

Sirio Sistemi Elettronici S.p.A. **Activities and Product presentation**

This presentation shows SSE main activities and products :


- Design and development of control systems for compression and power generation trains composed by prime movers like: Gas Turbines, Steam Turbines, Electrical Motors and driven machines like: Centrifugal Compressors, high and very high pressure Reciprocating Compressors, Pumps and Electric Generators for:
 - Gas extraction, compression and re-injection plants;
 - Oil extraction and pumping plants;
 - Power generation and co-generation plants;
 - Industrial water and water conditioning ;
- Design and development of Performance and Condition Monitoring Systems for rotating machines (TDS / DTLMS);
- Design and development of communication systems to integrate shop floor control systems with DCS and SCADA control systems for centralized plant control;
- Turn-Key supply of control systems to retrofit obsolete controls to upgrade the software and the hardware to up-to-date platforms to improve the reliability and the efficiency of the old plants. The scope of supply includes: site survey, engineering design, construction, supply of the control system and of the instrumentation, installation, commissioning and on site training. The experiences gathered by SSE in this kind of applications guarantee to fulfill the goal minimizing the shut-down time of the Plants.
- Development of custom software packages, based on standard databases, for plant data storage, processing and off line analysis. The integrity and the speed of collection of the data is assured by the most reliable communication protocols like Ethernet TCP/IP, Profibus, Modbus TCP/IP and by the use of optical fiber for the connection;
- Expertise, Design and Technical job direction for Hazardous Area electrical and instrumentation Plants;
- Operation and Maintenance Training courses;
- Design, supply and commissioning of Training centers for operators and maintainers;
- Plant commissioning and after sell assistance;

The expertise gathered in all operating fields enables SSE to supply Control, Supervision and Monitoring Systems for industrial processes according to the Customer specification.

SSE supplies from its factory turn-key systems that include design, application software development and assembling of the control panels.

SSE is structured in four main operating divisions: Engineering, Software Development, Workshop, and site assistance. Through its divisions SSE covers the following activities:

- Site Survey for as built data collection
- Definition with the Customer of the more suitable layout of the control system;
- Issue of the design documentation that is necessary to completely describe the control system;
- Identification of the most important critical variables and control algorithms to control in a full automatic way the plant;
- Design of an optimal and user friendly operator interface (HMI);
- Design and assembly all the control panels (UCP, MCC, F&G etc.) that are included in the control system;

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- Development of all the software for the control system;
 - Development of the HMI software as a simple interface that allows the operators to monitor and control the plant from local or remote control rooms;
 - Design and installation of computer LANs that allow the operators to monitor and control the plant from multiple local workstations (DCS);
 - Development and installation of secure Web-Server platforms that allow the operators to monitor and control the plant from any workstation connected to internet around the world;
 - Development and installation of remote-control geographical networks with features similar to Web-Server platforms, using fixed workstations placed in a wide area with high security level of access;
 - Installation and commissioning of the control system on site;

SSE uses quality assurance procedures for the design, assembly, testing and commissioning of its control systems. Special attention is given to the testing phase where 100% of hardware and software is tested using dedicated dynamic simulators. The result of this policy is a drastic cut in commissioning costs and time.

SSE gives assistance through a dedicated call center or sending his technicians to site during all the life time of its product both under warranty or after sell contracts;