REQUEST FOR PROPOSAL (RFP)

Wells, Greene and Martin

PROJECT OVERVIEW

Name: Indust Melissafort Facility Upgrade
Type: Facility Upgrade
Location: Melissafort, MH (Refinery Zone)
Industry: Manufacturing
Value: $2,158,054
Complexity: 2/5
Date: April 09, 2025
Disciplines: Electrical Engineering, Industrial Automation, Process Engineering
Regulations: ASME Standards, OSHA Regulations

SCOPE OF WORK

Scope of Work: Industrial Manufacturing Project - Automated Packaging Line Upgrade

Project Goal: Upgrade an existing manual packaging line to a semi-automated system, improving efficiency and reducing labor costs. This involves integrating new automated equipment with the existing infrastructure.

I. Electrical Engineering:

1. Power Distribution Upgrade: Design and install a new 480V, 3-phase power distribution system for the automated packaging line, including a new main breaker panel (1200A capacity), sub-panels for individual machines (rated per equipment specifications), and appropriate conduit and wiring (using THHN copper wire per NEC standards). Deliverables include detailed electrical schematics, panel layouts, and installation drawings.

2. PLC & HMI Programming: Program a Rockwell Automation PLC (CompactLogix 5370) to control the automated packaging system, integrating sensors (proximity, photoelectric) for material detection and machine sequencing. Develop a user-friendly HMI (PanelView Plus 7) interface for operator monitoring and control, including real-time data logging and alarm management.

3. Safety System Integration: Design and implement an emergency stop system compliant with OSHA regulations, incorporating E-stop buttons at strategic locations along the line and linking them to the PLC for immediate shutdown. Ensure the system meets NFPA 79 standards for electrical safety in industrial environments.

II. Industrial Automation:

1. Conveyor System Integration: Integrate a new 30-foot long roller conveyor system (3" diameter rollers, 24" wide belt) into the existing packaging line, adjusting the height and orientation to seamlessly connect with upstream and downstream equipment. Ensure proper alignment and speed synchronization to avoid material jams.

2. Robotic Arm Integration: Integrate a 6-axis robotic arm (Fanuc R-2000iC/165F model) for automated palletizing of finished packages. Program the robot's movements using RobotStudio software to optimize cycle times and minimize wasted space. Ensure all safety features are implemented and tested thoroughly.

3. Vision System Implementation: Install and configure a vision system (Cognex In-Sight 7000 series) to inspect finished packages for defects (e.g., damaged boxes, missing labels). Develop algorithms to identify defects and trigger rejection mechanisms.

III. Process Engineering:

1. Line Layout Optimization: Optimize the layout of the automated packaging line to minimize material handling distances and improve workflow. This includes creating a detailed process flow diagram and utilizing simulation software (e.g., AnyLogic) to validate proposed layout and cycle times. Deliverable includes a finalized line layout drawing and a simulation report.

2. Packaging Material Selection: Evaluate and select suitable packaging materials (corrugated boxes, tape, etc.) to meet product protection requirements and comply with industry standards. Develop a material specification sheet detailing material properties, supplier information, and quality control procedures.

3. Process Documentation: Develop comprehensive Standard Operating Procedures (SOPs) for the operation and maintenance of the upgraded packaging line, including safety procedures, troubleshooting guides, and preventative maintenance schedules.

IV. Cross-Disciplinary Tasks:

1. System Integration Testing: Conduct comprehensive testing of the integrated system, ensuring proper communication and data exchange between electrical, automation, and process systems. This includes verifying functionality, safety features, and performance against specified requirements. Documentation will include test reports and resolution of any identified discrepancies.

2. Commissioning and Handover: Oversee the complete commissioning process, including training operators on the new system and handing over complete documentation (electrical drawings, PLC programs, automation software, process documentation) to the client.

Complexity Impact Note: The project complexity is appropriate for a level 2 rating, involving moderate integration and customization but not requiring highly specialized or novel engineering solutions.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Indust Melissafort Facility Upgrade

Project Name: Indust Melissafort Facility Upgrade

Location: Refinery Zone, Melissafort, MH

Industry: Manufacturing

Date: April 09, 2025

1. Project Overview:

This RFQ solicits proposals for upgrading an existing manual packaging line to a semi-automated system at our Melissafort facility. The project involves integrating new automated equipment (detailed below) with existing infrastructure. Complexity rating: 2/5. Target completion: 3 months from contract award (May 2, 2025). Contract type: Fixed Price.

2. Scope of Work: (See detailed description attached) The project encompasses electrical engineering, industrial automation, process engineering, system integration testing, commissioning, and operator training. Key components include: new power distribution, PLC & HMI programming, conveyor system, robotic arm integration, vision system, line layout optimization, and comprehensive documentation.

3. Qualifications:

Bidders must demonstrate a minimum of 3 years' experience in industrial manufacturing automation projects and a proven track record of regulatory compliance (OSHA, NFPA 79, etc.).

4. Proposal Requirements:

Proposals should include:

* Technical Design: A concise (1-2 page) technical design outlining the proposed solution, addressing all aspects of the scope of work.

*** Cost Breakdown: A detailed cost breakdown with clear justification for all expenses.**

5. Evaluation Criteria:

Proposals will be evaluated based on: Technical Approach (50%), Cost (30%), and Experience (20%).

6. Timeline:

*** RFQ Release: April 09, 2025**

*** Questions Due: May 01, 2025**

*** Proposals Due: May 17, 2025**

*** Project Start: May 02, 2025**

7. Contact:

Submit proposals electronically to: procurement@manufacturing.com

8. Detailed Scope of Work Attachment: (Attached separately - details as provided in the original prompt)

CONTACT

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TIMELINE

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