



Responsibilities

The Integrator is to read, fully understand, and follow all system and proposal requirements. If the Integrator does not understand them, it is the Integrator's duty to contact Industrial Management & Engineering Group (IME).

Quotation

Copies of quotations for designing and/or building of standard or custom machinery and equipment must be sent to the responsible project engineer. Quotations shall follow IME's Quotation Sheet, RFQ Guidelines, Equipment Guidelines, Preferred Source List, and Terms & Conditions. Any exceptions to these guidelines must be requested in writing during quotation purposes. If for any reason this cannot be quoted, please contact the responsible project engineer. The Quotation Packet must be returned in duplicate to the project engineer at the address given in the packet

Statement of Work

The Integrator will furnish all labor, materials, supervision, technical, and other services to perform all operations necessary for the system build, delivery, installation and startup to complete a successful turnkey system.

Scheduling

A timeline, with major milestones will be provided no later than two weeks after the purchase order. This timeline will include dates for such items as, cell layout, tooling review, drawing approval, system complete, mounting of tool, run-off at Integrator site, shipment, start-up, run-off at customer facility, and installation.

Three weeks after the purchase order has been submitted the integrator is required to supply equipment specifications. These specs should include number, type and equipment manufacturer. In addition, utilities including power (amps, volts), water and air, and a footprint of the machine showing the maximum machine dimensions and weight must be submitted.

On every Monday morning the Integrator is required to submit a system progress and tooling to IME's project engineer for the duration of the project.

Design Approval

After the integrator has accepted a purchase order from IME's customer for custom design and build work and before it begins fabrication, they must supply the project engineer with drawings clearly showing its concept, preliminary sequence of operations, and a itemized list showing major commercial components. No work is to begin until the drawings and sequences of operation have been approved by IME in writing. A final design meeting will be held to cover major commercial components.

Cell Concept

Each system concept must provide an itemized scope and number of supply (cell design and all equipment, electrical controls, welding controls and equipment, pneumatic control package, and documentation).

In addition, a detailed description of operations, part processing, cycle time shall be in the proposal.

Safety

All aspects of the equipment must meet OSHA requirements including, but not limited to: guarding, emergency stops, color-coding, operator stations, and electrical panels. A safety audit sheet will be submitted to IME prior to shipment. The Integrator shall identify all safety equipment and protocols in quote.

Pre Shipment System Acceptance

Equipment will be inspected at the integrator plant for compliance to the specifications and required performance as stated in the purchase order and RFQ. This will include production rates, accuracy, metallurgical evaluation, process capability and quality. Equipment and Tooling must comply with review drawings

A minimum of one complete frame per fixture is required and will be approved by IME prior to run-off.

A minimum of one hundred pieces will be run-off of each fixture to meet IME's customer control plan.

**Control Plan*

Metallurgical Evaluation:

The Integrator will provide cutting and etching of five randomly selected parts per fixture. The parts shall be 100% inspected by the integrator and meet customers weld penetration requirement of a minimum of 20% penetration. If the Integrator cannot perform the required tests, it is the Integrator's responsibility to procure a qualified source.

Process Capability:

The Integrator will provide CMM verification of 30 consecutive parts per fixture each run-off. The parts shall be 100% inspected by the integrator and have demonstrated a process capability of 1.33 Cpk. If the Integrator's cannot perform the required tests, it is the integrator responsibility to procure a qualified source.

Post Shipment System Acceptance

Equipment will be inspected at Setex plant for compliance to the specifications and required performance as stated in the purchase order and RFQ. This will include production rates, accuracy, metallurgical evaluation, process capability and quality. Equipment and Tooling must comply with review drawings

A two-shift run @ rate is required to verify that the systems will meet quoted production volumes. In addition, a minimum of one hundred pieces will be run-off of each fixture to meet IME's customer control plan.

Delivery and Insallation

Unless otherwise specified in the purchase order equipment and tooling is to be FOB (IME Customer) with integrator providing issuance and risk of loss. Integrator must prepare equipment for reasonable protection during shipment. Every package or pallet must be plainly marked with the purchase order number and name of IME's project engineer

Training

A detailed description and cost as to what the integrator will supply in the way of system support for training, and installation. A minimum of two-week line follow for two shifts a day is required in the itemized cost.

Documentation

Three machine books and 1 readable CD will be completed for each individual machine. The machine book and CD shall include the following:

- Company name, date, program name and equipment number on the outside cover
- Completed Gantt chart diagram
- Drawing package including cell layout and tooling assemblies (11"X14" sheet)
- Recommended spare parts list
- Design drawings (11"X14" sheet)
- Operating instructions including startup, operation and shutdown procedures
- Process flow diagrams
- Recommended PM schedule, instructions and related data
- Set-up instructions
- Calibration instructions
- Trouble-shooting information
- Electrical and pneumatic diagrams
- PLC ladder logic & documented programs on a floppy disk
- Panel-view diagram
- Data sheets or booklets on any purchased item installed on equipment
- Print out of all robot programs & programs saved on a floppy diskette
- Completed weld schedule list
- Safety Audit Sheet
- Completed metallurgical evaluation sheet
- Completed statistical process evaluation sheet