



Customer Satisfaction

SSK Delta Design Engineering Private Limited

Training Services Offered
By
SSK Delta Design Engineering Private Limited



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1. Company's Overview

SSK Delta Design Engineering Private Limited (in short "**SSK Design**") based in Chennai is a company providing Automation Integration and Specialist Services / Solutions on the Industrial Process Control Systems such as DCS/ESD/PLC/RTU/SCADA, etc. We specialize in design, engineering, system integration services and installing the highest quality and most advanced process and plant control systems such as Emerson's DeltaV & Ovation DCS, Allen-Breadley's PLC, Siemens PLC, GE-Fanuc PLC, LS and EASY PLCs. We have the scope and capability to bring all the benefits of our innovative approach to anything from a single control panel to a full turnkey solution for Control & Automation of complete process to Clients all around the world. We provide the automation solutions that meet global Quality Standards and excellence in engineering.

SSK Design Operations is managed by well experienced professionals and internationally minded technocrats having many years of experience in various industrial segments. We are a multi-disciplinary engineering organization in the field of Instrumentation in providing complete range of services from concept to commissioning.

SSK Design Operations focus on:

- Technology with proven capabilities to work with Automation giants.
- Our expertise is in allied technologies & is responsive for suggestions / improvements.
- We believe in timeliness & speedy turnaround.
- Trust & confidentiality are the bottom matter of such endeavour & we have embedded them as integral part of our dealing with our prestigious clients.

We deliver what we support is the theme at **SSK Design**. We take up for Engineering to single point responsibility to provide customized solutions to suit specific requirements and industrial specifications. We have a successful track record in executing the projects undertaken by us with combined work of our well trained dedicated quality conscious work force. We provide comprehensive and efficient Engineering Solutions from a pool of in-house design and development team.

Turnkey Solution: Process Study; Basic Engineering; Planning; Kick Off meeting; Detailed Engineering; Automation Vendor Coordination; Project Documentation and support for Factory Acceptance Test (FAT) / Site Acceptance Test (SAT) / Commissioning

Training Services: Introduction to the industrial standard such as reading the P&ID, Loop Wiring Diagram, Instrument hook-up drawing, I/O List, System Architecture, Panel drawing and so on; Basic training on various PLC control system; Advanced training and integration between various control system with SCADA/HMI.



2. Services Offered

SSK Design offers the following services in the field of Industrial instrumentation.

■ Design & Detailed Engineering

- ✓ Generation of Control System Specification to meet the customer's requirement.
- ✓ Selection of Automation hardware to meet the end-user Specifications.
- ✓ Review of P&IDs and Generate Instrument Index.
- ✓ Generation of Drawings / Documentation for control room instrumentation.
- ✓ Review of Package Vendor Control System's Drawings & Documentation

■ Application Engineering

- ✓ Generation of Control System's Functional Design Specification (FDS) and Graphic Design Specification (GDS).
- ✓ Development of Graphic/ HMI (Human Machine Interface) to meet the approved GDS and customer requirement.
- ✓ Development of Control Strategies to meet the approved FDS & customer supplied Control description / Boolean Logic diagram / C&E (Cause & Effect) Matrix.
- ✓ Technical Consultancy / Support
- ✓ Testing of Control Strategies and Graphics to meet the expected result.
- ✓ Generation of Factory & Site Acceptance Test procedure.

■ Support Services

- ✓ Conducting FAT & SAT as per the approved procedures.
- ✓ Providing Site Commissioning Assistance
- ✓ Standard and Customized On-Site Trainings Services
- ✓ After Sales Support

■ Training Services at our Chennai Office.

- ✓ Basic Training on Industrial Automation Control System.
- ✓ Advanced Training on Industrial Automation Control System such as Integration of PLCs with MCC (Motor Control Center) or Any other Field devices via Modbus RTU, Modbus TCP, Ethernet IP, OPC.
- ✓ Universal SCADA Development using PCVue Software and integrating with various Industrial Control System such as Allen-Bradley, Siemens, GE-Fanuc and so on.
- ✓ Working with RTU/GSM based PLCs. Transferring data using GPRS system for remotely located Control System.

■ Administration Support

- ✓ Order Entry / Co-ordination with Clients
- ✓ Planning & Scheduling
- ✓ Service Administration



3. Why the training is required?

Instrumentation is one of the prime division in any of the process industries such as oil and gas, pharma, chemical, refinery, Automobile and so on., Now-a-days, almost all the industries have adopted to accept the complete automation of their production facility in order to increase the production, improve the safety and reduce the production cost. Since the scopes of automation at the industries are increased drastically it brought more job opportunity to the instrumentation engineers having better knowledge on these automation systems.

In the previous generation, most of the industries were using the single loop controller to control the analog loop and relay based panels to control the discrete loop. Obviously it is more economical to use the single loop controllers and relay wiring, if the process requires only one or two loops to control. However, with these old methodologies if it requires to fetch the historical value of any process parameter for analysis then it was not possible. Thus industries have moved into multi loop controller which controls more than one analog and discrete loop. But, still this was not satisfying the process requirement such as monitoring all the process value of the plant at one location and to have common control. Secondly, getting the various process data of plant for analysis was bit difficult with the multi loop controller. Thus industries have moved into the Programmable Logic Controller (PLC) which satisfied the entire plant requirements.

After the PLCs were introduced in the industry, it has become very easy to control the entire plant from center control room. Secondly all the process parameters are stored in the computer and it has become very handy to fetch various plant data for analysis purpose. Since it is very flexible/simple to automate any process using the PLC controllers, almost all the manual operations were converted into automatic. This has yielded more production and less rejection of products as the manual mistakes were nullified.

Since all the industries have built with PLC system, having good working knowledge on PLCs will increase the possibility of getting the job opportunity for the engineering who are just completing the engineering degree. At the same time, these training courses improve the fault diagnosing capability of the engineering working at the industry.

Though there are many PLC suppliers exists in the industrial market, following are the PLCs which exists in most of the local as well as the international industries.

1. Allen-Bradley.
2. Siemens.
3. Ge-Fanuc

Thus getting the training on the above well known branded PLCs will help the engineers to get more job opportunity as well as improve the fault diagnosing capability on these control system.



4. Training Courses Offered

Our Training facility is well equipped with all the latest product of well known industrial PLCs such as Siemens, Allen-Bradley, Ge-Fanuc and GSM based RTU and PLC. Additionally, our facility is equipped with multiple demo system of same hardware which makes more availability of demo hardware for practicing. Following hardware demo systems are available at our training facility.

1. Allen Bradley Demo Hardware:

- a) Micro logic 1400 PLC System----- 1 no.
- b) SLC 500 PLC System-----3 no.
- c) Control Logix PLC System-----1 no.
- d) Panel View 600-----2 no.

2. Siemens Demo Hardware:

- a) S5-100U PLC System-----1 no.
- b) S7-200 PLC System-----2 no.
- c) S7-300 PLC System-----2 no.
- d) S7-400 PLC System-----1 no.

3. GE-Fancu Demo Hardware:

- a) 90-30 PLC System-----2 no.

4. Omron Demo Hardware:

- a) SYSMAC CPM1-----1 no.

5. ABB Demo Hardware:

- a) Advent Controller 31-----1 no.

6. EASY Demo Hardware:

- a) ELC-6 PLC System-----1 no.
- b) ELC-12 PLC System-----1 no.
- c) ELC-18 PLC System-----1 no.
- d) ELC-26 PLC System-----1 no.

7. GSM RTU:

- a) GSM RTU-----1 no.
- b) GPRS RTU-----1 no.
- c) GSM Modbus RTU-----1 no.



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SSK Design offers the following training courses to meet our customers' expectation and requirement.

- ✓ Level – I Basics & Configuration.
- ✓ Level – II Configuration & Implementation.
- ✓ Specialization on Integration.

1. Level – I Basics & Configuration: Following are the list of items that will be covered under this course. Generally this course is suitable for the fresh engineers as it covers the basic concept of industrial automation and working instruction for various industrial automation control system (PLCs). Duration of this training course will be 2 weeks.

a) Review on the following:

- ✓ P&ID
- ✓ Instrument Loop Diagram
- ✓ Panel Drawing
- ✓ Instrument Hook-up Drawing
- ✓ Overview on field instrumentation
- ✓ Practical exposure to Field instrumentation
- ✓ I/O List

b) PLC System:

- ✓ FDS (Functional Design Specification)
- ✓ GDS (Graphic Design Specification)
- ✓ Configure the PLC I/O
- ✓ Simulate the field I/O
- ✓ Getting the process data into the SCADA
- ✓ Develop the sample Logic
- ✓ Simulate the logic and test the results.

2. Level – II Configuration & Implementation.

Generally this course is suitable for the plant engineers as it involves more workshops on various PLCs including the HMI development. Following are the list of items that will be covered under this course. Duration of this training course will be 2 weeks.

- ✓ Review of System Architecture
- ✓ Hardware & Software
- ✓ Overview on FDS and GDS documents.
- ✓ Configure I/O
- ✓ Simulate the field I/O
- ✓ Develop Graphic
- ✓ Fetch the field value into the PLC HMI graphics.
- ✓ Hardware diagnostic.
- ✓ PLC Workshops.



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3. Specialization on Integration.

This course is generally being useful for the plant engineers as well as the system integrator. This involves in integrating various control system into one plat form/HMI/SCADA. Additionally it covers the following items. Duration of this training course will be 2 weeks.

1. Modbus RTU Master/Slave communication.
2. Modbus TCP Master/Slave communication
3. OPC ("OLE (Object Linking and Embedding) for Process Control")
4. Device net Communication.
5. Transferring PLC data via WIFI signal
6. PCVue SCADA Software.



5. Supply of Training Simulation Kit

Development of industrial automation demand engineers having very good exposure to these automation systems in order to work with and trouble shoot. It may not be possible by all the engineering students to afford the cost to attend the training courses. Secondly, since it has become mandatory to learn about the PLCs to increase the job opportunity, one of the best options to fulfill the requirement is the college to procure such training kit and conduct training for the final year engineering students.

Moreover, having such training simulation kit will definitely increase the value of the college as it involves in getting the job opportunity to their student studying at their college.

We supply the complete demo system of well known PLC brand to increase the possibility of getting the job opportunity to the students. We can supply either one of the following PLC simulation kit at very attractive price and provide Two years of guarantee.

1. Allen-Bradley PLC System.
2. Siemens PLC System.

If the above proposal is not attractive to the colleges then alternatively, we can arrange to ship our training simulation kit to the colleges and conduct onsite training for a mutually agreed pre-defined period.



6. Our Training Facility

Training Center - 1:



Training Center - 2:

