

L'ANALYSE EN LIGNE // EAU // AIR

WATER // AIR
ONLINE
MONITORING

Industry
Environment
Engineering
Services

SERES
environnement



Industrie
Environnement
Insénierie
Services

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On line Analysis... Air... Water... Environment, industry, process...

The COMPANY :

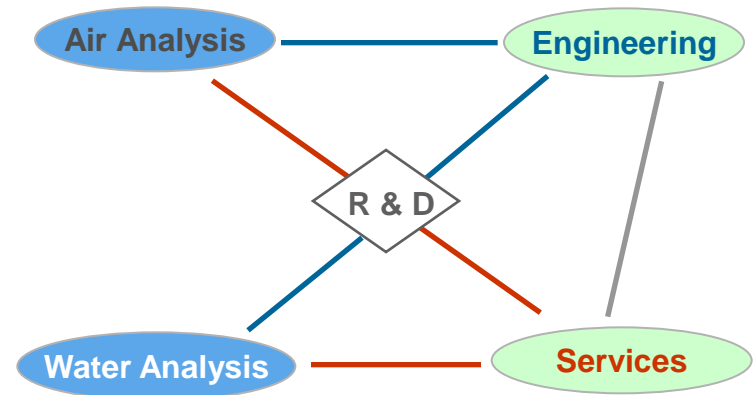
- SERES environnement develop and manufacture isolutions in the head office & plant located in Aix-en-Provence, France
- R&D and ENGINEERING Departments are staffed with multidisiplinary teams
- SAV & Maintenance is available worldwide, from France or via service stations
- Complete analysis systems & turnkey projects, engineering, assistance, training
- SERES environnement is ISO 9001-2008 certified

The ACTIVITIES : On line Analysis of Water and Air

SERES environnement offers a comprehensive range of **technical produits** and **solutions**

design, development, production, sales, after sales of :

- automatic monitors and analysis systems
- for the contrôle of AIR and WATER quality.



**SERES environnement, expert in analysis
at the service of environment and industry**

Our **MARKETS** : Industry & Environment

Today's **expertise** and **innovation** of **SERES environnement** is backed up by a **40-year experience** at the service of its customers in the :

→ **INDUSTRY**



- **Liquid effluents**
- **Stack gas emission**
- **Stack dust emission**
- **Industrial process**

→ **ENVIRONMENT**



- **Drinking water**
- **Surface water**
- **Waste water**
- **Process water**
- **Ambient air**

Our **SOLUTIONS** : Engineering and Services

Originally **designer** and **manufacturer** of **analysers**, **SERES environnement**, expert in measurement, has now evolved to become a well-known provider of a full range of **tunkey projects**, **monitoring stations** and **technical services**

→ **ENGINEERING**



- **Project feasibility study**
- **Project management : manufacturing, integration of analysers and complementary equipment, documentation**
- **Data processing and transmission**
- **Supervision of installation, commissioning**

→ **SERVICES**

- **Maintenance contracts**
- **On request attendances**
- **Installation, starting up, training**
- **Technical support platform**
- **Routine update of monitors in operation**





WATER ANALYSIS APPLICATIONS

DRINKING WATER

Quality control at all stages :
treatment, storage, distribution

SURFACE WATER

Study and design of surface
water monitoring stations

WASTE WATER

Monitoring of industrial
and urban waste water

PROCESS WATER

Quality control of
process water

OIL & WATER

Oil in Water Analysis &
Water in Oil storage tanks

OIL DISCHARGE TO SEA

Marine application
IMO Regulations

AUTOMATIC ON LINE ANALYSERS adapted to a VARIETY OF APPLICATIONS !

Multifunctional water monitors

Methods : Colorimetry, Titrimetry, Potentiometry
Parameters : Al, NH₄, Cn, SiO₂, PO₄, Mn, Fe, Cl, TH, TAC,
Analysers : Cristal, S2000*

Organic pollution

Parameters : Total Organic Carbon, COD, ...
Analysers : TOC 2000 UV, COD 2000 Cr Microwaves,
S2000 COD KmnO₄

Turbidity

Analyser : Turbilight for Low & Medium Loads
Analyser : Turbisonde for Heavy Loads

Discharge to sea (IMO regulations)

Seres ODME S663 MKII-MKIII Retrofit & Seil Seres ODME S3000
Control of oil discharge to sea from tankers

Process water monitoring

Methods : Colorimetry, Titrimetry
Parameters : Ca Mg, NaOH/Na₂ CO₃, SO₄ in brine, Chlorides
traces in soda solution, Active chlorine (ClO
Cl⁺) in brine and in chemical effluents,
NaOH/Na₂ CO₃ sodium hypochlorite/soda
medium, ...
Analysers : Cristal range, S2000*

Oil & Water

Green DHIR : Infra-Red Hydrocarbon solvent extraction
analyser and associated solvent regeneration
BWAM S751 : Infra-Red optical Hydrocarbon detector
OPAL : New Hydrocarbon detector (oil-in-water, real-
time, no reagents, IR optical detector)
PAUTBAC : Automatic water draining system for oil storage
tanks

* As from 2010, Seres S2000 analyser is being progressively replaced by the new CRISTAL monitor (please contact us for detailed information)

SOME ANALYSERS & EXAMPLES OF SERES WATER QUALITY MONITORING SYSTEMS

On line water analyser



2009–2010
Colorimetry & Titrimetry

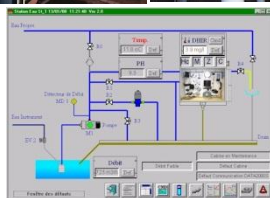


2011
Potentiometry

Water sampling & analysis systems and complete water monitoring stations



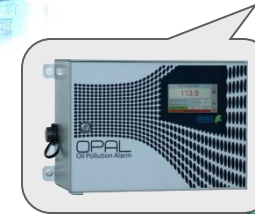
SOME OIL & GAS, REFINERY, ENERGY APPLICATIONS



Focusing on green issues with the Green DHIR new solvent regeneration unit



New in 2011
Real-time detection of HC by IR :
OPAL supersedes BWAM S751





AIR ANALYSIS APPLICATIONS

AMBIENT AIR QUALITY MONITORING & NETWORK SYSTEMS :

Environmental monitoring

CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) :

Stack Emission Monitoring

AUTOMATIC ANALYSERS & SYSTEMS for SPECIFIC APPLICATIONS !

Ambient Air Monitoring

Requisites & Applications

Control of air pollution in the environment :

- using a complete range of automatic analysers
- within global surveillance network systems
- implemented by states and municipalities for life quality improvement

Analysers & systems :

- **SO2 2000G**, UV Fluorescence analyser
- **NO/NO2/NOx 2000G**, Chemiluminescence Nox analyser
- **CO / CO2 2000G**, Carbon monoxyde gas filter correlation and CO absorption of IR radiation
- **OZONE 2000G**, UV Photometric ozone analyser
- **HCT 2000G**, Total hydrocarbons using Flame ionisation detection
- **Calibration System**
- **Meteorological Sensors**, Wind direction, wind speed, temperature, humidity,...
- **SUPERVISION SOFTWARE & DATA TRANSMISSION**
- **ENGINEERING** : analysis rack cabinet and station shelter (fixed or mobile)

Stack Emission Monitoring

Government & Industry Requisites

Control of stack emission pollution (exhaust gases & dust) are required :

- by the states and municipalities for life quality improvement,
- by the plant for process efficiency improvement
- In power stations, petrochemical plants, process industries, paper mills, incinerators, ...
- Coal, diesel or gas combustion

Analysers & systems, (QAL 1 Certification) :

- **GAS SAMPLING by DILUTION PROBE**
- **SONOX 2000G gas analyser**
 - **SO2**, UV Fluorescence
 - **NOx**, Chemiluminescence
 - **CO**, I.R. Absorption
 - **Associated measurements (oxygen, humidity, ...)**
- **STACK DUST EMISSION ANALYSIS**
 - **EP 1000A**, Laser back-scattering technology, **QAL 1 TÜV**
 - **EP 2000**, Laser post-diffusion technology
- **SUPERVISION SOFTWARE & DATA TRANSMISSION**
- **ENGINEERING** : analysis rack cabinet and station shelter

SOME ANALYSERS & EXAMPLES OF SERES AIR QUALITY MONITORING SYSTEMS

Analysis rack cabinets, stationary and mobile monitoring stations for **AMBIENT** or **EMISSION** air surveillance



EP 1000A
2009-2010
QAL 1, TÜV



EP 2000
2011
Low concentrations

Stack dust
laser analysis

CERTIFICATION

Company Certification

o ISO 9001-2008, MASE, QAL1, GOST, ...



ISO 9001:2008
N°15554-2

Product Certification

France & International

AIR :

• US EPA, NF, TÜV, QAL1, ATEX LCIE, ...



WATER :

• KWQMS (South Korea), Gost (Russia),
• ATEX LCIE, ...



PARTNERSHIPS

Seres technical and R&D teams enter into partnership with :

- Customers' Laboratories & Technical Departments,
- R&D Centers of key industries,
- Universities, Technology Institutes, Higher Education Colleges, etc.

To develop monitors and analysis systems :

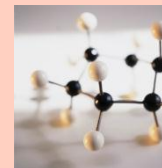
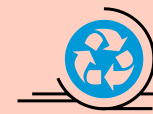
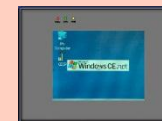
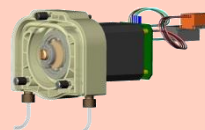
- **complying with regulations in force or upcoming,**
- **meeting strict process requisites, or new pollutant detection,**
- **integrating the latest technical innovations applied to sensors and measurement methods, ...**

RESEARCH & DEVELOPMENT

Research & Development

Key figures

- **Staff : 9**
- **10% of Turnover invested in R&D**
- **Skills :**
 - ⇒ Chemistry Engineers
 - ⇒ Electronics Engineers
 - ⇒ IT Engineers
 - ⇒ Mechanics Engineers



*Environment Ministries, Water Treatment Stations,
Petrochemical Industries, Refineries,
Power Plants, Metal, Agri-food and other industries,
Oil rigs, Tankers,
Etc ...*



France & French Insular Territories (DOM TOM) :

SHELL – TOTAL – ESSO - BP – EDF- CITROEN – RENAULT – SUEZ
– VEOILA – ONDEO – LA SAUR – ATOFINA – RHODIA – AVENTIS –
COCA COLA – KRONENBOURG – L'OREAL – RATP –
GENDARMERIE FRANCAISE – POLICE NATIONALE – PREFECTURE
DE PARIS –ALSTOM – TECHNIP – AEROPORT DE PARIS – DCN –
AIR LIQUIDE – AIR PRODUCT – ATMEL – ST MICROELECTRONICS
– MILLENIUM – BASF – BAYER ELASTOMERES – BEGHIN SAY –
BONDUELLE – ELYO – CEA – CXHEVRON CHEMICAL – CIMENTS
LAFARGE – CLEMESY – FOXTER WHELLER – COGEMA –
COMMUNAUTE URBAINE DE CHERBOURG – COMMUNAUTE
URBAINE DU MANS – COMMUNAUTE URBAINE DE STRASBOURG
– CHAUFFAGE URBAIN DE ST DENIS – CHAUFFAGE URBAIN DE
CERGY – DALKIA – ENICHEM – NORKS HYDRO – GRANDE
PAROISSE – GTIE – SPIE ENERTRANS – HOUILLERES DE
PROVENCE – ALUMINIUM PECHINEY – ALTIS SEMI-
CONDUCTEURS – LYONDELL – MERCKS – METAL EUROPE –
CELLULOSE DU RHONE – PERRIER – REGIE DE SEAUX DE
SAINTES – SOCIETE DES EAUX DE MARSEILLE – CANAL DE
PROVENCE – SAINT GOBAIN – SOLVAY – SOLLAC – SPONTEX –
WARTSILA – THOMSON – HOPITAL LARIBOISIERE – HOPITAL
COCHIN – HOPITAL ROBERT DEBRE – HOPITAL G. POMPIDOU –
AGENCES DE L'EAU...

Export :

OFFICE CHERIFIENS DES PHOSPHATES MOROCCO –
MINISTERE DE L'ENVIRONNEMENT INDIA - MINISTERE DE
L'ENVIRONNEMENT DU MAROC – DIRECTION DE LA
METEOROLOGIE NATIONALE DU MAROC – MINISTERE DE
L'ENVIRONNEMENT ALGERIA – ASAHI GLASS CORP JAPAN -
NZ POLICE NOUVELLE ZELANDE – PETROBRAS BRASIL – ICI
UK - PETROFAC USA – NATCO USA – CHEVRON USA – NTPC
INDIA – ENGENIEERS INDIA LIMITED – GAZPROM RUSSIA –
MOSVODOCANAL RUSSIA – MINISTERE DE
L'ENVIRONNEMENT RUSSIA – MINISTERE DE
L'ENVIRONNEMENT ROUMANIA – FORMOSA PLASTIC CORP.
TAIWAN - MINISTERE DE L'ENVIRONNEMENT BULGARIA –
SOLVAY BELGIUM – VEOLIA - COCKERIL MECHANICAL
INDUSTRIE BELGIUM – AIR LIQUIDE DENMARK – AIR LIQUIDE
SPAIN – CEPA CHINA – SENTECH CHINA – CNEMC CHINA –
HANG FANG POWER PLANT CHINA – LIAONING PROVINCE –
SHIN HAN KOREA – DAEWOO KOREA – HYUNDAI KOREA –
SAMSUNG KOREA – SEOUL CITY KOREA –MITSUBISHI – NKK
– ...

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