

REQUEST FOR PROPOSAL (RFP)

Gonzalez, Bell and Hess

PROJECT OVERVIEW

Name: Synth Manuel Modernization
Type: Modernization
Location: East Manuel, TX (Factory Complex)
Industry: Chemical Processing
Value: \$18,632,986
Complexity: 3/5
Date: April 09, 2025
Disciplines: Mechanical Engineering, Piping & Pipeline, Process Engineering
Regulations: ISO 14001

SCOPE OF WORK

Scope of Work: Chemical Processing Facility Modernization

Project Goal: To modernize a section of the existing chemical processing facility, improving efficiency, safety, and environmental compliance (where applicable to ISO 14001).

1. Mechanical Engineering:

* **Task 1: Reactor Vessel Upgrade:** Replace the existing 5m diameter x 10m high stainless steel (316L) reactor vessel with a new vessel of identical dimensions, but incorporating advanced internal mixing technology (specify vendor and model). The upgrade will include detailed design drawings, material specifications adhering to ASME Section VIII, Division 1, and a complete bill of materials.

* **Task 2: Pump Replacement and Optimization:** Replace three existing centrifugal pumps (specify existing model numbers) handling corrosive liquids with high-efficiency pumps (specify new model) capable of 200 m³/hr flow rate at 50 bar pressure. The task includes pump curve analysis to optimize operating parameters, detailed specifications, and procurement documentation.

2. Piping & Pipeline:

* **Task 1: Process Line Rerouting:** Reroute a 6-inch diameter, schedule 80 carbon steel process line (handling a specified chemical, with temperature and pressure parameters specified) for 150 meters to avoid interference with the new reactor vessel, ensuring compliance with ASME B31.3. This includes detailed isometric drawings, piping specifications, and a supporting stress analysis report.

* **Task 2: Installation of New Instrumentation Lines:** Install new instrumentation lines (specify diameter and material) for pressure, temperature, and flow measurement on the upgraded reactor vessel and associated pumps. This work involves routing and supporting lines to existing instrument panels, providing detailed drawings and specifications for all fittings and valves.

3. Process Engineering:

* **Task 1: Process Optimization Study:** Conduct a process optimization study focusing on the upgraded reactor and associated unit operations, aiming for a 10% increase in production efficiency. This includes process simulations using appropriate software (specify software), developing optimized operating parameters, and delivering a detailed report with recommendations.

* **Task 2: HAZOP Study for Upgraded Section:** Perform a Hazard and Operability (HAZOP) study for the entire upgraded section of the facility, including the new reactor vessel, pumps, and piping. The study must identify and mitigate potential hazards, complying with relevant safety regulations, and generating a comprehensive HAZOP report.

Cross-Disciplinary Tasks:

* **Task 1: Integrated Design Review:** Conduct regular integrated design reviews involving mechanical, piping, and process engineers to ensure compatibility and efficient coordination between disciplines. This review process should use standardized review protocols and result in a final signed-off design document.

* **Task 2: Construction Support & Commissioning:** Provide engineering support during construction, including resolving field issues and supervising the commissioning of the upgraded equipment and systems. This phase will involve on-site inspections, participation in equipment testing, and preparation of commissioning documentation.

Complexity Impact Note: The project complexity is rated as 3/5 due to the significant upgrade scope but the use of established technologies.

REQUEST FOR QUOTATION

Request for Quotation: Synth Manuel Modernization

Project: Modernization of a chemical processing facility section at East Manuel, TX.

Project Goal: Enhance efficiency, safety, and environmental compliance (ISO 14001) through a targeted modernization.

Scope of Work (detailed description attached): This project involves the upgrade of a reactor vessel, pump replacement, process line rerouting, installation of new instrumentation, process optimization, and a HAZOP study. The complete scope of work is detailed in the attached document.

Required Qualifications: Minimum 3 years' experience in chemical processing plant modernization, proven track record of regulatory compliance (specify relevant regulations).

Proposal Requirements:

1. Technical Design: A concise (1-2 page) technical design proposal outlining your approach to each task, including proposed equipment specifications (vendors and models).

2. Cost Breakdown: A detailed cost breakdown aligned with the scope of work, clearly identifying all labor, materials, and other costs.

Evaluation Criteria: Technical Approach (50%), Cost (30%), and Experience/Qualifications (20%).

Timeline:

- * RFQ Release: April 09, 2025
- * Questions Due: April 24, 2025
- * Proposals Due: May 04, 2025
- * Project Start: May 09, 2025
- * Project Duration: 16 months

Contract Type: Time & Materials

Submission: Submit proposals electronically to procurement@chemicalprocessing.com

Contact: [Your Contact Name/Title]

(Attachment: Detailed Scope of Work Document)

CONTACT

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TIMELINE

Include key dates such as submission deadlines, inquiry deadlines, and project start dates.