



## Process Engineer – Senior Staff

### General Description

The process engineer is extremely involved in the front-end of projects and then shifts to a support role during the detailed design phase. The process engineer interfaces with the client to understand the goals of the project. Based on the client's needs and desired outcome, the process engineer develops the conceptual design of the project. This requires creativity, good fundamental engineering skills and knowledge of available process technologies.

At the Senior Staff Process Engineer level, work is performed independently. The assigned projects are large and complex in nature and the scope may be undefined. The Senior Staff Process Engineer is considered an expert in a technical area and is sought out by clients for their expertise. Clients utilize this person as a knowledgeable resource for an area of their business. The Senior Staff Process Engineer is part of the Process Engineering Group and reports to the Chief Operations Officer. This position has no official supervisory responsibility; however, this position may give direction and guidance to less experienced process engineers within the group and/or direct the efforts of contract resources and consultants.

### Duties & Responsibilities

- Work with client to develop the scope of work for a project.
- Develop the process flow diagram for a complex process system(s).
- Model a complex process system(s) utilizing simulation software.
- Develop the heat and material balance for a complex process system(s).
- Run hydraulic calculations to determine pipe sizes.
- Run calculations to size all the pieces of equipment for a project.
- Input process data into equipment data sheets.
- Develop a Piping & Instrument Diagram for a complex process system(s).
- Gather plant process data (for example: flow rate, temperature, pressure). Analyzes the plant data for process design development.
- Prepares technical reports summarizing process design requirements.
- Works on multiple projects at one time.
- Participates in plant startup and/or commissioning activities.
- Assists in the preparation of process unit operational manuals and startup/shutdown procedures.
- Prepares process plant and equipment specifications.
- Participates in preparation of technical proposals.
- Oversees, reviews, and directs the work of less experienced process engineers.
- Completes complex process studies and provides recommendations on potential modifications to clients

### Minimum Qualifications

- BS degree in Chemical Engineering, Process Engineering, or equivalent.
- Over fifteen years of work experience in Process/Design Engineering or related experience.
- Proficient computer skills including word processing and creating spreadsheets.
- Passed the Fundamentals of Engineer exam (FE), or do so within one year of employment.
- Excellent oral and written communication skills.



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- Proficient computer skills including word processing and creating spreadsheets.
- Advanced working knowledge of HYSIS, STX, Sulsim or another commercially available simulation program.
- Be able to take trips (sometimes more than a week) to client sites on an infrequent basis – sometimes on relatively short notice.
- Can maintain a valid driver's license.

### **Preferred Qualifications**

- Experience in an industrial setting (manufacturing facility, oil refinery, chemical processing, mine or mill).
- Process analysis/design engineering experience in one or more of the following areas:
  - Petroleum refining
  - Gas processing and compressor stations
  - Power generation
  - Materials handling
  - Mineral processing
- Advanced understanding of economic analysis.
- Membership in a professional association that indicates a commitment to continuing professional development.
- Holds a license as a Professional Engineer (PE)

### **Classification**

Exempt

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