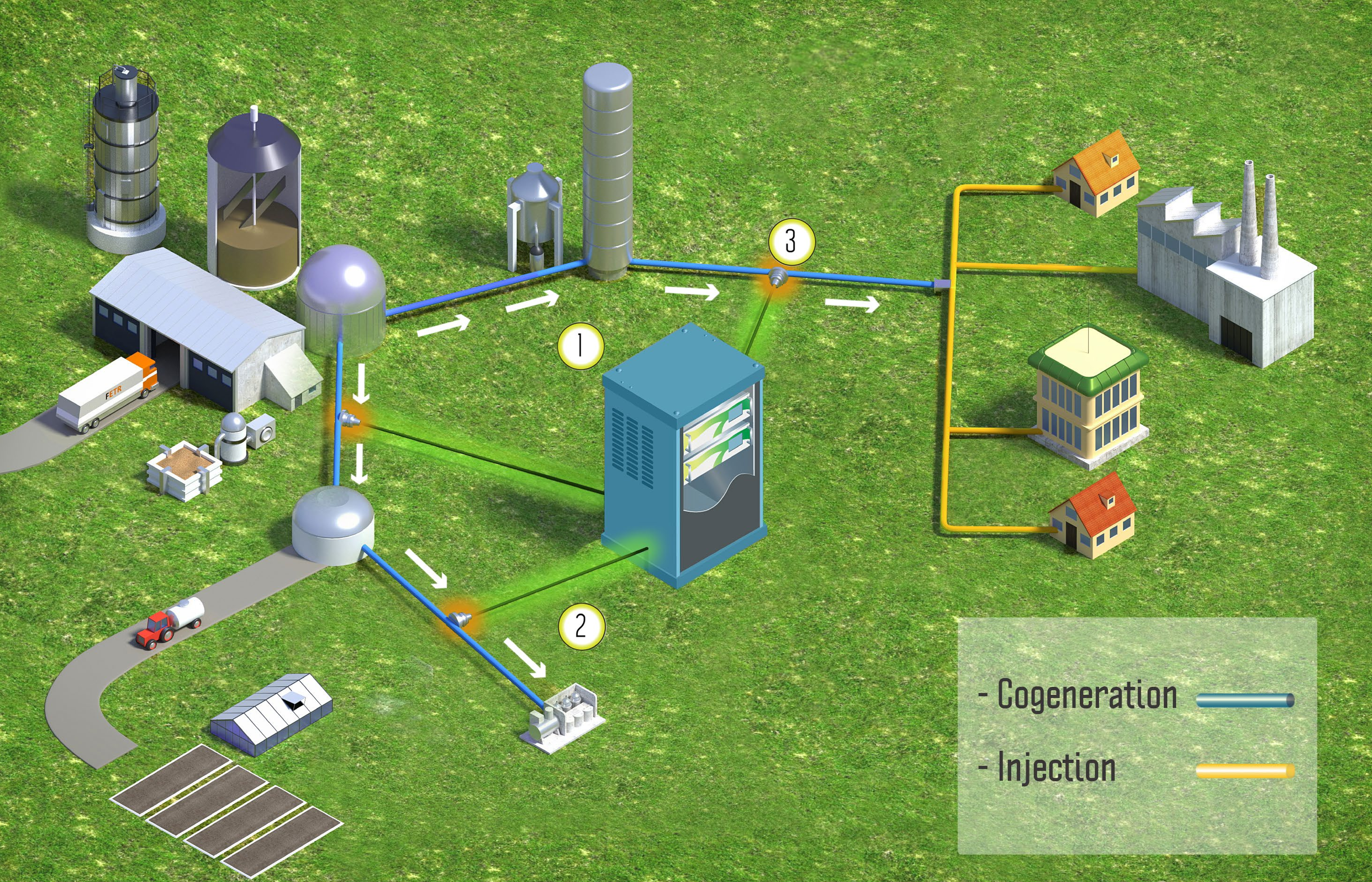


APPLICATION NOTE



ProCeas® THE NEW GENERATION OF BIOGAS ANALYZERS

-  High resolution and accuracy of measurements
-  Low maintenance and utilities costs & no drift and cross interferences
-  Fast response time

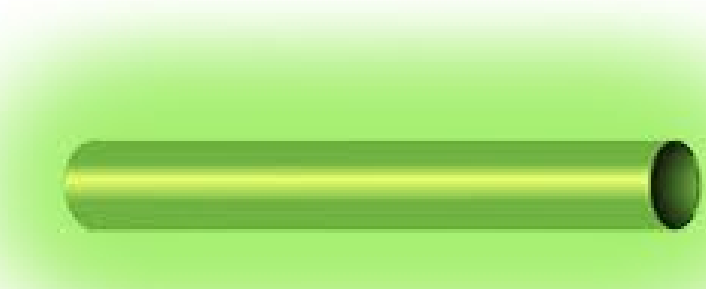


1



ProCees

2



Sampling Line

3



Sonic Nozzle

- Cogeneration



- Injection

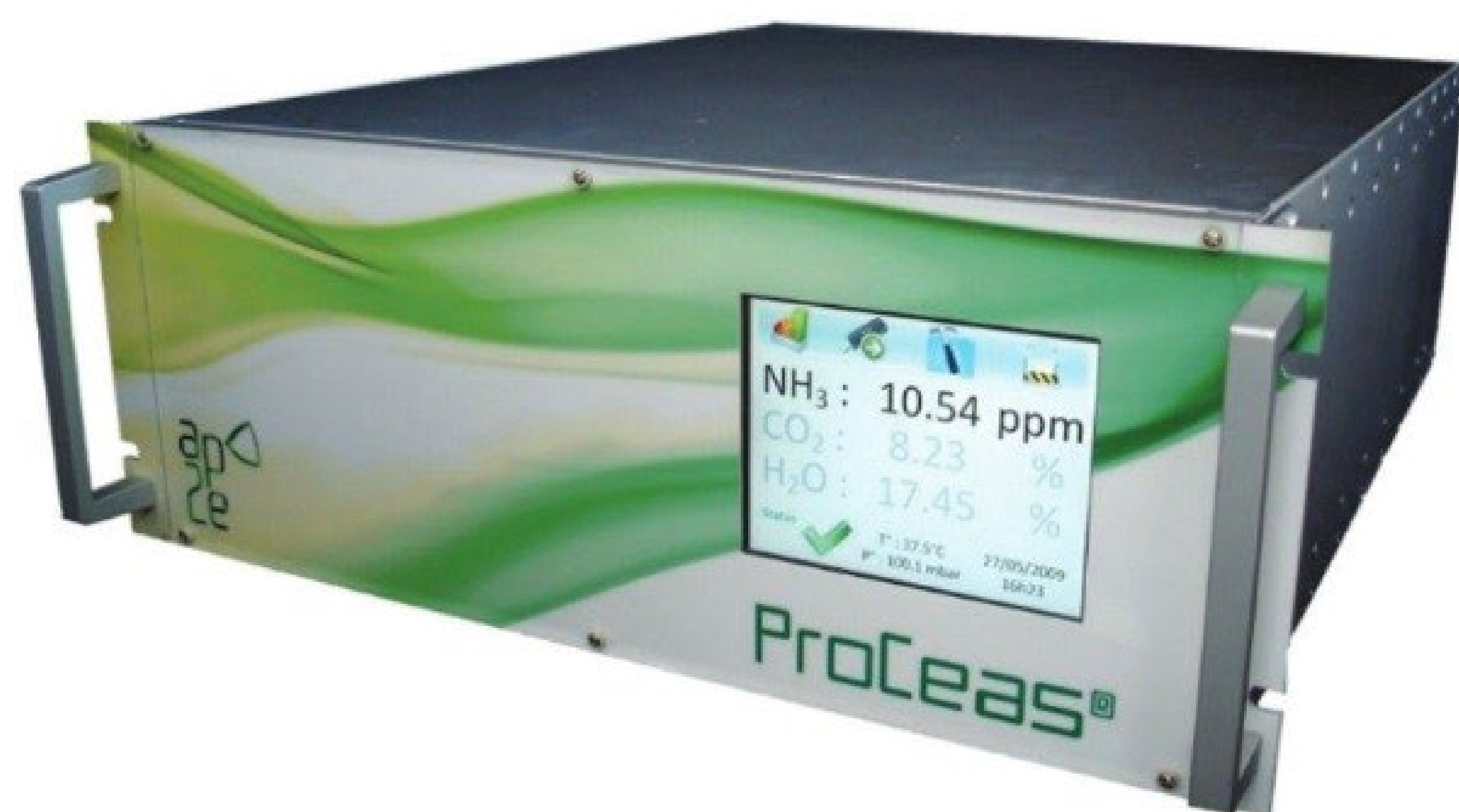


BIOGAS QUALITY

ProCeas® Biogas

Biogas providers, private and public sector evaluated several technologies to implement continuous real-time monitoring of CH₄, CO₂, H₂S and O₂ in biogas.

The ProCeas® has been selected as the technology the most suited to their monitoring needs in terms of response time, accuracy and flexibility around the integration within the mainstream of their installation. Customer uses the ProCeas® Biogas to measure various level of CH₄, CO₂, H₂S (low level) and O₂ in Biogas for several application: cogeneration unit and pipeline injection.



OFCEAS technology

For continuous Biogas and Biomethane quality monitoring (real time at ppb levels), the ProCeas® spectrometer is equipped with a laser at a single wavelength used to determine the concentration of a specific compound with an extremely low detection limit and fast response time.

The OFCEAS extended optical path and continuous signal feedback provide a high definition spectral response using what is essentially a traditional absorption measurement. The OFCEAS system uses a high-finesse optical cavity to provide path lengths of dozens of kilometres.

The OFCEAS technology can also, take advantage of broadband light sources to provide multi-component analysis, while offering improved sensitivity (ppb).

ProCeas® KEY FEATURES

- Low detection level
- Complete pre-calibrated laser infra-red spectrometer
- No Zero drift and no Span drift
- Fast response-time with LPS (Low Pressure Sampling) system
- Highly selective
- Multigas analyzer: CH₄, H₂S, CO₂, O₂, H₂O, NH₃

ANALYTICAL SPECIFICATIONS		
Gas	Range ^A	LOD ^B
CH ₄	0 - 100 %	< 0.1%
CO ₂	0 - 100 %	< 0.01 %
O ₂	0 - 25 %	< 0.05 %
C ₂ H ₆	0 - 10 %	< 0.1 %
H ₂ O	0 - 10 %	< 5 ppm
H ₂ S	0 - 2000 ppm	50 ppb
NH ₃	0 - 1000 ppm	50 ppb

^A adjustable range on request

^B limit of detection 3 sigma 60 seconds

Performances

Response time T10-90 : < 10 seconds

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