

SYSTEMS ENGINEERING

System solutions for process and emission analysis

DEVELOPED AND
MANUFACTURED
IN GERMANY



**TAILOR MADE
SOLUTIONS**

SYSTEMS ENGINEERING PROCESS AND EMISSION MEASUREMENT

ENOTEC quality gas analyzer systems are used worldwide as complete solutions for process and emission measurements to processes and optimize combustion systems.

The monitoring of combustion processes, ranges from complex analyzer systems for ensuring system safety to compliance with country-specific environmental regulations for emission measurements such as:

- > 13. BImSchV - Large combustion and gas turbine plants
- > 17. BImSchV - Incineration or co-incineration of waste
- > 27. BImSchV - Cremation facilities
- > 30. BImSchV - Facilities for biological treatment of waste
- > TA Luft - Other facilities for compulsory inspection

ENOTEC is a DIN ISO 9000 certified company and uses applicable VDE standards and EU directives, not only for optimal design, installation and commissioning of complete analyzer systems from a single source, but also provides competent advice and professional after sales service.

ENOTEC offers individual concepts, whether supplying a system with a single probe of its own production, to project specific systems combining *ENOTEC* products with products from renowned manufacturers to turnkey emission measurements in an analyzer container.

Analyzer house for emissions monitoring



SYSTEMS ENGINEERING

PROCESS AND EMISSION MEASUREMENT

Being an independent systems engineering manufacturer, *ENOTEC* has been cooperating for over 30 years with almost all major manufacturers of components and analyzers, offering perfectly configured analyzer systems to meet diverse customers requirements.

Our wealth of experience and know-how guarantee reliable, functional and low maintenance system solutions for the measurement of different gas components, especially when confronted with complex challenges.

ENOTEC is synonymous with tailor-made applications which are embedded in a comprehensive service concept and lead to lasting customer satisfaction. This satisfaction is based on confidence in the accuracy and speed of the measurement, as well as in the quality of the system

ENOTEC analyzer cabinet



GSF

GAS SAMPLING PROBES

ENOTEC GSF gas sampling probes for continuous sampling of industrial process gas. The modular construction enables the sampling probe to be configured to suit the specific process conditions.

The probe head has an integral SIC filter element, and is available in a heated version to prevent dewpoint condensation. For high dust concentration various sintered metal filters complete with deflectors are available.

The GSF gas sampling probes are produced in various lengths and materials to suit the application. An optional GRP housing is available for protection from weather and personnel from hot surfaces.

TECHNICAL DATA

INSERTION DEPTH OF PROBE	according to customer requirements - Please contact ENOTEC
FILTER	field replaceable
OPTIONAL GRP HOUSING	heated or unheated
PROCESS GAS TEMPERATURE	max. 1400 °C
FLANGE	according to customer requirements



GSF probe with GRP housing



THERMOTEC

HIGH TEMPERATURE THERMOCOUPLE

THERMOTEC high temperature thermocouple can withstand process temperatures of up to 1400 °C.

The probe utilizes a PROTEC protection tube, which is highly resistant to chemical weathering, corrosion and oxidation and guarantee a long service life, also under difficult process conditions. In addition the PROTEC tube offers an excellent thermal shock resistance.

THERMOTEC thermocouples consist of the PROTEC protection tube with aluminium or grey cast iron connection heads and one or two NiCr-Ni or PtRh-Pt thermocouples and can be configured to include temperature transmitters, according to your requirements. The connection head is available in heated or unheated versions.

Special designs with regard to dimensions or materials according to process requirements are available on request.

TECHNICAL DATA

INSERTION DEPTH OF PROBE	500 mm - 2000 mm
PROTECTION TUBE DIAMETER	20 mm or 25 mm
MATERIAL	PROTEC (Protection tube) aluminium & grey cast iron (connection head)
THERMOCOUPLE	NiCr-Ni / PtRh-Pt
PROCESS GAS TEMPERATURE	max. 1400 °C
FLANGE	according to customer requirements

**THERMAL SHOCK
RESISTANT**



THERMOTEC high temperature thermocouple

PROVISION OF SERVICES

SERVICES FROM SPECIALISTS

ENOTEC not only designs, constructs and sells complete and reliable emissions and process analyzer systems, but can be on hand to help after delivery - worldwide.

In consultancy with our customers, we develop customised service concepts which ensure the continuous and problem free operation of their installations. Benefit from our experience of over 30 successful years, by letting us take care of installation, commissioning and maintenance for you, irrespective of whether the measuring technology involved is made by *ENOTEC* or is from an external manufacturer.



REPAIRS

In addition to our in-house repair service, we also offer repair services locally at your facility. On request we can provide a complete modernization concept for the measurement technology in use to keep your facility up to date.



INSTALLATION AND COMMISSIONING

A comprehensive service, which includes the regular calibration and testing of measurement technology, ensures trouble-free operation for many years. Potential weaknesses can be identified at an early stage, whether an *ENOTEC* product or a product made by a competitor.



SYSTEMS SERVICE

ENOTEC's complete service package includes maintenance, call-back service or spare parts management through our on-site specialists. We naturally also provide assistance when the need to meet regulatory requirements arises, such as QAL3 or joint audits with testing institutes according to the Federal Emissions Control Act § 26.BImSchV.

PROVISION OF SERVICES

SERVICES FROM SPECIALISTS



SYSTEMS ENGINEERING CONSULTING

Prior to the planning phase, our experts can provide advice regarding the selection of suitable analytical concepts resp. help to plan which requirements are necessary for future measurement devices. Our wealth of experience and our flexibility enables us to offer proven and customized solutions.



COMPARATIVE MEASUREMENTS

In our laboratory, we are able to accurately simulate a customer's flue gas for comparative measurements by producing complex gas compositions. This enables an independent test with respect to the quality of gas analyzer system in use.



TRAINING

Seminars regarding measurement and control technology are available on a regular basis. In addition to current developments such as regulatory requirements, topics such as development of relevant certificates and basics of process and emission monitoring are also dealt with.



EQUIPMENT LEASING

In order to be convinced of our quality without actually purchasing our products, *ENOTEC* analyzer systems can also be leased. This is a budget-friendly way to modernize your measuring equipment. Coupled with a comprehensive service, this cooperation leads to a high level of customer satisfaction.

SYSTEMS ENGINEERING SAFE PROCESS MANAGEMENT

COMPANY

ENOTEC has provided gas sensing solutions since 1980, producing products with a high degree of accuracy, quality and durability - Made in Germany.

Our flexibility allows us to quickly develop solutions individually designed to meet your problems.

On request, we also offer after delivery service concepts - the world over.

APPLICATIONS

- > Biomass Combustion
- > Waste Incinerators
- > Coal Grinding Plants
- > Gas / Oil / Coal Boilers
- > Process Measurements
- > Crematories
- > Sludge Combustion
- > Emissions measurement

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ENOTEC has four subsidiaries: ENOTEC USA, ENOTEC ASIA, ENOTEC UK, ENOTEC OOO and over 50 distributors world wide...



ENOTEC REMOTE app
Simple control of ENOTEC analyzers



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