



GAS AND OIL

Modernisation and the improvement of a range of processes are necessary in the hydrocarbons production and refinery sector in order to meet demands of production, hydrocarbon quality, process security and/or to reduce atmospheric emissions.

SICE has the experience and knowledge required to provide the necessary services during all phases of a project within the scope of control and monitoring of industrial processes. The company supervises process controls in refineries, offshore platforms, distribution networks, power stations and in general with the key industrial processes in the energy sector.

Consultancy, engineering and solution integration services for the automation of industrial plants, offering:

- Basic and detailed engineering.
- Software solution development for process monitoring and control.
- Programming, configuration and commissioning of distributed control systems (DCS) and SCADA systems.
- Hydrocarbon flow measurement systems.
- Gas regulation and measurement stations.
- Fire protection and security systems (F&G).
- Emergency shutdown systems (ESD).
- Turnkey projects for the automation and control of processes in the fields of gas, oil, energy and the manufacturing industry in general.

EPC PROJECTS

SICE carries out multidisciplinary EPC projects covering design, engineering, operation and maintenance, as well as development, manufacture, installation and commissioning of systems.

Multidisciplinary projects covering process work, communication, instrumentation and control, security and civil, electrical and mechanical infrastructure. This type of project includes:

- Systems for the dehydration and desalting of crude oil
- Multi-stage separation systems
- Gas sweetening plant
- Construction and renovation of platforms for production surface facilities
- Heating oil systems

SCADA AND DCS SYSTEMS

SICE has noteworthy experience in the development of solutions to monitor and control industrial processes. Since the 80s it has designed, developed and implemented SCADA systems in the energy and industry sectors in general.

In particular, it implements applications to monitor and control a wide range of industrial processes, especially in the Gas and Oil sectors. The solutions are open and scalable which allows progressive growth and protects the initial investment.

They are integral solutions which cover Plant control and acquisition systems (PLC, SCADA and DCS) as well as ERP systems (SAP)

The multidisciplinary nature of SICE (automation product lines, control centres, communication, security...) allows to undertake all disciplines and phases of a SCADA project in a comprehensive and complete manner.

A deep understanding of the development of the most extended SCADA packets on the market such as Wonderware, Citect, InfoPlus etc., allows the company to adapt to the specific requirements of each client, each situation and moment.



CERTIFIED FLOW MEASUREMENT

Certified flow measurement systems are implemented for custody transfer in accordance with the main international regulations, standards and recommendations (OIML R117, API, AGA, and OSI).

SICE carries out all the processes associated with the supply of a metering skid: engineering, manufacturing, assembly and commissioning.

In recent years, SICE has implemented nearly one hundred certified metering skids for custody transfer with various primary technologies: mainly ultrasonic and mass meters, however SICE selects the most appropriate technology for its clients: ultrasonic, mass, turbines, etc.

FIRE AND GAS SYSTEMS (F&G)

Fire and gas (F&G) systems allow the security conditions of installations to be monitored in real time as well as the activation of mechanisms to deal with the incident appropriately.

SICE selects architecture and equipment in accordance with SIL integrity level requirements, following IEC-61508 and IEC-61511 recommendations.

SUPPLY AND DISTRIBUTION OF HYDROCARBONS

SICE has automated systems whose main objectives are to increase productivity, reliability and security in all Plant operations: supply, dispatch and reception measurement, pumping and tank movements.

Another objective of these systems is to provide tools for the real time control of the balance and stock of all Terminal products. Finally, they can increase buyer confidence through the implementation of dispatch measurement systems based on international standards.



EMERGENCY SHUTDOWN (ESD)

The purpose of an ESD is to protect staff, facilities and the environment when high-risk situations arise during the process.

These are systems for the monitoring and analysis of process conditions to prevent high-risk situations or to mitigate the consequences of risks, and to ensure that the process is put in a "safe state".

Architectures are defined in accordance with each client's requirements or based on a HAZOP study. According to their result, the required architecture, equipment and instruments are selected for the appropriate SIL integrity levels.