



Monitor Systems

## **Job Specification – Senior Project Engineer – Controls & Instrumentation**

### **Overview**

As Senior Controls & Instrumentation Engineer you will be responsible for developing systems and preparing control & instrument deliverables based on process specifications across the project and product life-cycle. This Includes development of designs and schematics, selection of components, development of all software, selection of instrumentation, sub-contract manufacturing support and installation/commissioning of control systems.

You will create detailed specifications, datasheets, instrument lists, IO schedules, cable schedules, cable block diagrams, termination drawings, hook-up drawings, layout drawings, and material requisitions.

You will be highly motivated, able to work independently, and have demonstrable leadership qualities. You will be confident in your own ability to deliver the project on time and within budget. You will be an experienced C&I engineer who can identify with the majority of the following criteria.

- Good knowledge of the C&I related British and international standards;
- Full C&I project life cycle experience;
- Experience in preparation, or reviewing full C&I project documentation including functional descriptions, specifications, wiring/loop diagrams, P&IDs and others;
- Good understanding of programmable logic controllers (PLC) including both hardware and software;
- Good understanding of industrial communication networks and its protocols including Profibus, Profinet, Modbus TCP
- Good knowledge of process instrumentation used for both, basic process control systems and safety instrumented systems (SIS). Ability to specify, install and commission instrumentation;
- Good understanding of safety instrumented systems design and safety life cycle.
- Good understanding of basic cybersecurity requirements for operational technology.

- Good knowledge of ATEX - Ex instrumentation, devices, and its installation requirements;
- The ability to produce technical reports, and able to clearly explain complex technical C&I related issues;
- The ability to push and justify the design changes to meet good practice and other requirements;
- The ability and willingness to travel worldwide to participate in meetings, completing site acceptance tests (SAT) and conduct inspections/audits;
- Monitoring of all on site activities including installation, commissioning, and site acceptance testing (SAT)
- Mentoring and support less experience engineers
- The ability to engage with, and influence, a team of professionals
- Share knowledge, experience, reward and leadership

## **Qualifications**

### **Essential:**

- Solid experience of Control and Instrumentation engineering specifically in projects.
- Generation of project documentation.
- Have the ability to generate and modify programs in TIA Portal and Simatic Manager & WINCC SCADA V7 or equivalent
- The ability to generate C&I schematic drawings in AutoCAD LT
- Hazardous Area experience
- Previous site works experience
- To be technically astute and conversant with the latest advances in technology
- Possess good communication and interpersonal skills
- Be able to work in a team as well as on own initiative
- Possess a full UK driving licence.

### **Desirable:**

- Possess knowledge of functional safety
- Be highly organised with attention to detail
- Be results focused with the ability to meet commitments & deadlines

## **Responsibilities**

### **1. Design**

You will:

- develop PLC systems from scratch based on functional specifications and considering the full project life-cycle
- develop designs and schematics
- select instrumentation and control components
- develop all software aspects of the systems
- ensure that all C&I design changes are captured by the change control process.
- participate in risk Identification/Hazard Analysis and HAZOP.
- provide technical input during design phase,
- develop specification and prepare material requisitions for control systems, instruments, and other components
- issue material requisitions to vendors for enquiry, order placement and for any subsequent revisions
- participate in design reviews
- perform calculations e.g. for intrinsic safety, etc.
- developing project procedures, standards and functional requirements specifications for control systems and instrumentation

### **2. Survey**

You will:

- carry out feasibility studies and reviewing design alternatives - Undertake site surveys
- provide relevant knowledgeable practical skills in the response and actions for:
  - Site visits and site surveys
  - Site queries and discussions
  - Supplier, vendor, contractor, client and site related discussions
  - Site based activities
- prepare, check, approve and provide technical input into project deliverables to the required quality standards in conformance with or better than, the approved budget and programme

### **3. Installation**

You will:

- install and commission instrument control systems
- liaise with other disciplines in the execution of the work.
- observe and operate both Monitor Systems and customer safe systems of work, complying with all legislation.
- ensure that the applicable legislation and standards are applied across all aspects of C&I delivery to the Project
- attend site during construction and commissioning phase when required.

### **4. Commissioning**

You will:

- actively participate in installation / configuration / implementation and commissioning of Monitor Systems products
- liaise effectively with the Engineering Manager to solve any problems which arise

### **5. Technical Support/Document Control**

You will:

- provide C&I Engineering technical support
- take ownership of C&I technical queries (TQs) to ensure satisfactory resolution.
- be responsible for diagnosis and rectification / management of issues in complex application software.
- implement smaller system upgrades or modifications that have the potential to significantly impact the customer's process. Implement system changes to live plant without compromising process safety and operation.
- provide C&I technical services to existing clients as instructed
- interface with clients' engineering representatives establish and maintain a project repository of project documents
- deliver documentation that is technically correct to the required standard and schedule

## **6. Project Delivery/General**

### **You will:**

- understand project life cycle from requirements to delivery and develop project documentation.
- ensure timely communication to provide effective turn around on customer feedback and billings.
- work on specific schemes of work as instructed by the Engineering Manager
- meet the requirements of the agreed schedule identified within the project plan for the C&I deliverables as assigned by the Engineering Manager
- liaise with and manage interfaces with other engineering disciplines; process, electrical, mechanical, piping etc. advise the Engineering Manager of any major slippages and their causes, major technical problems and unresolved differences with other Groups, and requests for changes by the Client which may constitute a contract change
- participate in engineering reviews.
- engage with any other activities that would be realistically required of the role.
- represent Monitor Systems in all customer interactions in a manner that is consistent with Monitor Systems values
- liaise with other Groups and Client as necessary