AQUAGAS MONITORING SYSTEMS

ANKERSMID Sampling

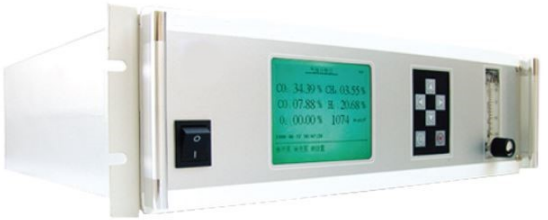
ABYSS ® ASG Online Syngas Analyser

Description - The **ABYSS Syngas** NDIR and TCD gas analyser series is specially designed for continuous and simultaneous monitoring of primary syngas constituents CnHm, CH4, CO2, CO, O2 and H2. Fitted with on **board BTU calculation**, the ABYSS ASG syngas fulfils the requirements of medium to large scale coal or biomass gasification or pyrolysis, off-gas from steel and iron plant, Blast furnace, Coking, Converter, Direct Iron Ore Smelting Reduction, Endo & Exo Gas Generators for heating treating. It is based on the **micro-flow type non-dispersive infrared (NDIR)** method for CH4 and CO, CnHm, CO2, and uses a **Thermal Conductivity Detector (TCD)** for H2 and O2.

Highly durable to harsh process conditions - The **ABYSS Syngas 19"inch rack mount enclosure** fitted with LCD screen, safety filter and built-in flowmeter enables efficient continuous measurement of up to 6 gases in emissions and process gas. An automatic built-in gas diluter reduce instruments recovery time in case of high and unstable gas concentrations. The ABYSS analysers are built, calibrated and factory tested in Belgium and certified **C.E.** by **Ankersmid Sampling BVBA**.

ABYSS ® ASG

High Performance
Online Syngas Monitoring



CO2 CO H2 O2

CH4 CnHm BTU

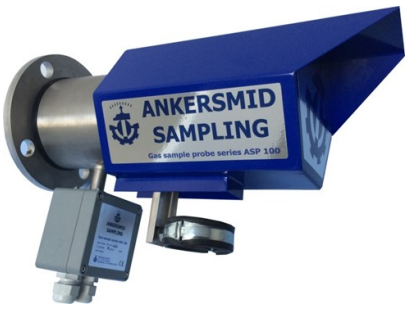
ABYSS ® Key Features

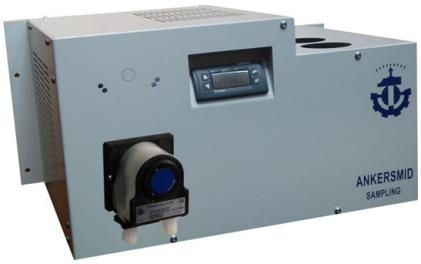
- Proprietary infrared single beam Micro-Flow NDIR and TCD detectors
- RS 232 serial com port for real-time data download to external PC or laptop as text file,
- Cost-effective Syngas online monitoring solutions
- Fully automatic standalone system for fast, accurate and reliable analysis of primary biogas constituents
- Keyboard / LCD display interface for configuration & calibration
- Online monitoring of up to 6 gases simultaneously with cross interference compensation
- 19 inch rack mount enclosure
- Stainless steel connectors for gas inlet/outlet and zero air inlet ports, Built-in Sampling Pump and flowmeter
- Dual CEMS (2 streams simultaneously) and multiplexed (up to 4 streams) systems empowering cost efficient multipoint monitoring
- PFA and PTFE gas path

Syngas Monitoring System

When sampling gas from gasification process, pyrolysis, off-gas from steel plant or blast furnace (…) the use of a **dedicated sampling system** is necessary to ensure application specific and reliable sample preparation.

AquaGas Sampling equipment and solutions cover a large range of applications within the syngas industry. Our gas coolers, heated sampling probes, heavy duty pumps (…) enable efficient syngas online measurement with **automated sampling sequences, multipoint monitoring, high performance gas conditioning and deep filtration features.**





ABYSS ® Specifications

INTEGRATION	
Dimensions	19inch rack mount unit
Weight	432x420x132mm wxhxd 12kg
Flow	0.7 to 1.2 lpm
Response time	TD+T90 < 15s (NDIR)
Warm- up time	5 min
inlet pressure	2kPa - 50kPa
Interface	LCD display + keyboard
Output	RS232 / 4-20mA / dry contact alarm
Power supply	240 VAC 50 +/-1Hz
Operating conditions	Temp 0-50C Pressure 86-108kPa Humidity 5-85% non-condensing

GAS	MODELS	APPLICATIONS
CnHm, CH4, CO2, CO, O2 and H2	ASG800	Syngas
CH4, CO2, CO, O2 and H2	ASG700	Syngas
CH4, CO2, CO and H2	ASG600	Syngas
CH4, CO2, CO and O2	ASG500	Syngas
CO2, CO, and O2	ASG400	Syngas
CO and CO2	ASG300	Syngas
CO and O2	ASG200	Syngas
Single gas **CnHm - CH4 - CO2 - CO - O2 - H2**	ASG100	Syngas

GAS	TECHNOLOGY	RANGE (max/min)	PRECISION	RESOLUTION	REPEATABILITY
CO2	NDIR	0 - 20 %	≤±1 % FS	0.01 %	≤±2% FS
CO	NDIR	0 - 40 %	≤±1 % FS	0.01 %	≤±2% FS
CH4	NDIR	0 - 10 %	≤±1 % FS	0.01 %	≤±2% FS
CnHm	NDIR	0 - 5 %	≤±1 % FS	0.01 %	≤±2% FS
H2	TCD	0 - 5 %	≤±2 % FS	0.01 %	≤±2% FS
O2	TCD	0 - 25 %	≤±2 % FS	0.01 %	≤±2% FS

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