

## Water quality monitoring instrumentation

ECM ECO Monitoring is providing on-line monitoring solutions for most of water quality applications. The main areas are:

- Drinking water
- Waste water
- Surface and ground water
- Process water monitoring

### **Drinking water applications**



Reservoir profilers to determine contamination and algae content in different depth. The system is solar powered and a wrench is moving the analytic set up and down.



Analyzers to monitor specific bacteria such as E-COLI or Coliform, general toxicity and different algae



On-line monitoring of organic and inorganic water quality compounds Typically COD, TOC, DOC, NO<sub>3</sub>, TSS, NH<sub>4</sub>, EC, DO, pH are monitored and a spectral alarm system allows to generate an alarm in case of increased concentration of contaminants such as pesticides, aromatic hydrocarbons, nerve-paralytic agents or others.



Coagulant dosing automation to allow automatic maintaining of optimal sedimentation / filtration of source water.



Particle counters and sizers for filter backflush control and bacteria detection



Automatic water quality samplers taking water sample for later representative laboratory analysis



Iron & Manganese, analyzers for water sources



Spectrometric drinking water safety monitoring systems generating alarm for a broad range of toxic contaminants



In-situ monitoring of contaminants allows to be installed directly in the pressurized water pipes with no need to stop operation and measuring the important disinfection or contamination parameters.





Level / Flow monitoring solutions allowing accurate monitoring of water flow in pipes and open channels.

## Waste water monitoring



Monitoring of water quality components in sewer systems and waste water treatment plants (such as COD, BOD, hydrocarbons, H<sub>2</sub>S, ammonia, nitrates, pH, ORP, color, turbidity and others) allowing to optimize aeration and other important parts of the treatment process.



Monitoring of nitrification / denitrification processes allow to provide the necessary information for the control system to keep optimal performance of biologic treatment.



Level monitoring in sewers and pools using advanced ultrasonic methods free of interferences.



Sludge level/density monitoring allows safe detection of the sludge level and density of sludge.

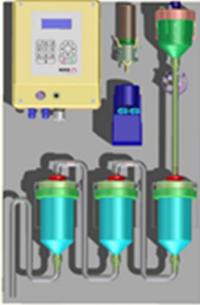


COD, BOD, toxicity, TN, TP, sulphate, sulphide, analyzers

Oil in water analyzers providing reliable monitoring of hydrocarbon pollution



Heavy metal analyzers for online monitoring of trace levels of metallic pollutants in water. Multicomponent modules allow a compact design of monitoring stations.



Automatic sampling in sewers with a robust design allowing representative sampling for analysis of pollutants into self emptying bottles to identify discharge of hazardous pollutants from industrial sources.



Monitoring of fatty acids for anaerobic biologic treatment allowing to monitor the important process of conversion of pollutants into biogas form.



Gas monitors systems to analyze biogas from anaerobic treatment to optimize energetic effectivity and to prevent corrosion.



Portable and stationary flow monitoring instrumentation allows reliable monitoring of waste water flow in tubes or open channels.

## **Surface and ground water monitoring systems**



State of art technology is allowing to apply complex electrode based and spectrometric systems submerged in the water. In this case there is no need to take water sample from the monitored water. The monitored pollutants are not only the basic pollutants like pH, DO, conductivity, ORP turbidity, etc., but also complex ones as COD, TOC, hydrocarbons in water, nitrates ammonia and others. In case of more complex monitoring systems where phosphates, sulphates, sulphides, heavy metals and some other „difficult“ compounds must be monitored, shelter mounted analytic systems must be applied.

## **Proces water monitoring**

Titration, ISE or colorimetric analyzers for broad range of applications in following industries:



- Chemical & Petrochemical
- Pulp & Paper
- Steel & Metal
- Power Generation
- Semi conductor
- Automobile
- Food & Beverage
- Mining
- Desalination & Demineralization



Oil in water analyzers providing reliable monitoring of hydrocarbon pollution

Color and turbidity sensors applications for:

- Chemical & petrochemical
- Oil & refining
- Corn & soy processing
- Beer
- Food & beverage
- Water treatment
- Biotech & pharmaceutical
- Power
- Pulp & paper



Acoustic monitor of particles in liquids, oil in water, water in oil and air bubbles



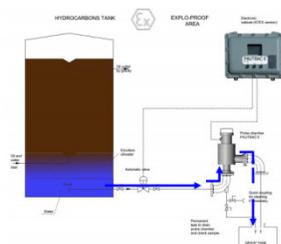
Bilge water monitoring for marine applications



Process Refractometers



Automatic draining control of hydrocarbon tanks



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