

PROCESSES

MONITORING FOR POWDER, DUST & GAS

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WHAT WE DO

The newly formed **Process** division of envea™ (trademark of the Environnement S.A Group companies) brings together the expertise of a range of global instrumentation companies already established as experts in their respective fields to provide an unrivalled range of monitoring solutions for industrial processes.

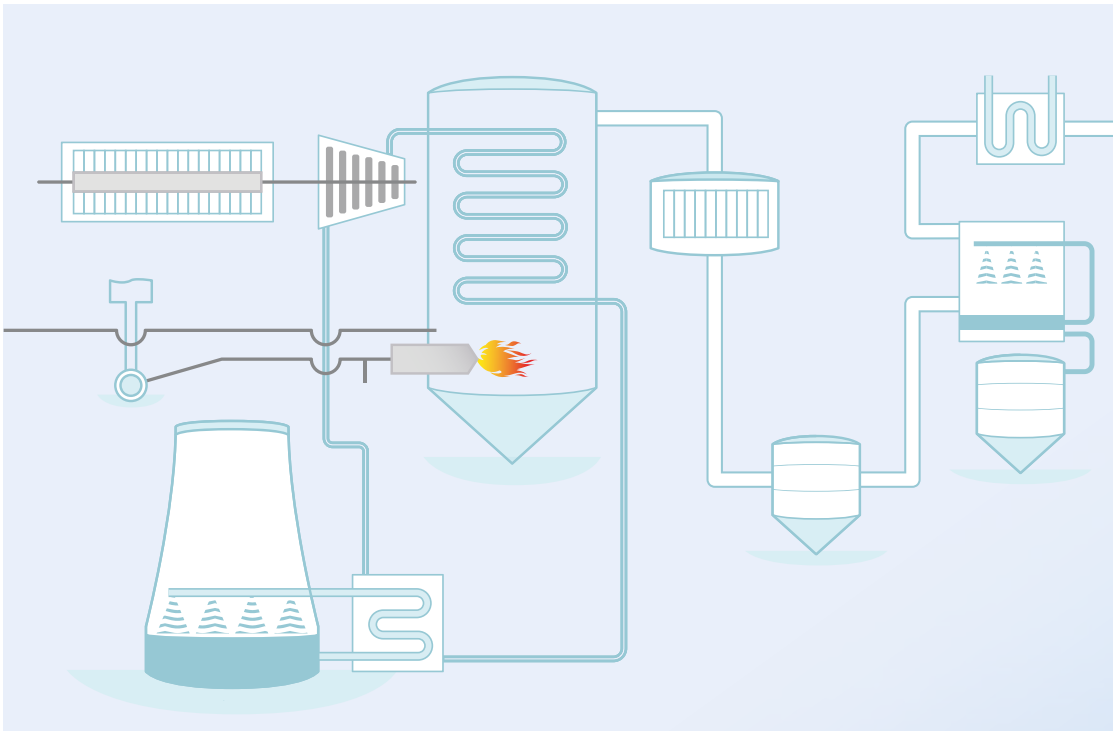
The process division includes market leading companies SWR engineering Messtechnik GmbH, PCME Ltd and TDL sensors Ltd who each provide innovative instrumentation for the monitoring of powders, dust and gases specifically for manufacturing industries to provide added value measurement solutions.

Together our companies provide over 70 years of experience of producing ground breaking instrumentation to enhance manufacturing processes helping to reduce lost production, plant maintenance times and associated costs. Our instruments are supported by a global sales and service subsidiary network as well as distributors in over 70 countries.

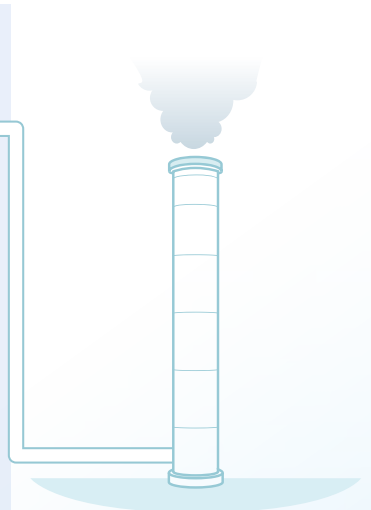
Our experience in the process industry is allied to the over 40 years' experience of our parent company Environnement S.A's in the manufacture of gas CEMS and air quality analysis systems.

envea™ offers solutions for Process Control, Emission Monitoring and Air Quality.

PROCESS CONTROL



EMISSION MONITORING



Our experience based on thousands of installations helps to improve your process



OUR SOLUTIONS ADAPT TO YOUR NEEDS.

INDUSTRIES

WHERE WE ARE

Since years we supply instruments and solutions to many industries.

Understanding the applications and needs of our customers has always been an important driver in the development of our systems.

Often working in harsh environments our sensors have been designed to provide rugged, reliable monitoring often with built in self-checks to assure the instruments correct functionality.

Working in both heavy industries such as power, minerals and steel as well as sensitive processes in the chemical and food industries our instrumentation for powder, dust and gas help to make processes more reliable, increase their efficiency and create cost reduction benefits for our customers worldwide.



MINERALS

- cement
- lime
- gravel
- asphalt
- quartz
- gypsum
- brick
- ceramics
- salt
- coal / coke
- glass
- asbestos
- china clay
- fiberglass
- lead glass
- mining
- refractory
- quarrying
- vermiculite

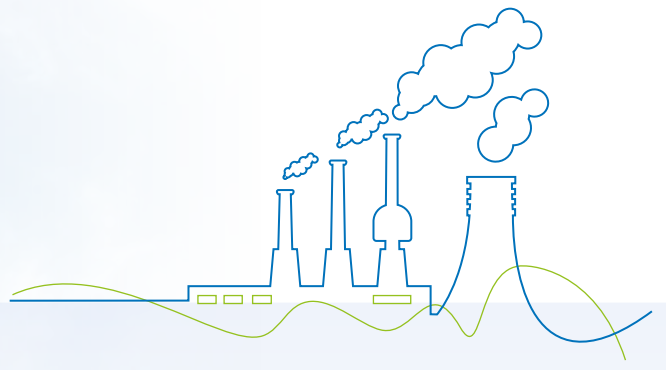
METAL

- steel
- galvanizing
- foundry
- aluminum recycling
- aluminum smelting
- copper recycling
- copper smelting
- ferrous foundry
- lead recycling
- lead smelting
- nickel smelting
- precious smelting
- zinc recycling
- zinc smelting



CHEMICAL

- plastic
- titanoxid
- paint
- pharmacy
- fertilizer
- rubber
- cosmetics
- carbon black
- detergents
- ink
- toner
- tyres
- pesticides
- pigments
- refinery
- TiO₂
- coating powder



POWER

- coal
- biomass
- incinerators
- bio fuels
- gas
- oil

INCINERATION

- clinical
- chemical
- crematoria
- municipal



FOOD

- coffee
- milk powder
- sugar
- animal food
- cereals
- pectin
- grain
- tobacco
- beverage
- flour
- pet food
- starch



WOOD

- insulations
- floors
- chipboard
- pulp & paper
- cellulose
- fibers and additives
- particleboard
- timber products

and many more ...

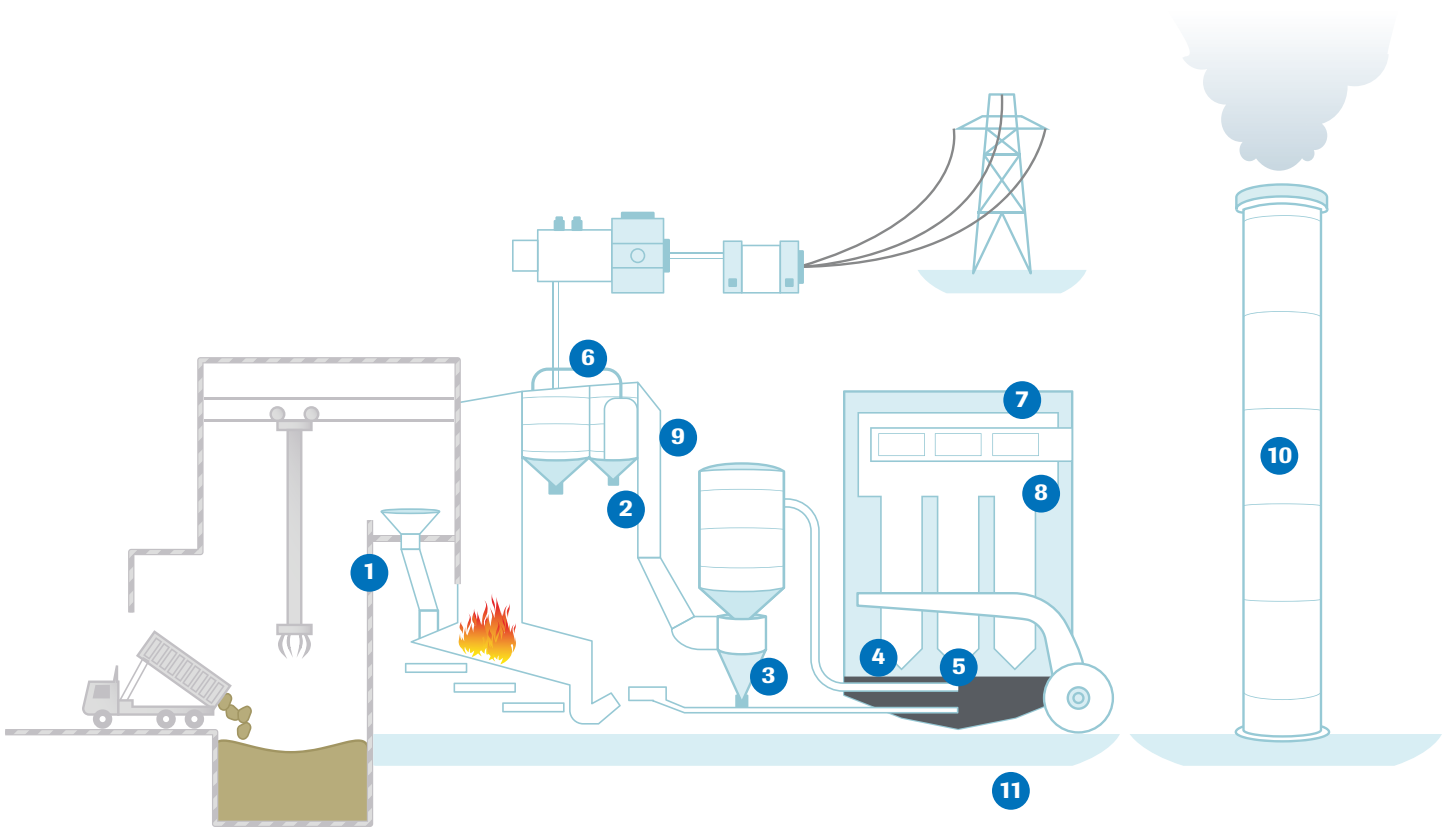
WHATEVER INDUSTRY WE WORK IN

Our installations are driven by:

- Providing our users with increased automation for energy and raw material efficiency
- Increasing the potential for on-line real time quality control and trending
- Providing real time sensor feed-back information for more flexible and high productivity production
- Meeting new regulatory demands and developments for environmental protection whilst driving operating costs down

Below examples show typical solutions.

INCINERATION

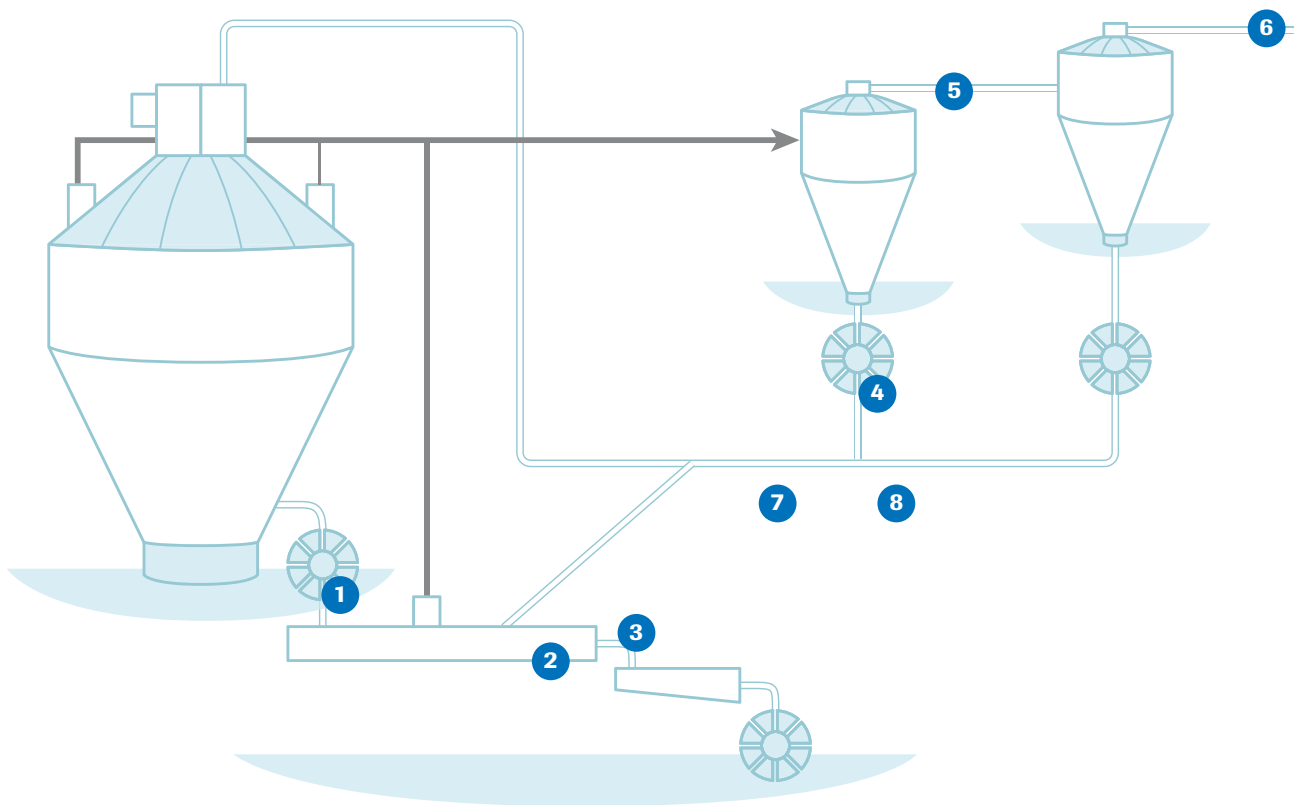


- 1 Point level detection in charging chute
- 2 Mass flow measurement of absorbent
- 3 Flow/NoFlow detection at cyclone outlet
- 4 Ash level detection at filter outlets
- 5 Flow detection at ash transportation system
- 6 Continuous level measurement in storage silos

- 7 Individual chamber baghouse performance monitoring
- 8 Predictive bag filter row monitoring
- 9 Process gas monitoring
- 10 Mainstack compliance gas, dust and flow measurement
- 11 Potential hazards measurements



FOOD AND PHARMA (SPRAY DRYING)

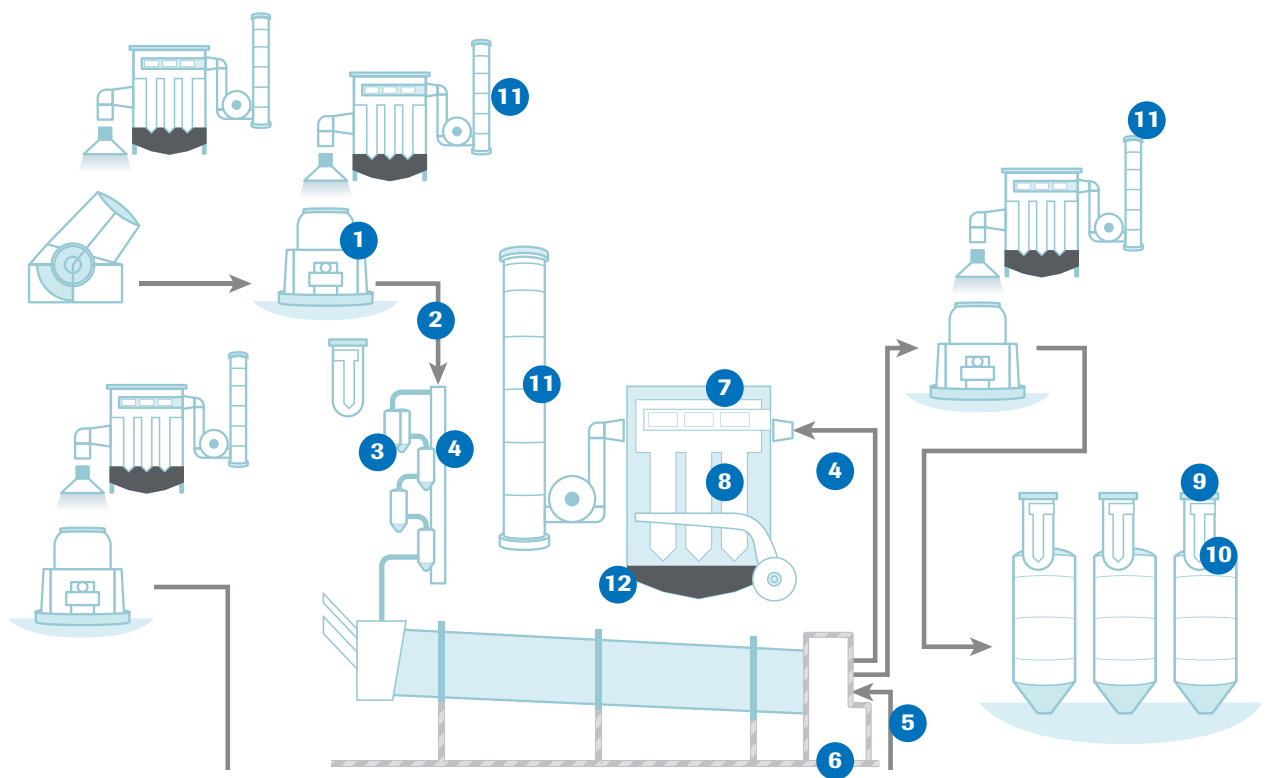


- | | |
|--|---|
| 1 Mass flow measurement out of spray dryer | 5 Primary filter performance monitoring |
| 2 Continuous moisture measurement in fluidized-bed dryer | 6 Compliance dust measurement stroke trending |
| 3 Mass flow measurement for inline blending | 7 Ambient dust monitoring |
| 4 Flow/NoFlow detection in return powder lines | 8 Potential hazards measurement |





CEMENT

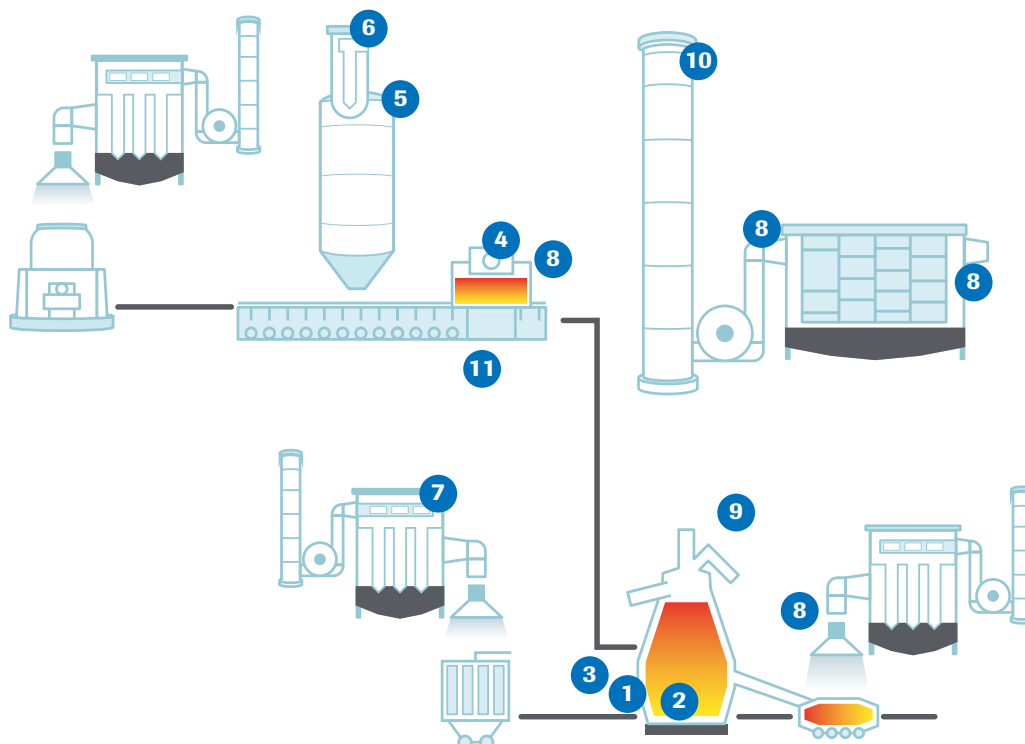


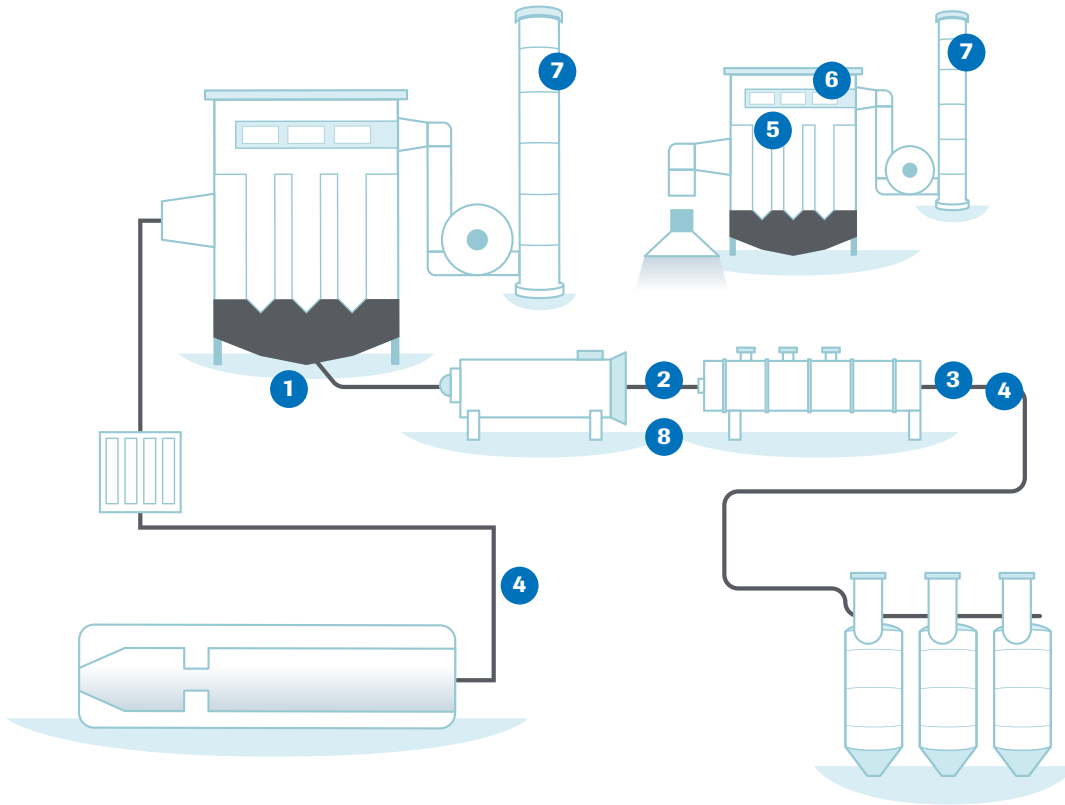
- 1** Continuous mass flow measurement of mill reject
- 2** Flow trending in air slide
- 3** Flow/NoFlow detection on cyclones
- 4** Process gas monitoring
- 5** Mass flow and velocity measurement of coal into kiln
- 6** Continuous moisture measurement of secondary fuel
- 7** Individual chamber baghouse performance monitoring
- 8** Predictive bag filter row monitoring
- 9** Silo baghouse performance monitoring
- 10** Continuous level measurement in storage silos
- 11** Mainstack emissions compliance gas, dust and flow measurement
- 12** Potential hazards measurement



STEEL

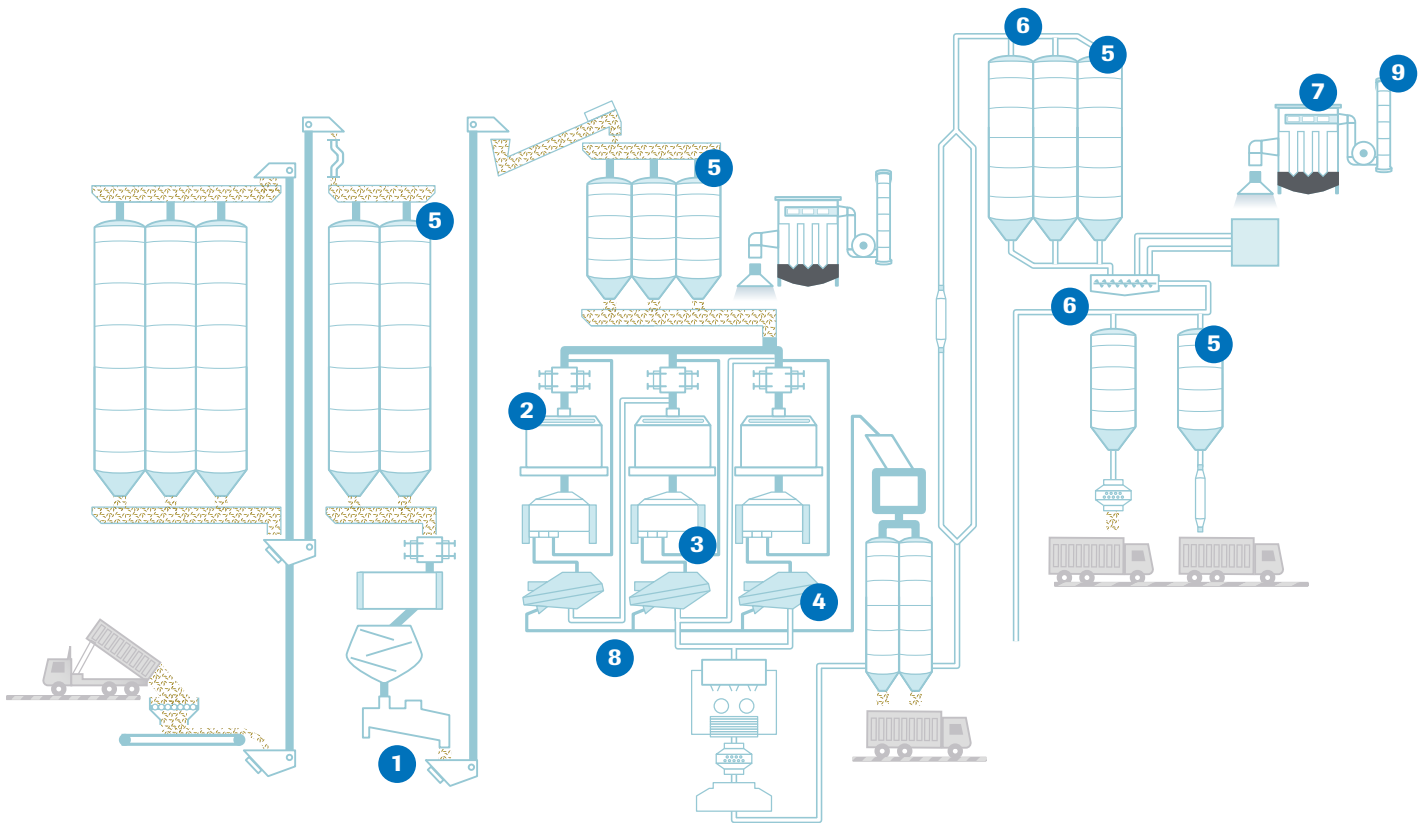
- 1 Mass flow measurement of pulverized coal into blastfurnace
- 2 Flow/NoFlow detection in single coal lance
- 3 Continuous moisture measurement of coal
- 4 Continuous flow measurement of sinter dust
- 5 Level detection in storage silos
- 6 Silo baghouse performance monitoring
- 7 Individual chamber baghouse performance
- 8 Monitoring electro-filter efficiency
- 9 Process gas monitoring
- 10 Mainstack emissions compliance gas, dust and flow measurement
- 11 Potential hazards measurement





- 1 Flow/NoFlow detection at filter outlets
- 2 Flow measurement after pelletizer
- 3 Continuous moisture measurement after dryer
- 4 Process gas monitoring
- 5 Predictive monitoring of bag row failure
- 6 Final stack emissions for compliance and performance monitoring
- 7 Emissions compliance monitoring
- 8 Potential hazards detection





- 1 Flow measurement after intake and cleaning
- 2 Flow/NoFlow detection of flow into roller mills
- 3 Continuous moisture measurement after conditioning
- 4 Screen break detection
- 5 Continuous level measurement in storage silos
- 6 Silo baghouse performance monitoring
- 7 Stroke filter performance
- 8 Ambient dust monitoring
- 9 Compliance dust emission measurement



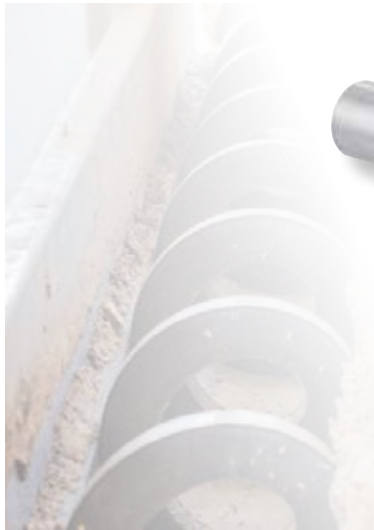
POWDER

envea™ - SWR engineering manufactures an unrivalled range of monitors for powder, granulates and dust to meet the continued demands of industrial processes to better understand and control their processes to help provide increases in efficiency and product quality.

With almost 25 years of experience envea™ - SWR engineering has achieved extensive knowledge in use of sensors for the measurement of flow, level, moisture, concentration, velocity and particle size detection. All working with the latest ground-breaking microwave and electromagnetic technologies.

FLOW MEASUREMENT

IN GRAVITY TRANSPORT AFTER FEEDERS



SOLIDFLOW 2.0
Microwave



MAXXFLOW HTC
Electromagnetic

IN AIR SLIDE TRANSPORT



SLIDECONTROL
Microwave

IN PNEUMATIC CONVEYING



Leanphase



PICOFLOW
Electrodynamic



SOLIDFLOW 2.0
Microwave

Densephase



DENSFLOW
Electromagnetic

MASS FLOW MEASUREMENT IN GRAVITY TRANSPORT



SOLIDFLOW 2.0

Waste incineration plant

Material: Furnace coke

Installation: Freefall between screw conveyor and injector

Volume: 300 - 400 kg/h

Customer benefits: Easy process control in exhaust gas cleaning. Avoidance of under- and overdosing. Contactless measurement, thus no erosions.



MAXXFLOW HTC

Building materials

Material: Clay

Installation: Freefall after screw conveyor

Volume: 30 - 80 t/h

Customer benefits: Contactless and maintenance-free measurement of high throughput rates. Replacement of Impact Flowmeter.



For flow rates up to 250 t/h

FLOW MEASUREMENT IN AIR SLIDES



SLIDECONTROL

Cement plant

Material: Cement

Installation: Air slide after main storage silo

Volume: Approx. 80 t/h

Customer benefits: Securing of constant material availability at the filling machine. Easy to retrofit sensor.



MASS FLOW MEASUREMENT IN PNEUMATIC CONVEYING



SOLIDFLOW 2.0

Starch production

Material: Starch

Installation: Starch pneumatic blow line

Volume: 0 - 3 t/h

Customer benefits: Totalizing starch flow into the silo for inventory control.



For flow rates up to 20 t/h



PICOFLOW

Incineration plant

Material: Furnace coke, hydrated lime

Installation: Pneumatic blow line

Volume: 4 - 50 kg/h

Customer benefits: Continuous flow measurement at low air/solid ratios. Documentation of material consumption.



For extremely low flow rates from 0 to 100 kg/h



DENSFLOW

Steel plant

Material: Coal

Installation: Pneumatic densephase conveying

Volume: 2 - 10 t/h

Customer benefits: Controlling coal flow in main pipe from vessel to coal distributor.



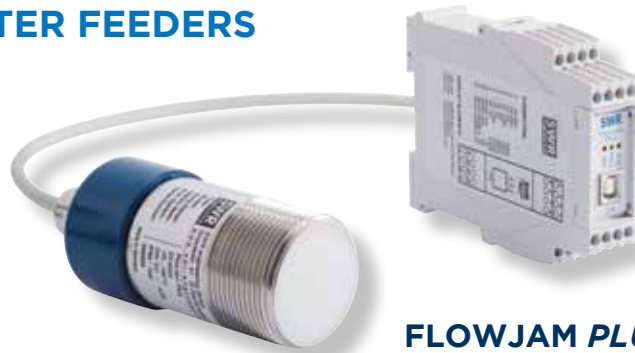
UNDERSTANDING YOUR PROCESS
AND HELPING TO IMPROVE.



POWDER

FLOW / NOFLOW DETECTION

IN GRAVITY TRANSPORT AFTER FEEDERS



FLOWJAM PLUS
Microwave

Gives Flow/NoFlow PLUS
jam / no jam information

IN PNEUMATIC CONVEYING

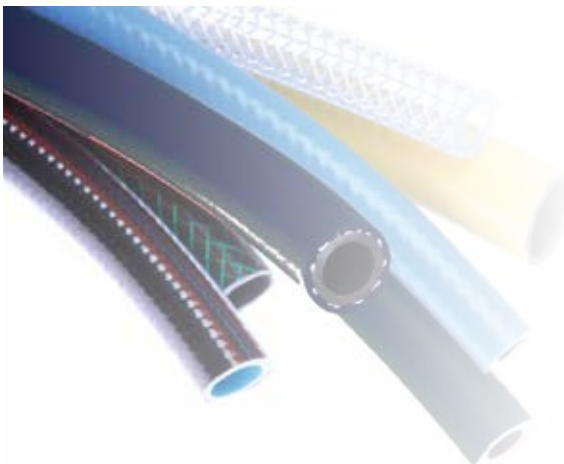


FLOWJAM
Microwave
compact



FLOWJAM S
Microwave
separated version

ON FLEXIBLE HOSES



FLOWJAM A
Microwave

FLOW / NOFLOW DETECTION

APPLICATIONS

FLOW DETECTION IN GRAVITY TRANSPORT



FLOWJAM PLUS

Incineration plant

Material: Activated carbon

Installation: After rotary valve

Volume: Max. 100 kg/h

Customer benefits: Activated carbon is being dosed into incinerator to reduce dioxin emissions. FlowJam *Plus* monitors the flow continuously and indicates immediately any interruption.



FLOW DETECTION IN PNEUMATIC CONVEYING



FLOWJAM & FLOWJAM S

Building material

Material: White and grey concrete

Installation: Silo outlet before screw conveyor

Volume: Approx. 1 t/h

Customer benefits: Production security by monitoring of material flow. Avoidance of shutdown or waiting time during production process and system start up.



FLOW DETECTION ON FLEXIBLE HOSES



FLOWJAM A

Surface treatment

Material: Glass beads

Installation: Flexible hose after dosing device

Volume: 0,5 kg/min

Customer benefits: Securing of constant material flow with decreased pulsations.



MOISTURE MEASUREMENT



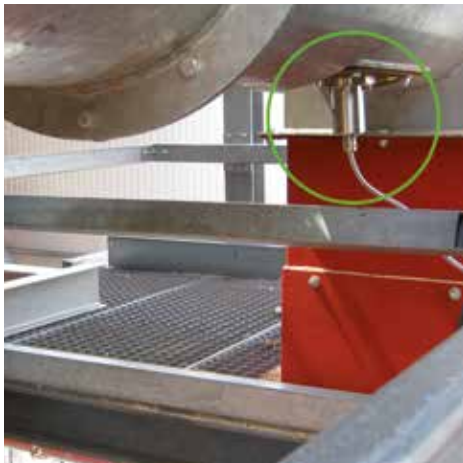
M-SENS 2
Microwave



M-SENS WR
Capacitive (wide range)

APPLICATION

Continuous measurement on screw conveyors, hoppers and belt conveyors



M-SENS 2

Pellets production

Material: Wood chips

Installation: Screw conveyor

Volume: 3 t/h

Moisture: 3 - 8 %

Customer benefits: Measurement of dryer input-moisture for control.

VELOCITY



SPEEDFLOW 2.0
Triboelectric



SPEEDFLOW 2.0-PIPE
Triboelectric

APPLICATION



SPEEDFLOW 2.0

Food manufacturing

Material: Ingredients

Installation: Pneumatic conveying line

Volume: 300 - 400 kg/h

Velocity: 10 - 12 m/s

Customer benefits: Ensure that material speed does not exceed maximum to avoid product damage.

Available as plug-in
or full cross-section version

POWDER

SCREEN BREAK DETECTION



PADDY
Microwave

APPLICATION

Immediate alarm
when oversize product in fines



PADDY

Refinement

Material: Quartz

Installation: On tumble screen

Volume: 150 kg/h

Customer benefits: Improved continuous monitoring of fines in between the twice-a-day manual check.



RELIABLE SOLUTIONS
BASED ON EXPERIENCE.

POWDER

LEVEL

POINT LEVEL



PROGAP
Microwave
compact



PROGAP S
Microwave
separate version

CONTINUOUS



NICO 15/30
Radar

POWDER

LEVEL

APPLICATIONS

POINT LEVEL



PROGAP

Plasterboards

Material: Paper fibers

Installation: Filling chute of a material hopper

Customer benefits: Detection of material jam at the earliest possible time. Fault-free process control and avoiding process downtime.



PROGAP S

Surface treatment

Material: Sand

Installation: Min. and max. position in storage hopper

Customer benefits: Contactless measurement of minimum and maximum level for filling control.



Up to 25 meters distance

CONTINUOUS



NICO 15/30

Cement plant

Material: Cement

Installation: Top of main storage silo

Customer benefits: Continuous level measurement for inventory control.



DUST

envea™ - PCME Ltd manufactures an unrivalled range of dust monitors to meet the demands of industrial processes. From both regulation and process standpoints **envea™ - PCME Ltd's** instruments allow end users to better understand and quantify their particulate emissions as well as to monitor the efficiency of dust filter systems and process plant.

By the correct selection of a suitable dust monitor industrial processes can achieve both cost savings in terms of reduced baghouse maintenance and lost production and in addition achieve reductions in emissions to atmosphere.

Instruments are available to measure both dry and saturated wet stacks and are based on Cross Stack Optical, ElectroDynamic™ and Laser Scatter technologies.

Baghouses are normally monitored by cost effective probe electrification ElectroDynamic™ devices with Laser Scatter technology predominately being utilised post electrostatic precipitators.

Both ElectroDynamic™ and Scatter technologies can be used as filter trending devices or calibrated to measure quantitatively in mg/m^3 with the ElectroDynamic™ sensors used as both MACT compliant bag leak detectors in the USA, as well as being certified to the European EN 15859 standard for both leak and measurement.

Should compliance to international or local emission standards be required to fulfil legal requirements such as EN 14181 QAL1, PS1, PS11 **envea™ - PCME Ltd** is also able to supply instruments to meet these requirements.

BROKEN BAG DETECTION



DUST ALARM 40
Filter damage monitoring
with separate display



DUSTY
Low cost
broken bag detection



DUSTY C
Compact sensor
for broken bag detection

BROKEN BAG DETECTION

APPLICATIONS



The basic broken bag detector **DUSTY**

Dusty is the simplest way to detect a filter break at a minimum. Conflicts with the neighbors can be avoided and it saves money.



Compact broken bag detector with trend signal **DUSTYC**

For all those, for whom a single alarm by relay is not enough! Dusty C additionally provides a 4 ... 20 mA trend signal and indicates upcoming filter problems.



Broken bag detection with large separate display **DUST ALARM 40**

For those, who simply want to operate the filter monitor from a distance, the DUST ALARM 40 is the optimal device. It offers a separate, simple, icon-guided operation with large display for measurement value and alarm.

- Reliable electrodynamic technology
 - non-contact charge induction
 - unaffected by rod contamination

- Stack sizes up to 4 m

DUST

FILTER PERFORMANCE



LEAK LOCATE 320
Filter damage and leakage monitoring of multi-chamber filter systems

The intelligent dust monitor **LEAK LOCATE 320**

It is good to know that a filter has broken. But to get information in which filter row the break happened is awesome. Multiple networked sensors allow each compartment of large multi-chamber baghouses to be continually monitored to determine the deterioration of the filter elements. These systems provide a proven method providing information to allow preventative maintenance procedures, thereby greatly reducing unplanned filter outages, maintenance times, lost production and spare filter element inventories.

DUST MONITORS



PROSENS
Separated version for continuous dust measurement (mg/m^3)



DM 170
Optical backscatter measurement of dust concentration (mg/m^3)



LEAK ALERT 73/75/80
Compact sensor for dust measurement (mg/m^3) - EN 15859

DUST MONITORS

APPLICATIONS



Dust monitoring with separate electronic PROSENS

A dust sensor for those who prefer to perform the operation (calibration/adjustment) of the system comfortable in the control room.

The separate transmitter makes it possible!

Optionally available as field version with display or as DIN rail card.

Sensors are calibratable to mg/m^3 .



The line of compact dust monitoring sensors

LEAK ALERT 73/75/80

All in one enclosure!

For users who prefer solutions without separate electronics.

Continuous measurement of concentrations calibratable to mg/m^3 suitable for meeting US ASTM 07392-07 or EN 15859.



- | Available for explosive atmospheres gas and dust
- | Up to 500 °C stack temperatures
- | Advanced probe contamination check



Monitoring solutions post electro-filters

DM 170

The DM 170 provides a cost-effective solution for measuring dust post ESP or in combustion stacks with no filtration. The DM 170 Back Scatter instrument requires only single point mounting and offers quality checks to assure measurement accuracy. It provides a compact stand-alone measurement solution for non-compliant applications in medium to high dust concentrations. It is the perfect instrument not only for final stack monitoring but also as a failure device between primary filters (ESP) and secondary baghouses.



DUST

COMPLIANCE



QAL 991

Electrodynamic measurement
of dust emissions
according to QAL 991

APPLICATION



The carefree package for dust and emission measurement QAL 991



An ElectroDynamic™ solution for the measurement of particulate emissions. The instrument provides a proven solution for applications where CEN standards EN 14181 / EN 13284-2 are applied (plant falling under the waste incineration and large combustion plant EU directives). The instrument holds QAL1 approval as specified in EN 15267-3, under both MCERTS and TUV, in addition to compliance with US EPA standard PS 11 for PM-CEMS.

AMBIENT



AIRSAFE

Continuous dust monitoring
in ambient air

INDOOR & OUTDOOR AIR QUALITY



How much dust floats in your workspace?

AIRSAFE

The uncomplicated little assistant to permanently check the environment for dust.

Installed in factory halls, at workplaces or at predestined dust sources, the AirSafe delivers an alarm when a threshold value is exceeded.

And if that is not enough: trend signal available!



Fugitive emissions and hazard detection

CAIRPOL

Your plant and equipment can be the source of fugitive emissions causing environmental pollution and loss to your business.

We provide a wide range of Cairsens gas micro-sensors for the industry to help keeping employees safe and reduce odour emissions and hazardous air pollutants.

Networkable, with no maintenance required, solar energy powered, the Cairnet version can be deployed quickly for fixed and portable measurement applications. The associated application software CairMap allow for real-time forecasting fugitive emissions of a multi-source installation for the management of events and processes. Cairpol systems can be also used to supplement conventional air quality stations by offering additional measurement points providing additional coverage and measurement data for an area, the data and software is compatible with Air Quality Data Acquisition systems.



Conventional mobile or fixed air quality monitoring stations

CRITERIA AIR POLLUTANTS ANALYSERS

Monitoring air quality is essential for local authorities as well as for major public and private industries to understand and prevent air pollution and assess emission sources, in order to preserve health and contribute to the fight against the greenhouse effect.

With over 35 000 air quality monitors measuring the pollution of cities and industrial sites worldwide, our analysers are designed for the continuous monitoring of pollutants emitted by industry such as sulphur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, ammonia, hydrogen fluoride and fine particulates PM10 & PM2.5.



envea™ - Environnement S.A together with envea™ - TDL sensors Ltd are present in almost all parts of an industrial process, alongside dust and powders, gases are important to monitor and measure in order to keep your process running at its optimal rate. We offer a complete range of products that will not only help you control your process, but also allow you to prevent incomplete reactions in abatement systems and consequently to reduce emissions. With various sampling methods and analysis technologies, our gas monitors will help you maintain the high standard performances of your industrial processes.

SELECTIVE ANALYSIS



Direct extractive

MIR 9000

Non-dispersive infrared gas filter correlation measurement for dry and wet applications



In-Situ

LAS 300 XD

Tunable Diode Laser Absorption Spectrometry Analyzer

APPLICATIONS



SCNR plant

LAS 300 XD

A decisive factor in the assessment of the SCNR process is the resulting slip after an incomplete reaction.

LAS 300 XD is measuring the residual gaseous ammonia (NH_3) in the exhaust gas.

By using TDL technology costly sample gas extraction via heated sample lines is omitted.



Cyclone preheater

MIR 9000

The gas sample is extracted and conditioned before transport, in order to have all moisture and condensable components removed prior to its analysis for NO_x , CO and O_2 in a cement plant.

	HCl	HF	NO	NO ₂	N ₂ O	NO _x	SO ₂	CO	CH ₄	TOC	NH ₃	H ₂ O (%)	CO ₂ (%)	O ₂ (%)
EXTRACTIVE DRY														
MIR 9000	0-15 / 5000	0-20 / 300	0-100 / 5000	0-100 / 1000	0-20 / 1000	0-200 / 5000	0-75 / 5000	0-75 / 5000	0-10 / 1000	0-50 / 5000			0-10 / 100	0-10 / 25
MIR 9000 CLD	0-15 / 5000	0-20 / 300	0-20 / 2000	0-20 / 2000	0-20 / 1000	0-20 / 2000	0-75 / 5000	0-75 / 5000	0-10 / 1000	0-50 / 5000			0-10 / 100	0-10 / 25
MIR 9000 CLD RACK			0-20 / 2000	0-20 / 1000		0-20 / 2000							0-20	0-10 / 25
EXTRACTIVE WET														
MIR 9000H	0-100 / 5000	0-40 / 300	0-200 / 5000	0-200 / 5000		0-200 / 5000	0-500 / 5000	0-75 / 10000			0-15 / 500	0-30 / 40	0-10 / 100	0-10 / 25
LAS 300 RK (ppm)	0-10 / 500	0-5									0-15			0-30
MIR FT	0-15 / 500	0-3 / 100	0-200 / 2000	0-200 / 2000	0-100 / 500	0-200 / 2000	0-75 / 20 000	0-75 / 10 000	0-15 / 1000	0-50 / 1000	0-15 / 500	0-30 / 40	0-10 / 30	0-10 / 25
IN-SITU														
LAS 300 XD (ppm)	0-10 / 3000 (H ₂ O 0-50%)	0-100						Low: 0-500 High: 0-100%			0-15 / 500 (H ₂ O 0-50%)			0-10 / 100
MIR IS	0-15 / 5000	0-20 / 300	0-100 / 5000	0-100 / 1000	0-20 / 1000	0-200 / 5000	0-75 / 5000	0-75 / 5000	0-10 / 1000	0-50 / 5000			0-10 / 100	0-10 / 25

Lowest / Highest available ranges expressed in mg/m³ (may vary with your site conditions to be indicated on the Site Survey Form you provide us with)

MOISTURE MEASUREMENT

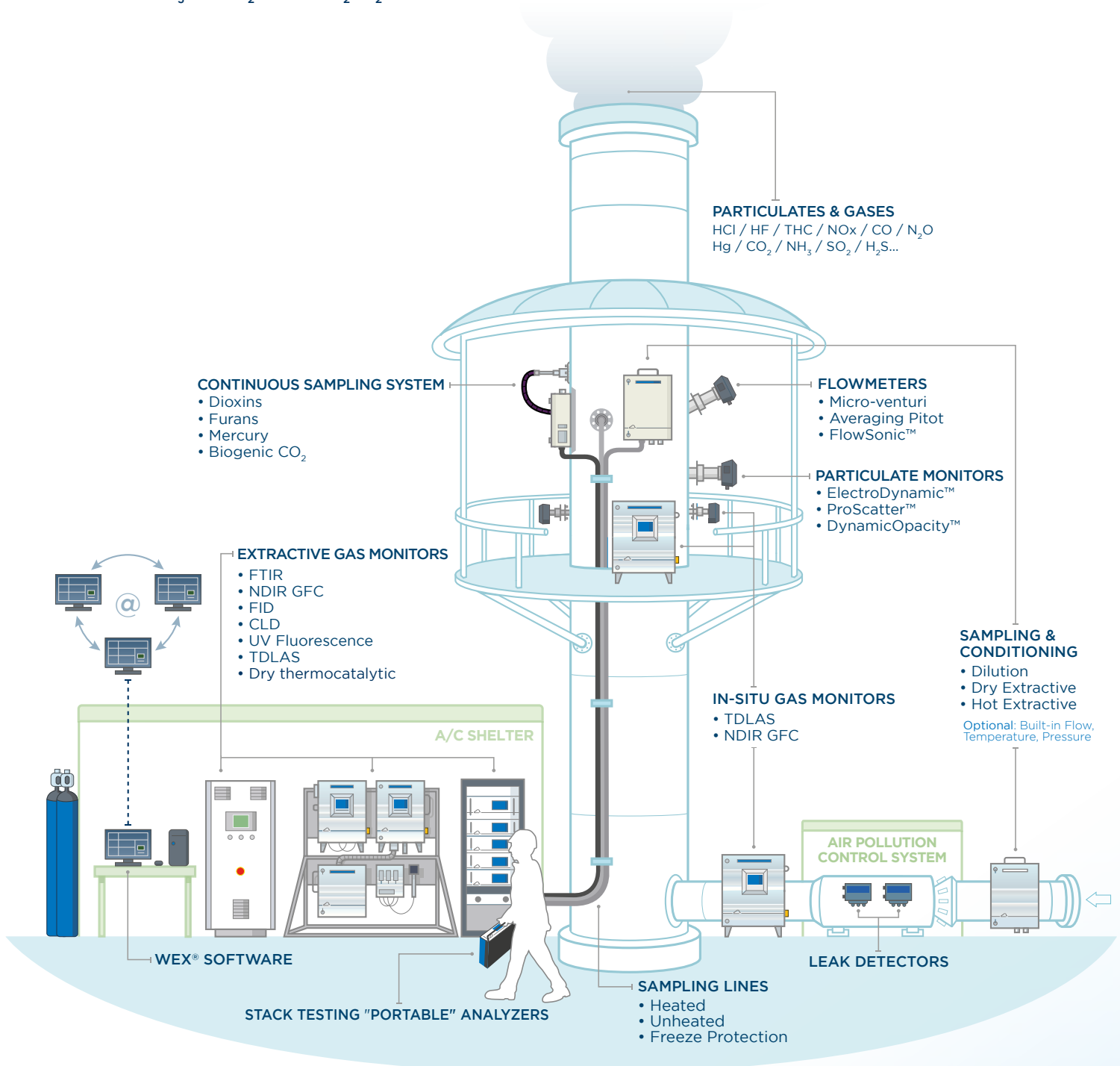


LAS 300 XD
Tunable Diode Laser
Absorption Spectrometry
Analyzer

Non-contact laser-based measurement for future fast and reliable readings of H₂O-concentration in gas streams. Reduces maintenance and of ownership.

AND FOR YOUR EMISSION COMPLIANCE

We design and produce a complete range of state of the art analyzers, sampling systems, data acquisition systems and software for the measurement & reporting of pollutants such as: HCl, SO₂, NO, NO₂, NO_x, N₂O, CO, CO₂, CH₄, THC, nmHC, NH₃, HF, H₂S, TRS, O₂, H₂O, Temperature, Flow, Pressure, Particulates, Mercury, Dioxins...



With decades of industrial experience, our systems are designed and developed as a **complete turnkey solution**. From sample extraction, through analysis, data acquisition and report management, each system is configured to comply to the normative demands and technical constraints of our clients, no matter the industrial domain:

- Waste-to-energy plants
- Combustion
- Power plants
- Gas turbines
- Biomass
- Glass industry
- Cement plants
- Pulp mills
- DeNO_x (SNCR, SCR)
- Boilers & industrial furnaces
- Process control
- Metal, steel, petrochemical, chemical industries...

PROCESS CONTROL INCREASES
EFFICIENCY AND REDUCES EMISSIONS.



SUPPORT & SERVICE

Improved plant performance by close partnership

With the global structure of the group we are very close to our customers.

Internal technical training make sure to have specialists and technical expertise available all over the world. Our engineers have full knowledge in all our process solutions but also do understand your process. That way we work in a close partnership with our clients to improve their processes, whatever your location or industry.

The Technical Support Services Team with its worldwide presence of experts brings experience from a wide range of applications and industrial sectors, ensuring that systems are set-up, operated and maintained to maximize functionality for their intended purpose.



COMMISSIONING

Utilizing our commissioning services allows you to ensure a proper commissioning of your process instrumentation. Especially during start-up of your process this ensures that everything runs smooth and customers have access to all specific skills needed.

CALIBRATION

Regular calibration of the instruments is essential to get reliable information for controlling your process especially for quality-critical processes. envea with its global network provides cost effective on site services for that purpose.

TRAINING

Training programs are custom-tailored and will specifically adhere to your company's particular needs, whether you require instruction for one individual or a group. Available training options are designed to be conducted in classrooms, on-site or in factory settings.

We can help you run your installation as efficiently and smoothly as possible

GROUP STRUCTURE - PROCESS

The process division of **envea™** currently operates four product centres where Research & Development together with manufacturing takes place: **envea™ - SWR engineering**, **envea™ - PCME Ltd**, **envea™ - TDL sensors Ltd** and **envea™ - Environnement S.A.**

With distributors in over 70 countries and a philosophy of working in close partnership with our customers to ensure a perfect understanding of their needs we develop innovative solutions for their monitoring requirements. Inclusive technology exchange between product centres has a great importance within the group and accelerates the process of bringing new class leading products to market.



Running technical centres for evaluating the performance of our sensors is essential for developing good products and is always part of the R&D-process.



Every year we provide customers with thousands of measuring points by trusting in our well qualified and highly motivated staff.

At these sites we also manufacture all products for process instrumentation worldwide.

Committed to quality

Quality and its continuous improvement is a prime focus at all **envea™** product centres. We work hard to consistently design in and provide outstanding quality into our products. Our management systems are based on ISO 9001 and in addition all locations are certified to ISO 14001. We have many longstanding relationships with our suppliers who apply the same principles of quality assurance to the components and systems they supply us. We endeavour to supply right first-time equipment and services to all our customers.

TOGETHER WE ARE **envea**TM

A new trademark to unify the technologies of the Environnement S.A Group

SWR engineering GmbH

Environnement S.A

PCME Ltd

Cairpol Microsensors

TDL sensors Ltd

Mercury Instruments GmbH

iséo Environnement

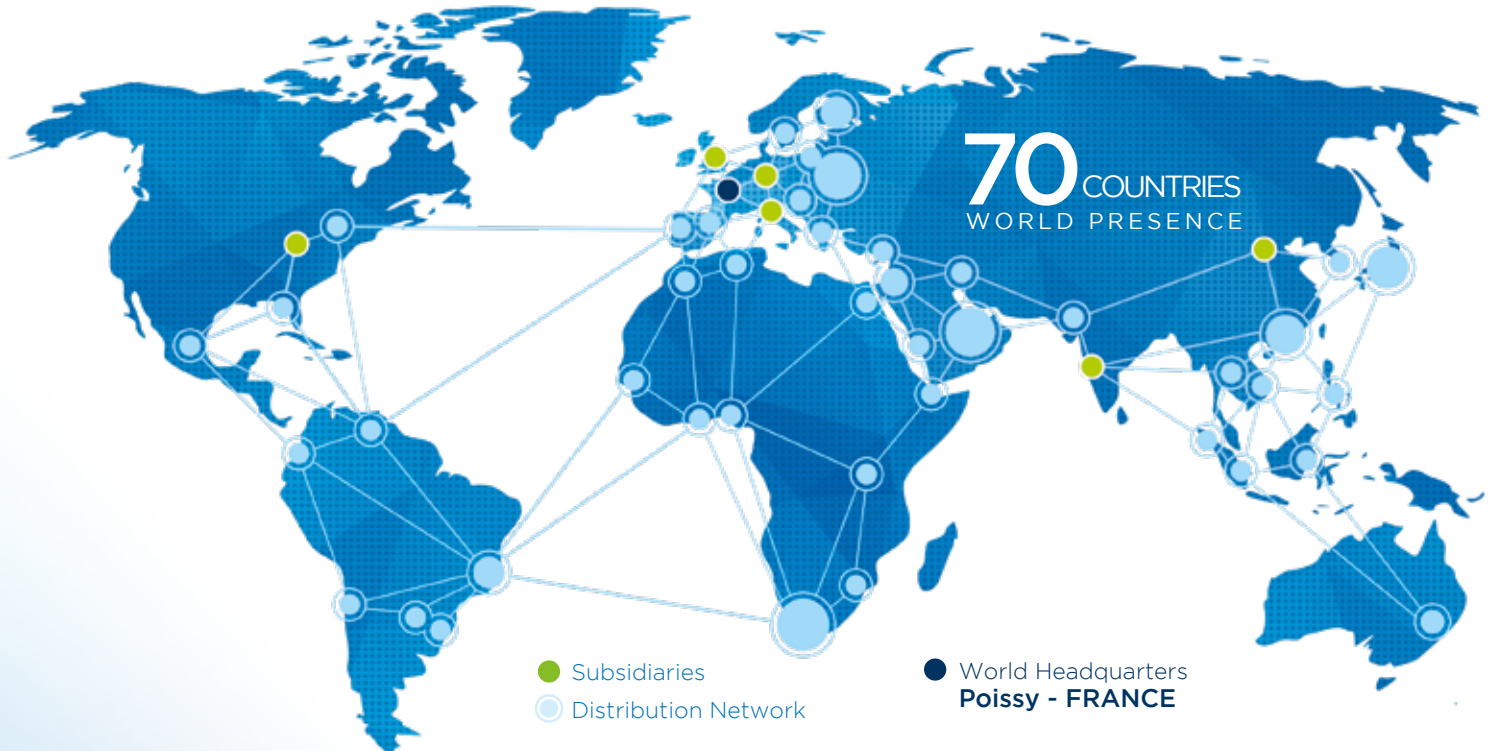
In line with its development strategy and desire to unite its technologies, production sites & sales subsidiaries, the group has created the global commercial brand **envea**TM. It hopes to provide a clearer vision on its solutions of the measurement, acquisition & processing of environmental data and services.

Faithful to the principles on which it was founded – innovation & quality, ethics & social responsibility, shared values & transparency – the group is committed to providing you with solutions and assistance at the highest standards in order to comply with applicable regulations; as well as the optimization of industrial processes for an improved efficiency, significant savings of raw materials & energy, the reduction of environmental impact.

Process - Emissions - Ambient Air monitoring solutions

Our worldwide references guarantee a perfect understanding of your needs and ability to manage a vast range of applications:

- More than 35 000 air quality monitors are measuring the pollution of cities worldwide: Rio de Janeiro, Istanbul, Barcelona, Seoul, Mecca, Delhi, Moscow, Paris, Budapest, Mumbai, Abu Dhabi, Bangkok, Dakar, Beijing, Chongqing...
- Over 25 000 processes & emission sources are monitored worldwide across a broad range of industries such as: chemical, minerals, power, incineration, food and pharma or wood industry.



Environnement S.A Group Headquarters
111 Bd Robespierre / CS 80004
78304 Poissy Cedex 4 - FRANCE
Tel: +33(0) 1 39 22 38 00
E-mail: info@environnement-sa.com

Group Companies:

USA: Altech Environment USA
China: Environnement S.A China
Italy: Environnement S.A Italia Spa
India: Environnement SA India Pvt Ltd
United Kingdom: PCME Ltd & TDL sensors Ltd
France: Environnement S.A,
iséo Environnement & Cairpol Microsensors
Germany: SWR engineering Messtechnik GmbH,
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