

Remote Monitoring Sample Room N° 1
thermoelectric E-CL – Mejillones, Chile.



Objective:

Remotely monitor the evolution of relevant variables in the application process and water treatment in boiler economizer and dome of power generation plant.

Variables to monitor:

- Oxygen in water entering the economizer (O2 Eco)
- Ph in water entering Domo (Domo Ph).
- Sample room temperature.

Solution Architecture:

This solution is, in general, the installation of interfaces capture analog signals 2 sensors on the Boards of Boiler Water Samples of the plant Mejillones.



Sample room n°1.



Oxygen Sensor in economizer.

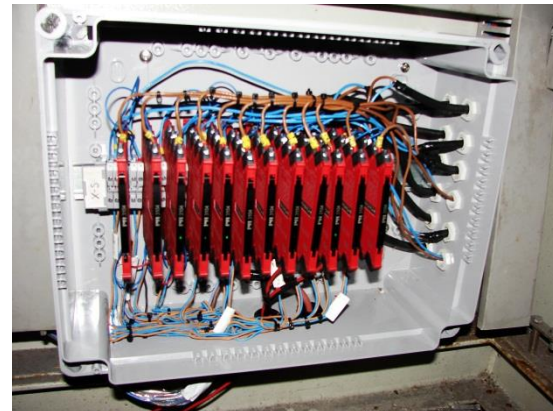


Ph Sensor Domo.

These signals are encoded to be sent as data in real time to a device that transmits through the GSM / GPRS network, to be captured and deployed web application (access from computer or smartphone) time. Taking readings were performed with 1 minute intervals between them.



Box containing data devices.



Box duplicators sensors for signal interface.

In addition to the above, this solution is able to send alarms in real time, via ringtone, email and text message to designated recipients, whenever one or more sensors recorded readings that are outside of a certain range, thus enabling implementation of corrective actions in a very timely manner.

Regarding alarms considered in this solution, these three types:

1. Alarm out parameter: When the reading is outside the configured security settings.
2. Reminder Alarm state. If the reading remains in the state of alarm, reminders are sent.
3. End of Alarm: When the reading returns within the parameters of safety.

Reports:

Weekly reports of behavior subject to monitoring variables are generated. They see information as:

1. Digital file (. xls) with database of readings during the period.
2. Executive Report (. pdf), where the following information is included for each variable:
 - Trend Graphs.
 - Maximum and minimum values registered.
 - Averages and deviations.
 - Time alarm state v / s total run time.
 - Probability Distributions.

Solution Benefits:

- Have real-time alerts, enabling take action in a timely manner.
- Avoid failures, processing delays, non-operating times, etc.. thus saving on operational costs.
- Availability of real-time critical variable.
- Availability of historical data to perform statistical analysis.
- Optimization of HH engaged in monitoring.