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EN ISO 9001:2008  
EN ISO 14001:2004  
BS OHSAS 18001:2007

**TÜV NORD**  
Certification





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*We have the answers*

The quality of our systems, technical solutions and services, as well as our numerous installations and service support agreements with our valued customers confirm the fact - PETROPROCESS is the regional leader in the area of analytics.

We are dedicated to fulfill all your requirements regarding the improvement of analytical measurements to optimize your process, improve the quality of your products, energy saving, safety of the plant operation, fulfill legal requirements and technical standards.

**PETROPROCESS**



# PROCESS ANALYTICS – PRODUCTS, SOLUTIONS, SUPPORT



Improved accuracy, availability and safety of analytics is precondition for increasing of quality, efficiency and safety of a technological process. Our team of highly dedicated professionals listens and recognizes customer needs. Using high-tech equipment, following the latest national and international technical standards and regulations, assessing all possible risks and impacts, on the basis of good engineering practice, including close co-operation with experts of our partners – global leading manufacturers of analytical equipment, we develop comprehensive solutions and provide full support throughout the project until the client receives the effective results, also including aftersales support during operation.





Own project bureau (licenses P030E4 and P053E4 issued by the Ministry of Environmental Protection and Spatial Planning of the Republic of Serbia).

Manufacturing, system integration, installation, commissioning and start-up, calibration, modification and improvement of existing systems, service support. Project and service engineers in process of permanent improvement with our partners: ABB (Germany and USA), DURAG (Germany), SWAN (Switzerland), etc. Experience for more than a decade on about 100 installed analyzer systems.

Service center is equipped with all necessary instruments and tools, including portable gas calibrator, own stock of spare parts and possesses mobile service team.

TÜV NORD certified management systems in accordance with: EN ISO 9001:2008, EN ISO 14001:2004 and BS OHSAS 18001:2007.





# CONTINUOUS EMISSION MONITORING SYSTEMS

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## **AMS (Automated Measuring System )**

All of our continuous emission monitoring systems are designed and executed in accordance with the law and applicable regulations, respecting all national and international technical norms, in the first place applicable standards of EU.

Uncompromised quality of applied analytical equipment and experience developed on 30 AMS and on numerous process analyser systems with the presence of efficient service support are the trademarks of PETROPROCESS but also a prerequisite for the fulfillment of prescribed performances, enabling the required accuracy and availability of system of more than 95%/Yr for measurement of all components of pollution, over 98% for measurement of O<sub>2</sub> and over 99% for emission data processing and storage.

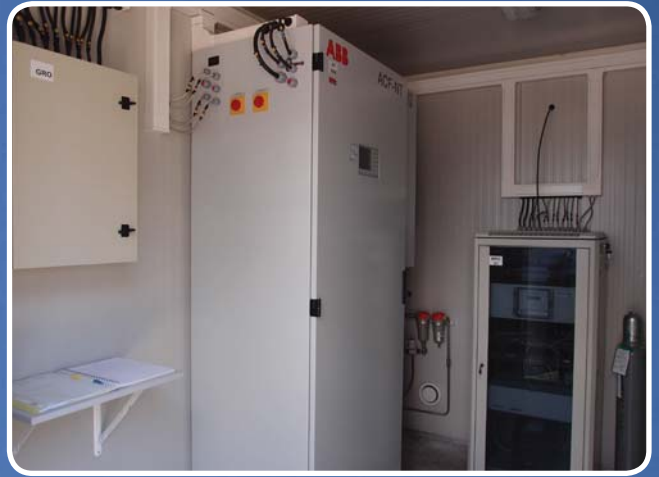
Team of our technical experts and full support for calibrations, maintenance of equipment and software is at full disposal to our valued customers and partners. We have all necessary equipment, instruments and tools for this purpose, we are keeping significant inventory of components and spare parts what is with our mobile service team the basis for the fulfillment of law and applicable regulations related to the high availability of the systems.

Experience in realization of projects for AMS is gained on the different types of technological processes, from combustion processes on large and middle combustion plants which burn lignite, fuel-oil, natural gas and bio-mass, over oil refineries and petrochemical processing plants, up to metallurgy, iron and steel and cement plants, which implies a wide range of measured pollutants i.e. application of wide range of emission measurement technology.

All components possess QAL 1 certificate in accordance to SRPS EN 14181.







AMS on basis of FT-NIR, ABB ACF-NT measurement of content CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, N<sub>2</sub>O, HF, HCl, NH<sub>3</sub>, TOC and measurement of O<sub>2</sub>, CO<sub>2</sub> and H<sub>2</sub>O.



Analyzer house.



Analyzer systems PETROPROCESS PPA CE 10 on base of ABB AO 2000. Measurement of CO, SO<sub>2</sub>, NO and CO<sub>2</sub>.





# PROCESS ANALYTICS

PETROPROCESS is a synonym for cutting edge quality in realization of process analyser systems. Realization of complete projects from basic engineering, via detailed engineering design, system integration, delivery, installation, commissioning and start-up, service support in warranty and after warranty period and maintenance of analyser systems for process analysis in technology processes.

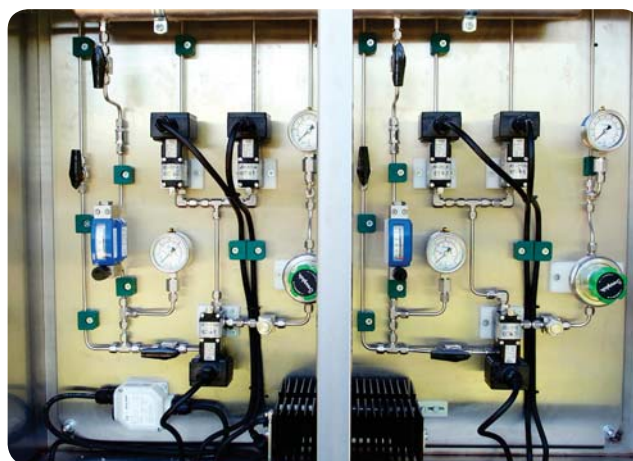
Solution for all specific process demands from specifically designed sampling conditioning systems, over systems for fast speed sampling (fast sampling loops) up to providing of complete systems for operation in dangerous areas (Ex areas).

Continuous gas analysers, NDIR process photometers, UV process photometers, paramagnetic analyser of O<sub>2</sub>, thermal conductivity analysers, TLD, FID...

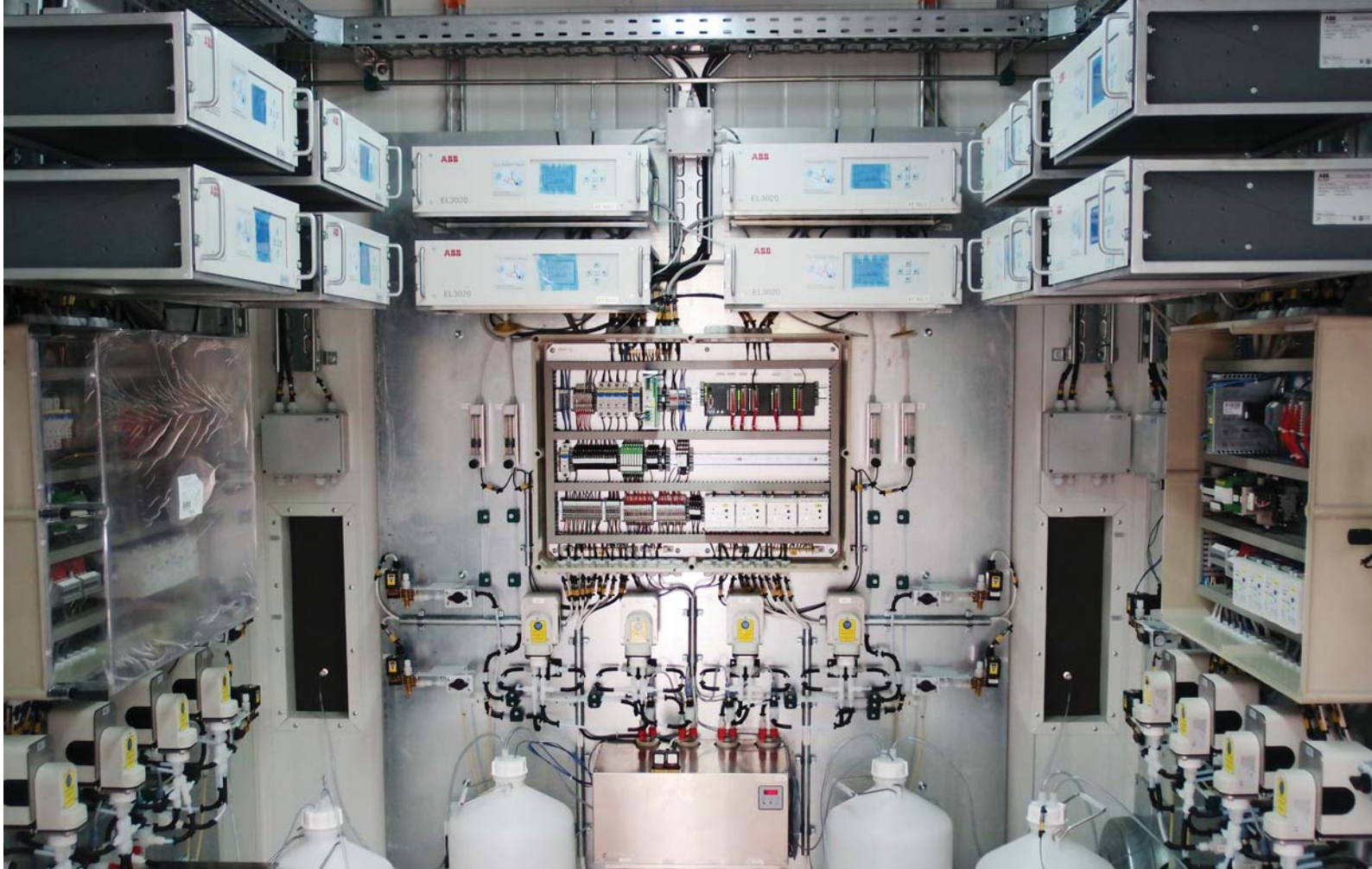
Process gas chromatographs (PGC) are ultimate tool for precise dividing and measuring of the lowest concentrations. Solutions for simple applications and solutions which make complex applications simple, by implementing analysers of the newest generation.

Complex analysis in the moment – process FT-NIR, on-line P.O.N.A. on-line R.O.N.

Due to providing of full support of process FT-NIR systems to our clients, and for purpose of development of chemometric model, PETROPROCESS possesses its own laboratory FT-NIR analyser.

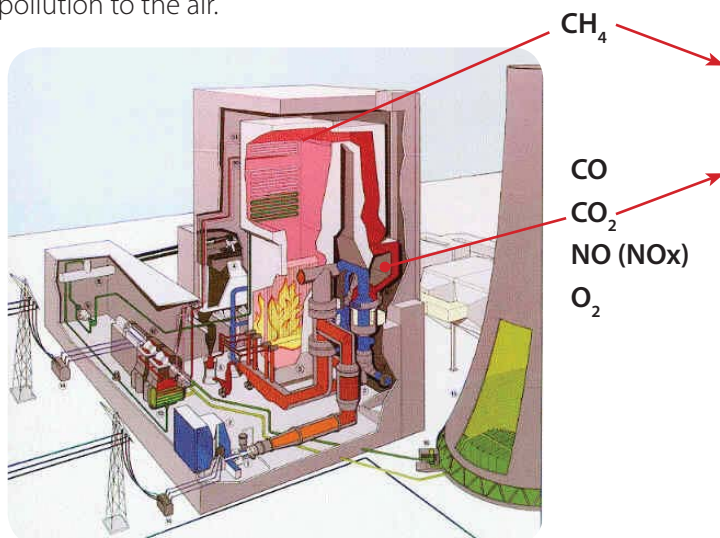






## PPROCESS ANALYZERS for analysis of gases products of combustion processes – a basis for optimization.

The correct information about combustion process through reliable and accurate measurement of concentration of gas products of combustion processes CO, CO<sub>2</sub>, NO (NO<sub>x</sub>) and Oxygene O<sub>2</sub> by analyser systems based on NDIR and paramagnetic measuring principle and appropriate sampling and sample conditioning systems tailored according specific process conditions in boiler and fuel type is the precondition for optimization of combustion processes and improvement of process efficiency. The result is the reduction of specific consumption of fuel and the reduction of emission of pollution to the air.



In case of gas fired boilers we are applying same analyzer for measuring of gas traces in boiler before ignition. On this way, without additional expenses for analysers, a client is receiving the important information for safe ignition / start-up of the boiler – Increasing of the plant safety.

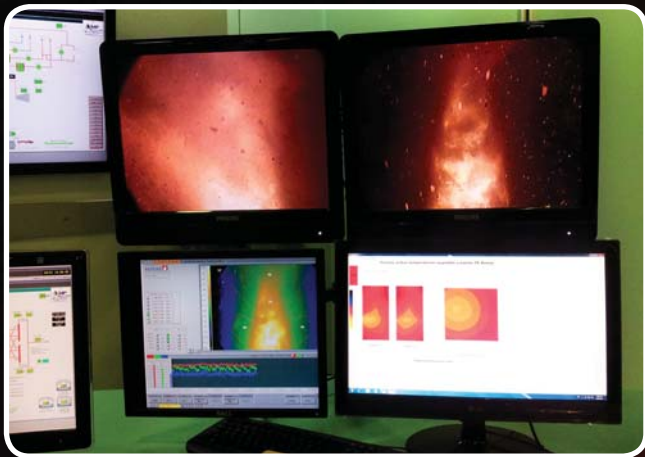


# ADVANCED SOLUTIONS FOR COMBUSTION PROCESSES

## AUTOMATED IGNITION, FLAME MONITORING, SYSTEMS FOR VISUALISATION OF COMBUSTION PROCESSES AND FLAME ANALYSIS

In co-operation with DURAG Group PETROPROCESS is offering advanced solutions for combustion processes: High Energy Igniters (high energy electric spark is capable to ignite fuel oil), Flame monitors, controllers; DURAG – Hegwein gas igniters, pilot burners, Gas/Oil burners, Gas controls; Systems for visualization of combustion processes and flame analysis with wide field of application in process optimization in power and process industry.

With references on the biggest power units in the region, for the complete realization of the project from engineering design, delivery of equipment, installation, commissioning, start-up and support in maintenance, Petroprocess is available even for the most demanding applications.





# ANALYSIS OF WATER, STEAM AND CONDENSATE

Analysers of parameters of water, steam and condensate and complex water analyser systems in cooperation with our partner SWAN A.G.

Delivery of complete solutions, service support, spare parts, reagents, calibration standards and training of customers.

Analysers of direct, cationic and anionic conductivity, differential conductivity with pH; Dissolved Oxygen analysers ( $O_2$ ), Redox (ORP), pH analysers.

Silica Analysers ( $SiO_2$ ), Analyser of Hydrazine / Carbohydrazine (ppb), Sodium analysers, Turbidity analysers, Total Organic Carbon content analysers (T.O.C.).



## ANALYSIS OF MOISTURE CONTENT

Analysis of moisture content of non-metallic materials (mineral materials, quartz sand, limestone, materials of biological origin, seed products, etc.).

Analysis of moisture content in liquids (natural and mineral oils, oil and oil derivatives - Ex version).





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