



WASTE WATER QUALITY CONTROL SYSTEMS

SICE designs, installs and maintains waste water quality control systems whose objective is to equip Waste Water Treatment Plants (WWTP) with a system able to realize and monitor continuous analysis of several physicochemical parameters in the influent and effluent of every installation.

These systems have a dual role, on one side, to detect and quantify elements in the influent waste water that may affect the purification process, giving the plant operator a very valuable information in order to anticipate such effects. On the other side, the analytical control of the effluent in order to check that the waters discharged into the receiver channels comply with the levels required by current legislation after the purification process, thus ensuring the environmental protection of the fluvial setting.

Data continuously obtained by the monitoring stations are sent to the control centre where they are managed by specialized personnel. SICE also develops the communication networks as well as the control centres (hardware, software, furniture, etc.).

SICE's extensive experience in water quality has enabled, in addition to a perfect integration of measurement elements or monitoring parameters, the development and the thorough optimization of a number of auxiliary elements which are, together with such measurement elements, those that will ensure a really operative, reliable, robust and low maintenance system.

CONTINUOUS MONITORING STATION

In order to obtain information about the water quality of the influent and effluent of a Waste Water Treatment Plants (WWTP), an instrumentation appropriate to the parameters to be measured is needed, as well as different systems that allow the water catchment at the measuring point, the transportation to measuring probes and the return to the sampling point.

The auxiliary services are basically the catchment, pumping, treatment and distribution of samples, as well as the electric and control installation, security systems, air-conditioning, auxiliary air and water networks, etc.

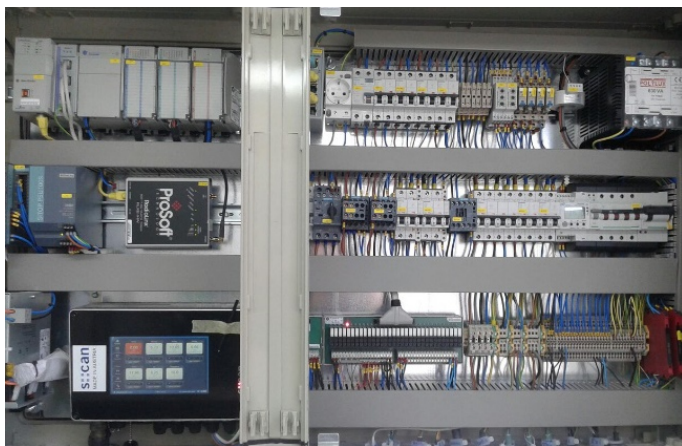
This set of installations, equipment and systems is called continuous monitoring station.



MEASURING AND CONTROL EQUIPMENT

The parameters that are often monitored in this kind of systems are organic matter (BOD, COD and TOC), turbidity, pH, conductivity, ammonium, phosphates and nitrates. Measuring equipment is designed to run continuously and automatically, with the minimum maintenance.

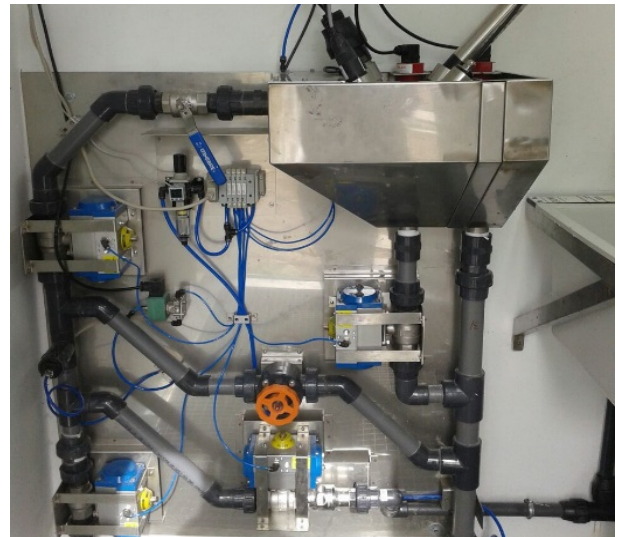
They are managed through a control system equipped with a PLC and the hardware necessary to data logging and sent and the control of auxiliary services. The control system integrates bidirectional communication with the control centre (whether in plant or remote), allowing any kind of communication, wireless (GRPS, Wi-Fi, WiMAX, satellite, etc.) or wired (optical fibre or copper).



AUXILIARY SYSTEMS

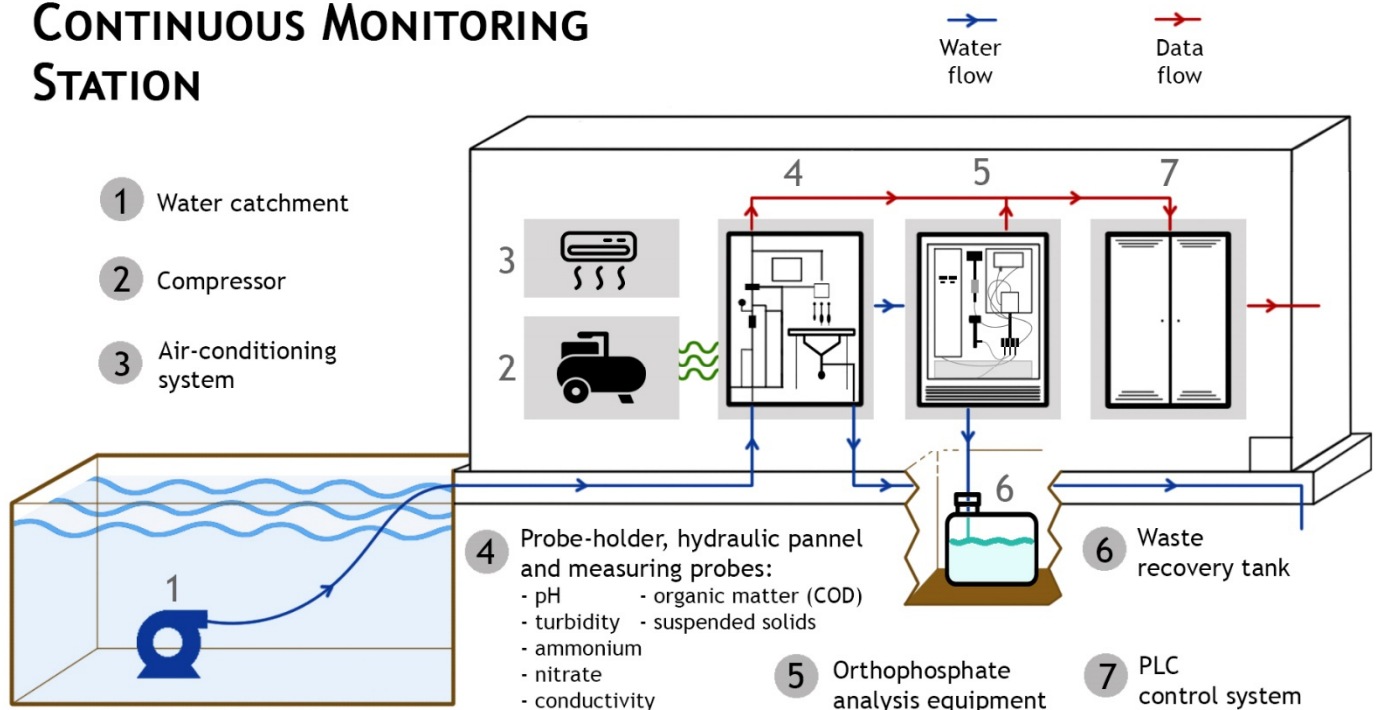
Due to the nature of the water to be analysed, the critical point of the system is in the analysing circuit (water catchment system and probes location) since the waste water, due to the high concentration of solids and foreign elements, cause stuck, failures in the catchment system, preferential flow zones, etc.

SICE's experience in this kind of systems, has enabled the design of a hydraulic panel that avoids stuck and facilitate the cleaning of the bucket and the catchment pump.



STATION STRUCTURE

CONTINUOUS MONITORING STATION



*Important: this equipment is only installed in the effluent