



## Job Description

**Job Title:** Project Engineer (Mechanical / Electromechanical)

**Department:** Engineering

**Business Unit:** Agriculture

**Reports To:** Lead Engineer

### SUMMARY

This individual will research, design, test and commercialize new products as well as continually improve existing products in Shur-Co's Agriculture Business Unit. He/she will create technical product specifications and develop products which meet all performance, reliability, and cost requirements. They will interface directly with customers and all Shur-Co departments as well as provide Engineering representation on Cross Functional Teams (CFTs). This individual will document product development progress and issue progress reports at regular intervals. They may also manage projects and facilitate CFT product development meetings.

### ESSENTIAL DUTIES AND RESPONSIBILITIES

- Communicate with customers, Sales, Marketing and Quality teams to uncover and define unmet customer needs. Create accurate and complete product specifications based on defined product objectives.
- Prepare guidelines and procedures to develop company products per specifications. This includes investigating material/component specifications, vendors for part procurement, cost effective processes, fit & function, tolerance assessment, methods for manufacturing product, innovative design solutions, problem resolution and other research as defined to promote the continuous advancement of the engineering effort.
- Utilize Shur-Co CAD tools to create accurate models and drawings of mechanical components and assemblies.
- Create and maintain bills of material and costing models. Monitor costing during development and ensure target material and labor costs are not exceeded.
- Communicate and coordinate with the manufacturing and quality teams to ensure all components can be efficiently manufactured, assembled, and inspected as designed to a costing level acceptable to the project. This includes assisting in the design and manufacturing of jigs/fixtures to aide in the building of designed product for the desired performance.
- Coordinate fabrication, sourcing, and assembly of components for engineering prototypes. Test prototypes to verify conformance to design specifications. Document and file test results.
- Define and document critical assembly parameters including coordinating with Manufacturing team to align assembly procedures with design requirements.
- Provide elevated technical assistance to manufacturing team during product launches.
- Visit customer facilities and farm shows to identify unmet needs, resolve design related issues, troubleshoot, supervise/perform prototype installs and train OEM manufacturing teams on proper installation/operation of Shur-Co products and systems. Potential travel with overnight stay(s) required is estimated at 15-20%.
- Monitor product failures and institute design improvements if failure rates exceed acceptable levels.
- Create and publish project status reports at assigned intervals. Identify and resolve development obstacles as they occur to keep project timing on track.
- Create and maintain accurate project records utilizing Shur-Co documentation processes.
- Create initial drafts of owner's manuals, installation procedures, and patent applications.

- Simultaneously organize and manage multiple projects and priorities.
- Identify and lead lean events for continuous improvement of Shur-Co products and processes.
- Work to promote a “TEAM” approach throughout Shur-Co with a positive work attitude to elevate the skills of everyone while enhancing product designs and maintaining product standardization.
- Other duties may be assigned.

## QUALIFICATIONS

**Education and/or Experience:** A Bachelor of Science degree in mechanical engineering (or at least 5 years’ work experience designing mechanical components) and a minimum of 3 years’ work experience in a manufacturing environment are required. Experience in metal fabrication is preferred.

**Language Skills:** Ability to read, analyze, and interpret technical documents and procedures. Ability to write clear and concise professional level technical reports, procedures, and correspondence. Ability to effectively present technical information and respond to questions from groups of managers, engineers, or customers.

**Mathematical Skills:** Comprehension of plane and solid geometry and trigonometry as they apply to the design and measurement of three-dimensional components. Ability to create and apply complex algebraic equations and mathematical formulas to analyze data and predict outcomes.

**Reasoning Ability:** Ability to solve practical problems involving multiple variables. Ability to perform root cause analysis and determine proper corrective actions. Ability to interpret a variety of instructions furnished in written, verbal, diagram, or schedule form.

**Computer Skills:** To perform this job successfully, the individual must have experience with 2D and 3D engineering CAD software and the ability to design and model various mechanical components and assemblies. This individual must also utilize Microsoft Office software to create and manage advanced spreadsheets and technical documents. Experience with MRP software is highly desirable.

**Other Skills and Abilities:** Ability to use basic hand tools to assemble and disassemble parts. Ability to use measurement tools (calipers, micrometers, gauges, etc.) to measure components and verify design conformance. Ability to read, comprehend and create prints and technical drawings.

**Other Qualifications:** Able to execute essential duties with little supervision. Ability to work with cross-functional teams to support customer needs.

## PHYSICAL DEMANDS

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

## WORK ENVIRONMENT

While performing the duties of this Job, the employee is occasionally exposed to moving mechanical parts and machines, chemical fumes or airborne particles and risk of electrical shock. The noise level in the work environment is usually moderate. Occasional travel to external customer facilities is required, including occasional installation of Shur-Co products on customer vehicles.

(Reasonable accommodations may be made for individuals with disabilities to perform essential job functions.)