

Job Description – ASU Process Engineer

1.0 Purpose

Job Descriptions are part of Company Quality Policies and Procedures.

This standard defines the tasks and responsibilities of the Process Engineer for the ASU Business Unit. The standard is valid for all employees associated with this role.

2.0 General:

Provide quality process designs in the specific areas of cryogenic and non-cryogenic air separation processes. Ensure proper process information is developed, reviewed and made available during execution of either a proposal or a project. Preparation and review of process engineering documents will involve not only development by the Process Engineer but also will require participation in the preparation of engineering specifications owned by others.

3.0 Tasks and Responsibilities:

The Process Engineer shall be responsible for, but not limited to, the following:

- Perform process design, develop preliminary process flow diagrams and provide performance estimates for client requested studies and/or budgetary proposals.
- Development of process designs for proposals that result in securing project work for the organization. Specific details of the work required include:
 - Thorough review of customer's inquiry and/or Request for Process Design information.
 - Perform the conceptual process design to provide a complete unit that meets the customer's stated needs and product specifications.
 - Make computer-based process simulation calculations and/or perform hand calculations for flow rates, heat and material balances.
 - Select or participate in the selection of proper materials of construction for major equipment and piping components.
 - Develop/prepare process data sheets for major equipment.
 - Provide or review the process vessel/reactor/distillation column size, operating levels, temperature, pressure and corrosion requirements.
 - Perform or review detailed pressure drop calculations for all major process lines.
 - Prepare the process portion of the proposal write-up (including but not limited to Special Features, Process Description, Design Basis, Recoveries & Utilities, and Guarantees). Review these write-ups with the Department Director and the responsible corporate officer.
 - Support the Sales Department by participating in technical detail discussion with proposal managers and/or clients.
- Provide process-engineering tasks as required to ensure a project is executed cost effectively and passes the required performance test. Specific details of the work required include:
 - Perform process-engineering tasks as required should the proposal become a project.
 - Control and maintain the process flow diagram throughout the project.
 - Review designated major equipment documents received from the selected vendor prior to purchase as needed.
 - Assist the instrument engineer with proper process data for instrumentation and valve sizing, and specifications as needed.
 - Participate in the HAZOP and/or PSM for the project (if required).
 - Assist Plant Engineer, Project Engineer and Project Manager.

- Participate in plant performance tests (when required).

4.0 Education and Experience Required:

- Minimum of 3 to 5 years experience.
- Demonstrated, proven skills in the areas process design and engineering, start-up and performance testing.
- Bachelors Degree in Chemical Engineering.
- Graduate level courses or degrees are preferred.

5.0 Skills Required:

- Intermediate level skills with Microsoft Office software and Windows Operating System.
- Knowledge and handling of data based process calculation programs are preferred.
- Ability to work with minimal supervision
- Effective analytical and problem-solving skills
- Ability to prioritize workload to meet deadlines
- Attention to detail

6.0 Travel Percentage:

Moderate, 20 %

7.0 Physical Requirements:

- While performing the duties of this job, the employee is regularly required to talk or hear. The employee frequently is required to sit. The employee is occasionally required to stand; walk; use hands to finger, handle or feel; reach with hands and arms; climb or balance; and stoop, kneel, crouch, or crawl. The employee must frequently lift and/or move up to 10 pounds and occasionally lift and or move up to 40 pounds. Specific vision abilities required by this job include close vision, color vision, and ability to adjust focus. The employee must frequently climb to heights of 200 feet.

8.0 Department:

- ASU

9.0 Reports To:

- ASU Engineering Manager

10.0 FLSA Status:

- Exempt

11.0 Direct Reports:

- None

12.0 Salary Grade:

- 10 to 12 based on experience

13.0 Approval:

- Manager: _____ Date: _____

• Employee: _____ Date: _____