Job Profile: Senior Process Engineer

Organisational setup and Job Information	
- Location: - Department: - Reporting line:	Briggs of Burton Plc - based in Burton upon Trent, England Engineering Lead Engineer / Dept. manager

Job Focus

To provide proactive Process Engineering services to the Briggs Group of companies, specifically for the pharmaceutical sector of the business. Majority of this being through exceptional delivery of large-scale capital projects and also providing support to sales & proposals, business development, process / project engineering and general project execution across. To contribute directly and indirectly to the success of the business.

The role & Responsibilities

Management responsibilities

- Ensure both Briggs and Client Health & Safety and GMP standards are upheld across all activities.
- Project responsibility with input into departmental functions and operations which consist of resource allocation, technical and project deliverables.
- Coordinate with the Briggs Quality Assurance, procurement, planning and H&S teams.
- Management of the day-to-day activities of any allocated Process Engineers, and ensuring they are used effectively and efficiently.
- Management of quality, completeness, consistency, and accuracy of allocated deliverables
- Track costs, project progress, provide updates and deliver on time.
- Manage and develop positive client relationship including Key Client Management.
- Provide technical expertise and guidance, training and mentoring of Process Engineers.
- Line Management of Process engineers, graduates, and apprentices.
- Assist with the development and delivery of the Business' strategic goals.

Tasks and Duties

Performs tasks in some complex or non-routine contexts. Significant responsibility or autonomy. Oversees the work of others, assisting with:

- **PFDs Process Flow Diagrams** – Showing the main process flows and processes required in simplified flow charts, with capacity, flow etc.
- **P&IDs Process and Instrumentation Diagrams** – Showing in schematic detail plant, pumps, heat exchangers, valves, instruments, and pipework, with tag numbers and sizes/duties. Includes development of equipment database to include process fluids, flows, and equipment duties.
- **Process drawing control and management** – Planning, management, and control of BFDs, PFDs & P&IDs (as above), including review, approval, value engineering and change.
- **Utilisation Charts** – Showing plant utilisation over a few batches / extended time, often with utility loads. Produced graphically or using process modelling software.
- **Site Surveys** – Gather information to allow the production of P&IDs of existing equipment.
- **Mass Balances** – Calculating and defining material / product flows in, between and out of process operations.
- **Energy Balances** – Calculating and defining energy flows in, between and out of process operations.
- **BOD Basis of Design** – Capture the client's requirements in a single document confirming the project scope.
- **Design Reviews and Qualification** – Attend / lead design reviews internally and externally with customers to confirm/agree design. Ensure designs are verified against customer requirements

- **Process Description** – Describes in English how the plant should operate, to enable software development.
- **Heat Transfer Design/Specification** – Thermal design calculations to size heat exchangers and produce Heat Exchanger Datasheets/Specifications.
- **Fluid Flow Design/Specification** – Pressure drop calculations to size pumps and produce Pump Datasheets/Specifications.
- **Plant Design / Specification** – Design, sizing and specification of tanks and process equipment such as dryers, evaporators, separators, filters, etc.
- **3D Model Review** – Review 3D models of plant and pipework produced by draughtsmen/project engineers to ensure the plant layout suits the process objectives and ergonomic requirements.
- **FSM Functional Safety Management** – In conjunction with Electrical Engineers and customer to ensure plant is commissioned to required operational safety standards, and to degree demanded by the agree project scope.
- **HAZOP Hazard and Operability Analysis** – Review of the plant design based on P&IDs, URS etc, to ensure it will operate safely and reliably.
- **FDS Functional Design Specification Review** – The FDS describes in detail how the automation system will control the plant, based on the URS – Usually produced by Automation engineers and reviewed by Process engineers (and customer).
- **FEED Front End Engineering Design Studies** – Conceptual / Feasibility studies assisting clients determine appropriate project scopes.
- **Software FAT Factory Acceptance Test (Simulation)** – Review of completed process automation software to ensure it provides the functionality required (as defined in the Process Description & FDS).
- **Software CAT Customer Acceptance Test (Simulation with Customer)** – Final review of process automation software with the customer.
- **Programme and Cost** – Liaison with Project Manager & other Engineers To ensure scope, programme (schedule), and costs / budget are maintained and controlled. This includes consideration of cost, schedule, and operation / safety before making changes, and communication of these changes, especially once purchasing & implementation commences.
- **Commissioning** – Taking the process plant from installation through to reliable operation and client hand over. Including plant walk downs, dry testing, wet testing, product trials and performance tests.
- **Preparation and Execution of Qualification Protocols** – Preparing detailed testing protocols to demonstrate compliance with customer requirements, as well as expected technical and cGMP requirements.

Desired Knowledge & Experience

Education:

- Chemical Engineering or similar Degree, and other relevant experience/qualifications.
- Master's Degree Preferable.
- Chartered Engineer or prepared to work towards IEng/CEng status.
- Language – English (any foreign language skills could be considered beneficial).

Professional experience:

- A minimum of 5-years' experience in Engineering as part of degree course or other.
- Preferably knowledge of engineering within hygienic process industries.
- Experience in working in regulated environment, such as the pharmaceutical industry, and application of GMP and GDP
- Demonstrable experience of delivery through full project and validation life cycle; URS, DQ, FAT, SAT, IQ, OQ, PQ and handover to production.
- Understanding of Briggs products and engineering services.

Technical skills:

- MS office also proficient in Excel, Access, Microsoft Project.

Required competencies & behaviour

- Result driven, confident, and dynamic personality.
- Self-motivated with ability to gel and proactively support existing and future teams.
- Communicate problems / issues.
- Strong focus on quality, completeness, consistency, and accuracy engineering deliverables.
- Work to deadlines.

- High level of integrity, open mindedness, and flexibility.
- Work as a team to increase efficiency and communication.
- Excellent communication skills, sociability, and social know-how.
- Attention to detail.
- Word processing

Remarks:

- International and national travel will be an essential part of the role, this would be both regular travel for business meetings, also extended periods of time associated with project work as and when required to meet the Business, Client and Project needs.
- This job description is issued as a guideline to assist you in your duties, it is not exhaustive.
- Due to the evolving nature and changing demands of our business this job description may be subject to change.
- You may, on occasions, be required to undertake additional or other duties within the context of this job description, and according to the needs of the Company