



HILASE Development, Production,
Service and Trading Ltd.

8000, Székesfehérvár, Berényi út 72-100
Domicile: 6720, Szeged, Dóm tér 9.



HIGH SENSITIVITY MONITORING SYSTEMS FOR CONCENTRATION MEASUREMENTS IN INDUSTRIAL GASES AND IN THE ATMOSPHERE





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HILASE Ltd. is a *spin-off* company, which was jointly founded by laser spectroscopy specialists of the University of Szeged and the Videoton Holding Plc.

The knowledge of the founders:

University of Szeged	Videoton Holding Plc.
Spectroscopy	Instrument development
Laser development	Software, hardware
Acoustics	Engineering

The short history of the company:

- 2004 Foundation
- 2004 Acquiring the right for exploitation for various patents on photoacoustic measurements
- 2005 Winning governmental R+D projects 
- 2005 Signing a general framework agreement with the University of Szeged on the exploitation of the know-how on various photoacoustic systems
- 2006 Starting the accreditation of a calibration laboratory
- 2006 Starting the commercialization of various photoacoustic systems

COMPANY PROFILE



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Applied technology:

LASER BASED PHOTOACOUSTIC SPECTROSCOPY

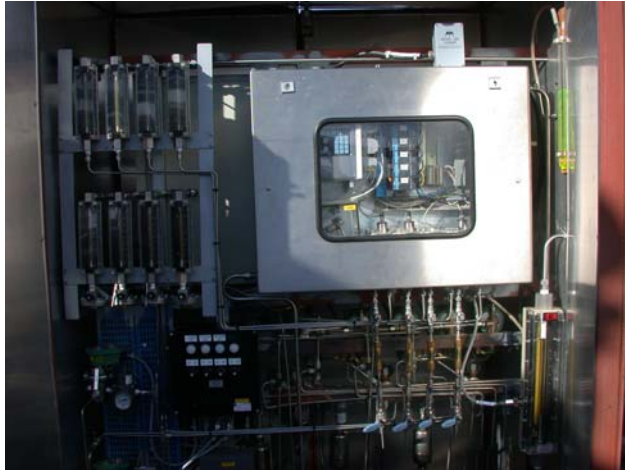
General features:

HIGH SENSITIVITY, SELECTIVITY, AUTOMATIC OPERATION, FAST RESPONSE TIME, OPERATION UNDER INDUSTRIAL (EVEN POTENTIALLY EXPLOSIVE) CONDITIONS. INTEGRABILITY INTO COMPLETE CONTROL SYSTEMS.

Measurable components in the atmosphere, in industrial gases and in natural gas

- ◆ METHANE
- ◆ ETHANE
- ◆ HYDROGEN-SULFIDE
- ◆ WATER VAPOR
- ◆ CARBON-DIOXIDE
- ◆ AEROSOLS (SOOT, MINERAL DUST, ETC.)
- ◆ AND SEVERAL OTHER GAS COMPONENTS

TECHNOLOGY



**WASUL
(H₂S MEASUREMENT
IN NATURAL GAS)**

**Reference: MOL Rt.
Gas Plant at Üllés**

Sensitivity: 1 ppm.

Response time: 15 min.

Ex-proof construction

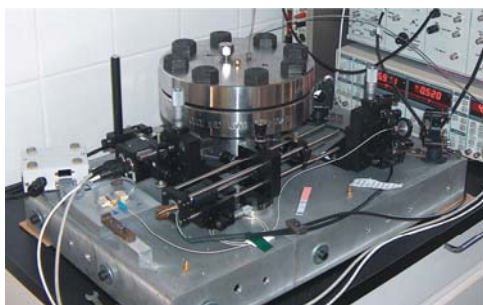
**WASUL (H₂O AND H₂S MEASUREMENT
IN NATURAL GAS)**

Reference: MOL Rt. Gas Plant at Algyő

Sensitivity : 1 ppm

Response time: 15 min.

Ex-proof construction



**MEASUREMENT OF GAS
PERMEABILITY OF FOILS
(INCLUDING MEASUREMENT OF
FLEXIBLE OFFSHORE PIPES AT
HIGH PRESSURES)**

**Reference: Phoenix Rubber
Industrial Ltd. Szeged**



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List of further test measurements, references

- ◆ **WATER VAPOR MEASUREMENT IN CO₂-
Messer Griesheim Hungary Kft., Ölbő**
Demonstrated sensitivity: 1 ppm
Demonstrated response time: 10 sec
- ◆ **WATER VAPOR MEASUREMENT IN CLEAN BOXES –
General Electrics Hungary Rt., Budapest**
Demonstrated sensitivity: < 1 ppm
Demonstrated response time: 5 sec
- ◆ **COMBINED METHANE, ETHANE AND CARBON-
DIOXIDE MEASUREMENTS ON BIOGAS –
Exim-Invest Kft. Nyíregyháza-Oros**
- ◆ **WATER VAPOR MEASUREMENTS IN ATMOSPHERIC
SIMULATION EXPERIMENTS- Forschungszentrum
Karlsruhe**
- ◆ **WATER VAPOR MEASUREMENT SYSTEM ON-BOARD
OF A RESEARCH AIRCRAFT– THE CARIBIC project**
- ◆ **MULTI-WAVELENGTH MEASUREMENT OF
AEROSOL SAMPLES -
Forschungszentrum Karlsruhe, Institute for
Tropospheric Research Leipzig**

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Further information: www.photoacoustics.hu

REFERENCES