2016

ES & EL ENGINEERING QUALITY ASSURANCE

QUALITY ASSURANCE



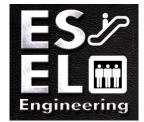
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Director 6/11/2016



ES & EL Engineering (ES & EL Eng.) is an Escalator/ Elevator & General Engineering Consultancy and Services provider. World class quality services in the Cape Metropolitan area. Website: http://es-el-engineering.co.za

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QUALITY ASSURANCE

INTRODUCTION

The purpose of this manual is to document the company's quality system, to instruct and guide employees whose actions affect product quality and to inform the company's customers what controls are implemented to assure product quality.

The Quality Policy of ES & EL Engineering is based on customer satisfaction. We strive for continuous improvement in our quality systems and meeting the objectives of our company:

- **4** Supplying products that meet or exceed our customer's requirements
- Providing a service that results in customer satisfaction
- Continuous development of a dependable vendor base

We are committed to continuous improvement in quality and the assessment of the quality system to assure its suitability to meet the requirements of our company and the requirements of our customers.

By meeting our objectives defined within this manual we will be able to: -

- 1. Provide defect free services.
- 2. Provide customer satisfaction by providing:
 - a. On time deliveries.
 - b. All contract requirements are met.
 - c. Exceptional product quality.
 - d. Exceptional service quality.
- 3. Assist vendors and work with subcontractors to reduce late deliveries and delivery of defective services.



MANAGEMENT RESPONSIBILITY

Our quality managers use a variety of measures and management systems, such as total quality management: -

- devising and establishing a company's quality procedures, standards and specifications;
- **4** reviewing customer requirements and making sure they are met;
- working with purchasing staff to establish quality requirements from external suppliers;
- setting standards for quality as well as health and safety;
- making sure that manufacturing or production processes meet international and national standards;
- ↓ looking at ways to reduce waste and increase efficiency;
- defining quality procedures in conjunction with operating staff;
- setting up and maintaining controls and documentation procedures;
- **u** monitoring performance by gathering relevant data and producing statistical reports;
- **4** making suggestions for changes and improvements and how to implement them;
- using relevant quality tools and making sure managers and other staff understand how to improve the business;
- making sure the company is working as effectively as possible to keep up with competitors.

QUALITY SYSTEM

The Quality System Engineer is primarily responsible for engineering and executing business system improvements at ES & EL Engineering. The QSE utilize statistical thinking and methodologies to identify opportunities, plan improvements, execute those plans and then follow up to ensure business results have been statistically improved and sustained, especially with

regard to meeting customer expectations.

The QSE is an in-house consultant to all departments to facilitate and lead improvement activities. The QSE support engineering efforts that relate to quality improvement and participate in support activities involving compliance with applicable regulatory and Quality Management System requirements.

The QSE coordinate and execute plans to maintain an ISO-certified quality system at ES & EL Engineering. The QSE support the maintenance and development of the customer corrective and preventative action (CAPA), internal non-conformance and ES & EL Engineering Quality Management Systems.



Essential Duties and Responsibilities: -

- Provide quality service to ES & EL Engineering's internal and external customers in all assigned tasks, while upholding ES & EL Engineering Values at all times.
- Evaluate business goals, identify improvement opportunities and apply scientific methods, statistics and problem solving techniques to improve and sustain product quality and process effectiveness.
- Plan and execute projects and team activities to facilitate changes that have a statistical impact on business results, especially as it relates to meeting and exceeding customer expectations.
- Establish programs, policies and procedures to evaluate precision, accuracy and capability of processes, products, production equipment and testing, measurement, and analytical equipment and facilities.
- Provide technical expertise in product development projects, design reviews, verification, validation and manufacturability involving R&D, Product Group, Procurement, Manufacturing and other departments.
- Support the maintenance and improvement of the ES & EL Engineering Quality Management System.
- Schedule and perform audit activities, to include pre-audit planning, audit execution and evaluation and post-audit follow-up and recommendations.
- Assist operating units with development and implementation of corrective and preventive action plans to improve overall ISO compliance and quality results.
- Present to managers on improvement projects and activities.
- Compile & write training material and conduct training sessions on improvement tools & methodologies.
- Ensure applicability of current quality policies, procedures and objectives by keeping informed of the latest updates/modifications related to ISO quality systems.
- Support the development and administration of the customer corrective and preventative action (CAPA), internal non-conformance and ES & EL Engineering Quality Management Systems.
- **4** Perform other related duties as assigned.



CONTRACT REVIEW

Comments

consideration.

Process Step

Identify contracts for Review

Identify any duplicate supply arrangements. Review existing supply arrangements to assess best method to source products. Eg: Are two suppliers preferable to single Where multiple suppliers are used for a category, the review process will need to take other suppliers into

Nominate appropriate Contract Review Team members Category coordinator in conjunction with Operating Group PSG member will identify most appropriate team member. Each Operating Group should have the opportunity to nominate a member.

Review significant changes impacting supplier, supply chain or industry

Gain Feedback from incumbent supplier

Issue user survey

Identify any significant recent changes to the industry or supplier that may impact the supply arrangement.

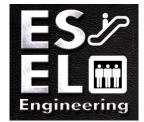
Obtain feedback of supplier's desire to continue as preferred supplier as well as identify any requirements they have.

Team to seek broad feedback from users, coordinators, stakeholders as a key component of performance review.

Identify key issues from survey for inclusion in Contract Review Objective and Supplier Review Document.

Analyse User survey

Analyse Supplier response



Identify and attempt to quantify switching costs

Identify any reciprocal trade issues

Review original contract & business case

Review supplier performance against original MoU/Business

Identify objectives for Contract Review: LAO. Decide whether agreement should be formal contract or M.O.U.

Informal alternative supplier review

Request submission from incumbent supplier(s)

Summarize key components of original contract, business case and any subsequent requirements placed upon inconsistent supplier, I.e. Service Quality, Price, KPIs Supply Chain, Total Life Cycle Cost Initiatives.

Weight and rate supplier on all relevant performance measures.

Identify all new requirements for revised contract including pricing. Each item should be identified as critical or desirable. Least Acceptable Outcome(LAO) must be clearly documented.

Where deemed appropriate suitable alternative suppliers should be asked to deliver an informal presentation/report on "What they could offer should we choose to re-tender ".

Request submission from incumbent. Specific areas for improvement as identified through the provision steps need to be advised. Incumbent needs to be aware that this is their opportunity to convince us not to retender.



Incumbent Supplier Presentation

Update Contract Objectives statement

Review Incumbent's submission

Prepare formal business case including expected financial

Executive Group Approval

Advise successful Supplier as well as alternative suppliers.

Sign MOU/Contract

Communicate within ES & EL Eng.

Develop model to be used for tracking financial savings

ES & EL Engineering implementation phase Written response with 30-minute presentation.

Review previous list of objectives based on information gathered from alternative and incumbent supplier's presentations.

Review incumbent's submission in light of Contract Review Objectives. Outcome is a decision with incumbent's versus re-tender category or part of.

During business case preparation consideration should be given to how the supply arrangement can be configured to assist the quarantining of savings.

Seek formal sign off by Executive Group where appropriate.

Formally advise supplier that they have been successful. Advise any other suppliers that will not be re-tendering.

Execute legal documents.

Ensure all appropriate people within PDL have been advised of revised contract details.

This would include but not limited to MDs/CFOs; Category Coordinators; Major users

Implementation by Strategic Sourcing Coordinators and Operating Coordinators.



DESIGN CONTROL

Purpose

This procedure applies to the design and development of ES & EL Engineering systems, sub-systems, assemblies, sub-assemblies and parts from the conceptual design to the release for procurement and manufacturing.

It establishes design control policy and defines responsibilities and procedures for preparing and verifying engineering design documents.

Policy

- To implement uniform methods of design and drafting in all engineering groups involved in the construction of ES & EL Engineering to ensure that it meets the specified requirements.
- **4** To define the checks and verifications applied to the design and development activity.
- To control and verify the design, assign design function responsibilities, define technical interfaces and verify that the design output meets the design input requirements.
- To expose the design to persons with viewpoints and opinions other than those of the design and development teams.
- To maximise protection against oversight that might adversely affect ES & EL Engineering quality, safety and performance.
- To ensure through proper documentation that the design decision process is recorded for reference in the production, commissioning, operation and maintenance of ES & EL Engineering.
- **4** To ensure that the design change history is properly documented.

Scope

This procedure applies to all design activities associated with defining, developing, producing, installing and maintaining ES & EL Engineering systems, sub-systems, assemblies, sub-assemblies and parts. It is applicable to design teams at ES & EL Engineering, in Institutes and Contractors.



Responsibilities

Managers, Supervisors, Project Engineers (PE) and Designers at ES & EL Engineering, Institutes and Contractors are responsible for: -

- Making all participants aware in performing good engineering and management practices to meet Project cost, schedule, safety and technical objectives.
- Ensuring that engineering calculations related to safety are carried out by suitably qualified personnel.
- Ensuring that non-staff personnel assigned to design and drafting activity is suitably trained in the use of Computer Aided Design tools (CAD) and has been informed of ES & EL Engineering practices before starting work.
- Ensuring that detailed designs are consistent with the approved ES & EL Engineering configuration.

The Project Management, the Project Committees and Approval Groups provide additional checks, through reviews, that detailed designs are consistent with ES & EL Engineering approved configuration.

The ES & EL Engineering Project organisation chart assigns responsibilities for the development, design, manufacturing and commissioning of ES & EL Engineering systems, sub-systems, assemblies and parts to the Divisions and Groups at ES & EL Engineering and in collaborating Institutes, that are participating in the Project.

Division and Group Leaders at ES & EL Engineering have the responsibility to prepare and allocate work packages corresponding to the main systems, sub-systems, assemblies and parts of ES & EL Engineering. A Project Engineer is assigned to each work package.

The Project Engineer of a work package has the responsibility to: -

- **4** Plan and supervise the design of the products included in the work package.
- **4** Supervise the production of specifications, drawings and layouts.
- ♣ Assess the safety requirements of the products and co-ordinate the review of those requirements with ES & EL Engineering's Inspection & Safety Commission.
- **4** Supervise the building and testing of models and prototypes.
- **4** Supervise the collection and recording of test data.
- **4** Define the quality assurance of the product and its sub-assemblies and parts.
- **4** Supervise the processing of modifications.



Design Control

Formal design control is secured by conducting at appropriate stages of the development Project Reviews, Collaboration Reviews, Critical Products Reviews and Design Reviews. The design reviews are: -

- Design Input Review.
- Preliminary Design review.
- Drawing Review and Approval
- **4** Specification Committee Review.

Design Input Review

The Design Input Review shall be carried out by the PE and his design team. Its purpose is to ensure that the basic design description is complete and unambiguous and correspond to the conceptual design requirements.

Preliminary Design Review

The Preliminary Design Review shall be carried out by the PE and his design team. Its purpose is to ensure that the basic and detailed design correspond to the basic design description and that the design documentation is ready to be submitted for review and approval.

Drawing Review and Approval

All engineering drawings are subject to a Review and Approval process before they are released for distribution.

Specification Committee Review

The Specification Committee Review is the main formal review before a design is released for procurement. It shall ascertain that design requirements are met by the proposed design in respect of: -

- **4** Engineering and functional considerations
- \rm 4 Cost
- Schedule
- **4** Quality Assurance requirements
- Statutory and regulatory requirements
- Safety requirements

The results of the Specification Review shall be documented in a meeting's minute.



DOCUMENT AND DATA CONTROL

Purpose

The purpose of this procedure is to give guidance for development of ES & EL Engineering documentation and management records. Controlled documents shall be formatted to a consistent standard, authorised at the appropriate level, accessible to appropriate personnel and subject to regular review and update.

Scope

All documents and records which comprise ES & EL Engineering management system shall be subject to the requirements of document control.

Definitions

Controlled Documents	Documents which will be updated when a new revision of those documents are distributed.
Uncontrolled Documents	Documents which will not be updated when new revisions of those documents are distributed, e.g. they may have been given out for information only.
Records	A record concerning ES & EL Engineering issues such as a completed inspection checklist, the Committee and related minutes, risk assessment, aspect and impact assessment, incident investigation, spill containment drill, medical records and expert reports. Records may be hard or electronic copy.

Responsibilities

Manager	 Retain controlled copies of all procedures and a summary of incidents. Keep procedure distribution list. Assign new document numbers and revisions. Distribute procedures as per distribution list. Archive superseded procedures.
Board of Trustee Manager	• Determine how records for their region will be managed, implemented and monitored.
Procedure Author	• Follow this procedure.



Procedure Authoriser	• Ensure the document has been prepared in accordance with this procedure and the content is appropriate prior to authorisation.
Recipients of Procedures	Store received copies of procedures appropriately.Remove superseded copies of procedures.

Procedure

Developing New Procedures

- Prior to developing a new procedure, check that the content of the proposed procedure has not been or cannot be include in an existing procedure.
- Obtain a document number from the Manager. Comply with Quality System requirements where applicable.
- **4** Develop a procedure distribution list in consultation with the Board of Trustees.
- **4** Check legislative and other external requirements.
- **4** Check other ES & EL Engineering requirements.
- Persons who may be affected by the new procedure shall be consulted during the development of the procedure via the Committee, meetings, SharePoint and broadcast emails.
- ↓ Draft the procedure. The document should be marked "Draft" until approved.
- **4** Incorporate review comments into the procedure.
- Send the procedure and a brief summary of the drafting process to the person who is to authorise the document.
- ↓ Once it is authorised, forward the procedure to the Manager for distribution.
- **4** Implement any training/briefing requirements for users of the new procedure.

Amending Existing Procedures

It is vital that all amendments be made to the controlled copy and not simply added to a local copy of a procedure.

- Obtain a document revision number from the Manager. Comply with quality system requirements where applicable.
- Check that the procedure distribution list is still appropriate in consultation with Regional Managers.
- 4 Check legislative and other external requirements.
- **4** Check other ES & EL Engineering requirements.
- All personnel who may be affected by the amended procedure shall be consulted via the Committee, meetings, SharePoint and broadcast emails.



- Draft amendments to the procedure. The document should be marked "Draft" until it is approved. It is helpful to track changes on electronic versions of documents.
- ↓ Incorporate review comments into the procedure.
- Send the procedure and a brief summary of the amendment process to the person who is to authorised the document.
- **4** Once it is authorised, forward the revised procedure to the Manager for distribution.
- **↓** Implement any training/briefing requirements for users of the amended procedure.

Safe Work Procedures

Other documents such as safe work procedures give specific information on the operation of a piece of equipment or are applicable to one activity.

Development of these documents should follow the above process. However, because they are usually more locally used documents, the number of people who review the document may be reduced. Safe work procedures should refer to a "parent" procedure where applicable.

Records Management

ES & EL Engineering records include: -

- **4** Committee minutes
- Management review meeting minutes
- Licenses/Permits
- **4** Archive of obsolete documents
- Training and induction records
- **4** Records of monitoring of objectives, targets and plans
- Risk register
- Audit reports
- **4** Completed inspection checklist
- Completed incident and non-conformance reports
- **4** Maintenance records
- \rm Risk assessment
- **4** Testing records
- Health surveillance records

The Manager shall maintain central summary incident records and ES & EL Engineering procedure documents. The Committees shall determine how other records are maintained in their region. Electronic copies of records relating to health and safety management must be backed up effectively to avoid the loss of data. Once backed up, these records need to be traceable in the event of loss of the original data.

Hard copy records should be protected from damage, loss and deterioration over time and shall be properly indexed and filed to ensure they can be retrieved at anytime. Records shall be retained for a minimum period of 5 years.



PURCHASING

Purpose

To provide a consistent process for the purchase of items which relate to customer contracts and product quality.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility	
Controller Accounts Payable Clerk	Maintains Accounting System	
CEO Director Quality Assurance Manager Coordinator	Evaluate and select suppliers based upon their ability to supply product in accordance with QNP's requirements. Maintains Approved Vendor List.	
	Establish level of controls and performance ratings appropriate to suppliers on the Approved Vendor List.	
	Disqualifies and re-qualifies Vendors whose performance falls below defined acceptable levels.	
Department Supervisors	Issue purchase order requisitions.	
Personnel identified on the Purchasing Authority Control List	Approve requisitions and issue purchase orders as authorized.	
	Maintain open lines of communication with QNP Management regarding supplier history and quality issues.	
President/Purchasing Agent	Approves purchase order requisitions and issues purchase orders for those who are not designated with this authority.	



Policies

- 1. Purchasing authority and responsibilities for individual employees are defined within the Employee Training Database.
- 2. Purchase Orders: A Purchase Order shall contain: -
 - ↓ Vendor Name and contact information
 - ♣ Ship to/Bill to Address
 - **4** ES & EL Engineering Buyer contact information
 - ↓ Items Ordered, including as applicable
 - A specific description of the item ordered
 - The type, class, grade, revision, or other precise identification
 - Quantities Ordered
 - Prices, if known
 - Certification requirements
 - Shipping Information or other special instructions
- 3. As appropriate, purchase orders shall also specify;
 - **4** Requirements for approval of product, procedures, processes and equipment
 - **4** Requirements for the qualifications of personnel
 - Supplier QMS requirements
 - Positive identification and applicable issues of specifications, drawings, process requirements, inspection instructions, and other relevant technical data
 - Requirements for test specimens for design approval, inspection, investigation or auditing
 - Requirements relative to notifying ES & EL Engineering of nonconforming product, and arrangements for ES & EL Engineering's approval of nonconforming materials
 - Requirements for the supplier to notify ES & EL Engineering of changes in product and process definitions, and obtain our approval as necessary
 - Right of access by ES & EL Engineering, our customers, and appropriate regulatory authorities to all facilities involved in the order and their records
 - Requirements for the supplier to flow down applicable requirements to subsuppliers in their purchasing documents, including key characteristics where required.
- 4. The Approved Vendor List, identifies suppliers by;
 - Company name
 - Contact information
 - Products and/or services supplied
 - 4 Quality system



- ♣ Approval status (approved, conditionally approved, or disapproved)
- Scope of approval
- 4 Classification as a critical, key, or non-key supplier
- **4** Risk, and risk mitigation as appropriate.
- 5. Minimum quality and on time delivery ratings are defined for each vendor. Records of vendors' quality and on time delivery ratings are maintained in the Approved Vendor List. Product Realization database calculates this information from the follow up data entered after product has been received against a purchase order.
- 6. The current performance status of an individual supplier is viewable with when a purchase order is generated. Buyers are prompted to check with Management before issuing a purchase order to an underperforming vendor. Overall supplier performance is reviewed by management during periodic reviews of the Purchasing Process and Management Review Meetings.
- 7. Vendors and Subcontractors are selected from a list of approved suppliers. To be accepted and approved, Vendors and Subcontractors must meet ES & EL Engineering requirements for: -
 - ♣ On-time delivery
 - **4** Results of Receiving Inspection
 - 4 Active Status in online Approved Vendor/Subcontractor List
- 8. Suppliers may be added to the Approved Vendor/Subcontractor List, based on supplier quality data obtained from objective and reliable external sources.
- 9. If a contract with a customer requires the use of a specific source for a special process, those requirements shall be flowed down to sub-suppliers through our purchase order. It is the responsibility of the buyers to periodically verify that suppliers are meeting flow down requirements.
- 10. As necessary, ES & EL Engineering may procure materials, components and services from non-approved suppliers. A buyer may issue (1) purchase order to a supplier before that supplier is added to the Approved Vendor List. Until the supplier has been added to the Approved Vendor List, that supplier shall be considered "conditionally approved" under the purchasing authority of the buyer.

Upon receipt of a satisfactory order, verified to meet material requirements, a supplier may be added to the Approved Vendor List. If appropriate, a probationary period may be defined for the supplier during which time it may be subject to an increased level of receiving inspection or review of performance data.



- 11. Regardless of vendor status or history, ES & EL Engineering is responsible for the conformity of all purchased products, including products purchased from customer defined sources.
- 12. Quality problems and product non-conformances from vendors shall be recorded on the Approved Vendor/Subcontractor List.
- 13. If ES & EL Engineering Management determines that it is appropriate to issue a request for corrective action from a vendor, it shall be recorded on the Corrective Action Form and coded with the prefix "s" to indicate that is a "supplier" corrective action request.
- 14. As appropriate, a buyer may choose to request an informal action plan to address quality or delivery problems.
- 15. If necessary, ES & EL Engineering may choose to assume the risk for the continued use of an underperforming vendor.
- 16. ES & EL Engineering Management may determine that a vendor does not meet ES & EL Engineering's quality requirements if the vendor;
 - ↓ Is unable to correct errors in a timely fashion
 - **4** Fails to respond to Corrective Action Requests
 - ↓ Jeopardizes ES & EL Engineering's relationship with its customers.
- 17. When it has been determined that a vendor does not meet the quality requirements of ES & EL Engineering, they shall be deactivated from the Approved Vendor List. The vendor shall be notified of its disqualification and the reasons why. Buyers, management and quality personnel who have the responsibility for approving supplier quality systems also have the authority to disapprove those they find unsatisfactory.
- 18. Upon request for re-qualification from a disqualified vendor, ES & EL Engineering Management shall re-evaluate the vendor to ensure that corrective action has been implemented to correct the problem that led to the disqualification.
- 19. The selection of vendors and the type and extent of control imposed upon them is dependent upon the type and complexity of the materials, components and services they supply, risk and the impact they have on the quality of customer orders.
- 20. In those cases, where ES & EL Engineering may be required to verify/source inspect purchased product or subcontractor service at their premises, ES & EL Engineering will specify verification arrangements and method of product release in purchasing documents and maintain suitable quality records.



Procedure

Use the steps in the table below to purchase the categories of items relating to customer contracts.

Step	Action	Person(s) Responsible
1.	 Do personnel have authority to purchase required supplies/services? If NO, go to Step 2 If YES, go to Step 4 	Personnel with authority to issue purchasing requisitions.
2.	Issue a purchasing requisition for supplies, including all appropriate information.	Personnel with authority to issue purchasing requisitions.
3.	Forward completed purchasing requisition for supplies to personnel with authority to issue purchase order	Personnel with authority to issue purchasing requisitions.
4.	Generate the purchase order. Purchase from an approver supplier or initiate action to add a supplier to the Approved Vendor/Subcontractor List.	Personnel with authority to issue purchase orders.
5.	Mail/Email purchase order to vendor. Maintain a copy of the purchase order. Attach any requisitions accrued above to the purchase order.	Personnel with authority to issue purchase orders.
6.	Purchase order is held by personnel who issued the requisition or the accounting department.	Personnel who requisitioned/purchased item or designee
7.	Personnel who requisitioned/purchased item accepts shipment.	Personnel who requisitioned/purchased item or designee
8.	Use purchase order to inspect received product. Reference: Verification of Purchased Product	Personnel who requisitioned/purchased item or designee
9.	Enter quality status and delivery date into the Product Realization database.	Personnel who requisitioned/purchased item or designee
10.	Attach packing slip to receiving copy of the purchase order.	Personnel who requisitioned/purchased item or designee



11.	Forward purchasing documents to the Accounting Department.	Personnel who requisitioned/purchased item or designee
12.	Maintain purchasing documents in Accounts Payable.	Accounting Personnel

CONTROL OF CUSTOMER SUPPLIED PRODUCT

Purpose

To provide a consistent process to identify, verify, protect and safeguard customer property maintained at ES & EL Engineering.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility	
Receiving Personnel	el Receives and inspects customer supplied product upon delivery	
	Identifies customer property with required information.	
	Places customer property in designated areas.	
Customer Service Personnel	Receives customer owned reference material	
	Identify and attach customer owned reference material to the appropriate Customer Purchase Order	
	Advises the customer of damage, deterioration or otherwise unfit condition of customer property	
Department Supervisor	Establish storage areas designed to safeguard customer property against damage and/or deterioration.	
	Advises the customer of damage, deterioration or otherwise unfit condition of customer property	
Engineering Personnel	Identifies customer property.	



	Arranges for return of customer owned reference material.
Production Personnel	Tracks customer property with purchase order.

Procedure

The control of customer supplied product involves the following individual procedures:

- **4** Receiving and Control of Customer Supplied Materials/Supplies.
- ↓ Control of Customer Supplied Reference Material

Receiving and Control of Customer Property

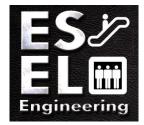
Use the steps in the table below to control customer supplied materials and supplies.

Step	Action	Person(s) Responsible
1.	Shipment is received and inspected per <u>Verification of</u> <u>Purchased Product</u> and is identified as Customer Supplied Material. Note: any damage to product found upon receipt is to be processed per policy procedure.	Receiving Personnel
3.	Attach a completed <u>Customer Supplied Product</u> <u>Labels</u> to each container in the shipment.	Receiving Personnel
4.	Place the product in the designated customer supplied product holding area.	Receiving Personnel

Control of Customer Supplied Reference Material

Use the steps in the table below to control customer supplied films, product samples, electronic media, artwork, and colour samples.

Step	Action	Person(s) Responsible
1.	Customer supplied reference material is received, it is determined that the customer requires it to be returned and is matched to the appropriate customer purchase order	Customer Service Personnel



2.	Mark the customer supplied reference material in an appropriate manner with: • "To Be Returned" • Customer Name • Purchase Order Number.	Engineering Personnel
3.	Indicate on the Purchase Order that customer supplied reference material is to be returned. This information is marked so that it will come to the attention of Shipping Personnel upon shipment of the order.	Engineering Personnel
4.	Upon shipment of the order, contact Engineering Department to return reference material.	Shipping Personnel
5.	Return customer supplied reference material.	Engineering Personnel or Shipping Personnel
6.	 Indicate on Purchase Order that reference material has been returned to the customer with: "Customer Reference Material Returned" Date shipped Name of Carrier Person Responsible 	Engineering Personnel or Shipping Personnel



PRODUCT IDENTIFICATION AND TRACEABILITY

Purpose

To provide a method for identifying and tracing product through all stages of production at ES & EL Engineering.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility
Customer	Provides purchase order number via the customer purchase order.
Engineering Personnel	Record the Customer Purchase Order Number
Receiving and Stock Department Personnel	Identify incoming shipments of raw material with Material Control Label
Production Personnel & Department Supervisors	Ensure product lots are controlled

Policies

- 1. ES & EL Engineering maintains the identification of the configuration of the product.
- 2. Raw materials (flats of steel, aluminium, brass, vinyl, polycarbonate, polyester, etc.) in the stock department are identified by a Material Control Label, during Verification of Purchased Product. Once material has been requisitioned and cut for a specific order, the material then travels with the appropriate Job Tracking Card.
- 3. A ES & EL Engineering Job Tracking Card accompanies a customer's order throughout the production process. Product that is recognizable or unique in such a manner that its identity cannot be mistaken or confused with other product may travel unaccompanied by a Job Tracking Card if necessary.
- 4. The ES & EL Engineering Job Tracking Card identifies a product through the production process by: -
 - Job Tracking Number
 - Process (Job Type)
 - Customer Purchase Order Number
 - Scheduled Ship Date
 - Customer Name



- Date Received
- Bill to Address
- Ship to Address
- Customer Requirements
- Other
- 5. A Job Tracking Card is generated by Photo Department Personnel at the time that stock is requisitioned. It is placed in the Job Tracking Envelope and is used to identify a container or rack that is part of a production lot by: -
 - Job Tracking Number
 - Customer Purchase Order Number
 - Part Number
 - Material
 - Colour
 - or a combination of all
- 6. Bin Labels are affixed to boxes in the Shipping/Inspection Department to identify packages of parts which are being held for Bin release. A Bin Label identifies product by: -
 - Customer Name
 - Part Number
 - Purchase Order Number
 - Bin release, maximum, minimum, and remake quantities
 - Lead time information
- 7. A Job Tracking Card is not generated unless it is required for identification purposes.
- 8. Age Sensitive Materials are identified and controlled through the use of Material Control Label, Age Sensitive Material Labels.
- 9. Containers of product which become separated from the original lot travel with a Job Tracking Card.
- 10. Product not accompanied by a Job Tracking Card, a Bin Label and not immediately recognizable, should immediately be brought to the attention of the Department Supervisor, a Material Review Board Member, and/or the Quality Assurance Manager.

Procedure

Product identification and traceability of a customer order through production at ES & EL Engineering is maintained using the following individual procedures:

Fulfilling Traceability Requirements

Use the steps in the table below to fulfil traceability requirements for items identified on a customer purchase order: -



Step	Action	Person(s) Responsible
1.	Traceability requirement identified on a customer purchase order or contract.	Engineering Personnel
2.	Information and items to be retained for traceability requirements indicated on the Job Tracking Card, durin <u>g Quality</u> <u>Planning</u> . <u>Examples</u> : Heat Number, Vendor Material Certification	Engineering Personnel
3.	Information recorded on the Job Tracking Card as available during production.	Production Personnel
4.	When order is completed and the Job Tracking Card is returned to the office, make copies of all information necessary to maintain traceability.	Quality Assurance Personnel
5.	The Job Tracking Card is retained as a Quality Record for the standard amount of time.	Engineering Personnel
6.	Traceability information maintained by Quality Assurance Department for the amount of time specified by the customer.	Quality Assurance Personnel
7.	Information made available to customer upon request.	Quality Assurance Personnel

PROCESS CONTROL

Process Control

In our company, we have numerous processes in the operation of the business and the manufacture of our goods. (By process we mean a systematic series of actions directed to some end or goal.)

Rationale

We believe it is important for us to maintain control over these various processes and to document those processes. This is to make sure the product is made correctly and consistently. We believe that effective process control will result in reduced costs by helping



eliminate wasted effort and material due to making the product incorrectly or inconsistently. It will also ultimately result in increased business due to customer satisfaction from getting expected goods and services.

Policy

Thus, it is the policy of ES & EL Engineering to adhere to the ISO 9001 section 4.9 standard on Process Control, as follows.

4.9.1 General

To avoid inconsistencies, it is our policy to always identify and plan our production and installation processes that directly affect the quality of the goods we produce.

To avoid poor decisions, it is our policy to always ensure that these processes are carried out under controlled conditions by following Procedure 4.9.

Controlled conditions shall include the following:

- Documented work instructions defining the manner of production and installation, where the absence of such instructions would adversely affect quality
- Use of suitable production and installation equipment, suitable working environment, compliance with reference standards/codes and quality plans
- Monitoring and control of suitable process and product characteristics during production and installation
- The approval of processes and equipment as appropriate Criteria for workmanship that shall be stipulated to the greatest practicable extent in written standards or by means of representative samples.

4.9.2 Special Processes

In our work there are some special processes, of which the results cannot be fully verified by subsequent inspection and testing of the product and where, for example; processing deficiencies may become apparent only after the product is in use.

Accordingly, continuous monitoring and/or compliance with documented procedures are required to ensure that the specified requirements are met. These processes shall be qualified and shall also comply with the requirements of 4.9.1. Records shall be maintained for qualified processes, equipment and personnel, as appropriate.



INSPECTION AND TESTING

Inspection and Testing

In ES & EL Engineering, we receive parts and supplies, integrate them into our product and then ship finished product to our customer. It is important that all parts and supplies we receive meet specification, in order that we get our money's worth from them. It is also important that our product meets specification, in order to satisfy our customers.

Rationale

Thus, we believe it is important for us to properly inspect and test parts and supplies received, inspect and test our product in process and inspect and test our product before delivery to verify they meet specification. This is to avoid the risk of using out-of-specification parts and supplies and delivering out-of-specification product.

We believe that effective inspection and testing will result in reduced costs due to eliminating wasted effort and material. It will also ultimately result in increased business due to customer satisfaction from getting expected goods and services.

Policy

Thus, it is the policy of ES & EL Engineering to adhere to the ISO 9001 section 4.10 standard on Inspection and Testing, as follows.

4.10.1 Receiving Inspection and Testing

To avoid using out-of-specification parts and supplies, it is our policy to ensure that incoming product is not used or processed (except in the circumstances described in 4.10.1.2) until it has been inspected or otherwise verified as conforming to specified requirements.

It is also our policy to verify those parts and supplies have been inspected in accordance with the quality plan or documented Procedure 4.10.

Where incoming product is released for urgent production purposes, it is our policy to positively identify and record the product (see section 4.16) in order to permit immediate recall and replacement in the event of non-conformance to specified requirements.

NOTE: In determining the amount and nature of receiving inspection, consideration should be given to the control exercised at source and documented evidence of quality conformance provided.



4.10.2 In-Process Inspection and Testing

It is our policy to:

- 1. Inspect, test, and identify product as required by the quality plan or documented procedures
- 2. Establish product conformance to specified requirements by use of process monitoring and control methods
- 3. Hold product until the required inspection and tests have been completed or necessary reports have been received and verified except when product is released under positive recall procedures (see 4.10.1). Release under positive recall procedures shall not preclude the activities outlined in 4.10.2 a)
- 4. Identify nonconforming product

4.10.3 Final Inspection and Testing

To assure that final inspection and testing be done properly, it is our policy to always require that: -

- 1. All specified inspection and tests, including those specified either on receipt of product or in-process, have been carried out
- 2. The data meets specified requirements within our quality plan or documented procedures for final inspection and testing

To complete the evidence of conformance of the finished product to the specified requirements, it is our policy to always carry out all final inspection and testing in accordance with the quality plan or documented procedures.

To avoid delivery of non-conforming product, it is our policy to always assure that no product is dispatched until all the activities specified in the quality plan or documented procedures have been satisfactorily completed and the associated data and documentation is available and authorized.

4.10.4 Inspection and Test Records

To avoid questions about the validity of our inspection and test, it is our policy to always keep and maintain records that give evidence that the product has passed inspection and/or test with the defined acceptance criteria.



CONTROL OF INSPECTION, MEASURING & TEST EQUIPMENT

Purpose

To define the processes used to identify, control and calibrate the monitoring and measurement equipment that ES & EL Engineering uses to demonstrate evidence of conformity of product to determined requirements.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility
Quality Assurance Manager	Establish and maintain procedures to identify, control, calibrate and maintain inspection, measuring and test equipment used in the production of product.
Coordinator	Perform activities related to the calibration and control of inspection, measuring and test equipment.
Production Personnel	Ensure that the inspection, measuring and test equipment used in the production of product is calibrated and suitable.

Policies

- 1. The monitoring and measuring required to provide evidence of conformity of product to determined requirements is documented in the Production Inspections. Unless otherwise specified, the ambient manufacturing work environment is acceptable for performing inspections.
- 2. Vernier's, micro meters, pin gages, gage blocks and other monitoring and measuring devices have been provided by ES & EL Engineering to the appropriate personnel in order to perform the inspections defined in the Production Inspections.
- 3. Calibration is defined as the determination of the deviation/variation from a known standard.
- 4. Calibration Standard is a measurement reference that is traceable to a nationally/internationally known value or standard such as the National Institute of Standards & Technology (NIST).



- 5. Equipment to be calibrated on a regular cycle includes: -
 - Micro meters, Callipers, Vernier's
 - Pin Gages
 - Tension Meters
 - Gage Blocks
- 6. Significantly out of tolerance is when the accuracy of the instrument is found off more than 10% of product tolerance.
- 7. Calibration stickers are placed on inspection, measuring and test equipment used at ES & EL Engineering and include the following minimum information: -
 - Date Calibrated
 - Date of Next Calibration due.

Note: On boxed sets of inspection, measuring and test equipment, a calibration sticker is located on the box containing the set.

- 8. Calibration cycle for all inspection, measuring and test equipment at ES & EL Engineering is one year or as required.
- 9. A register of all measurement and test equipment and their calibration records are maintained in the Measuring & Test Equipment Calibration/Service Record and contain the following information: -
 - Equipment name/type/size
 - Unique calibration serial number
 - Location where used/assigned
 - Calibration frequency/interval
 - Acceptance criteria (tolerance)
 - Condition (accuracy) after calibration
 - Next-Due-Date
 - Traceable standard used
 - History of service or repair, if applicable
 - History of rejection, loss, or damage, if applicable
 - Environmental conditions suitable for calibration
- 10. Equipment used in the calibration of inspection, measuring and test equipment is protected and secured by Quality Assurance Personnel. When not in use, employees should store their measuring and test equipment in such a way as to prevent it from being damaged.
- 11. Trained supervisors and quality department personnel perform the calibration of inspection, measuring and test equipment.
- 12. Employee or customer owned inspection and measuring equipment is calibrated in the same manner as ES & EL Engineering owned inspection and measuring equipment.
- 13. Lost or missing measuring equipment should be reported to the Quality Assurance Department. Missing measuring equipment that is later found should be calibrated as appropriate before being returned to use.



- 14. Calibrations are scheduled with a qualified commercial/independent laboratory when: -
 - Inspection, measuring and test equipment is beyond in-house capabilities.
 - In-house expertise is not available.
 - Required standards are not available or require special laboratory controls.
- 15. During calibration, the measuring and test equipment should be checked for damage, significant wear, or burrs which may affect performance. If appropriate, the equipment should be cleaned or adjusted as necessary by trained members of the quality assurance team.
- 16. Owners of measuring and test equipment should receive periodic notifications or training on the proper care and maintenance of their equipment and reminders to not make unauthorized adjustments.

Procedure

The inspection, measuring and test equipment at ES & EL Engineering is controlled using the following individual procedures:

- Scheduled Calibrations
- ♣ Significantly Out of Tolerance Condition

Scheduled Calibrations

Use the table below to assure that inspection, measuring and test equipment is calibrated according to schedule as indicated in Measuring & Test Equipment Calibration/Service Records.

Step	Action	Person(s) Responsible
1.	On a three-month basis, review the Measuring & Test Equipment Calibration/Service Record database.	Quality Assurance Personnel
2.	Compile a list of all inspection, measuring and test equipment that is due to be calibrated.	Quality Assurance Personnel
3.	Calibrate the instrument	Quality Assurance Personnel
4.	Ask: Is the instrument out of tolerance?1. If NO, go to Step 5.2. If YES, go to Step 9.	Quality Assurance Personnel



5.	Record the out of tolerance condition on Measuring & Test Equipment Calibration/Service Record.	Quality Assurance Personnel
6.	 Ask: Is the instrument significantly out of tolerance? <u>Note</u>: significantly out of tolerance condition is when the accuracy of the instrument is found off more 10% of product tolerance. 1. If NO, go to Step 9. 2. If YES, go to Procedure Significantly Out of Tolerance. 	Quality Assurance Personnel
9.	Place new calibration sticker on the calibrated equipment.	Quality Assurance Personnel
10.	Record the results of the calibration in the Measuring & Test Equipment Calibration/Service Record	Quality Assurance Personnel
11.	Return instrument to proper location/owner.	Quality Assurance Personnel

Significantly Out of Tolerance

Follow the steps in the table below when a piece of inspection, measuring and test equipment is found to be significantly out of tolerance.

Step	Action	Person(s) Responsible
1.	Piece of Inspection, measuring and test equipment determined as being significantly out of tolerance.	Quality Assurance Personnel
2.	Recheck to verify the condition.	Quality Assurance Personnel
3.	Record the out of tolerance condition in the Measuring & Test Equipment Calibration/Service Record.	Quality Assurance Personnel
4.	Alert the owner of the out of tolerance condition of their measuring equipment.	Quality Assurance Personnel
5.	Ask: Is it possible that inspections performed by the equipment could have	Quality Assurance Personnel



	allowed non-conforming product to be accepted? 1. If NO, go to Step 12. 2. If YES, to go Step 6.	
6.	Determine potentially non-conforming product that is still at ES & EL Engineering.	Quality Assurance Personnel
7.	Handle the product as non-conforming material. <u>Reference:</u> Control of Non-Conforming Product	Quality Assurance Personnel
8.	Determine potentially non-conforming product that has been shipped to customers.	Quality Assurance Personnel
9.	 Notify the Customer to: 1. Handle the product as non-conforming material until the customer can verify product is acceptable, or 2. Return the potentially non-conforming material to ES & EL Engineering for reinspection, rework, or rerun. 	Quality Assurance Personnel
10.	Re-inspect the product using a calibrated instrument: <u>Reference:</u> Production Inspections	Quality Assurance Personnel



INSPECTION AND TEST STATUS

Purpose

To establish a consistent method to identify the conformance or non-conformance status of product resulting from inspection and tests that have been performed.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility
Customer Service Personnel	Perform and document the quality plan check on all customer orders prior to production. <u>Reference</u> : Production Inspection
Production Personnel	Perform and document all inspections during the production of a customer order: <u>Reference</u> : Production Inspection
Shipping Personnel	Perform and document the final inspection of all customer orders during the shipping process. <u>Reference</u> : Production Inspection
Quality Assurance Personnel Department Supervisors	Assist in all inspections when required.

Policies

- 1. Operations that have been performed on an order are typically documented with an employee's initials and date written on the purchase order. The inspection and test status is typically documented on the Production Inspection Report, that is created for each order during quality planning process. Ref: Quality Planning.
- 2. Product that has failed an inspection or is suspected of being non-conforming should be processed in accordance with Control of Non-Conforming Product.
- 3. The use and control of acceptance authority media, such as stamps, electronic signatures and passwords is documented within the Employee Training Records.
- 4. If the inspection and test status of an order cannot be determined by referencing the Purchase Order, the Production Inspection Report, or an attached Hold, Scrap or



Rework Tag, the product in question should immediately be brought to the attention of the Department Supervisor, a Material Review Board Member, and/or a member of the quality assurance team.

Procedure

The table below indicates how the conformance/non-conformance status is identified during the production of a customer order at ES & EL Engineering.

Form(s)	How Conformance/Nonconformance Is Indicated	
Job Tracking Envelope	Completed quality plan inspections are signed off and dated on the Job Tracking Envelope.	
	Production Inspections Report is contained inside the Job Tracking Envelope.	
	Accompanies a customer order throughout the production process.	
Job Tracking Card	Used to identify a tray, container or rack or product that is part of a production lot by:	
	Job Tracking NumberCustomer Part Number	
Production Inspection Report	ction Records the results of all inspections performed during the production of product.	
	<u>Reference</u> : Production Inspection	
Tags	The following tags are places in/on the lot containers when required:	
	 <u>Hold Tag (YELLOW)</u> <u>Scrap Tag (RED)</u> <u>Repairable or Rework Tag (GREEN)</u> 	
	Reference: <u>Control of Nonconforming Product</u>	



CONTROL OF NON-CONFORMING PRODUCT

Purpose

To provide a consistent procedure for the identification, documentation, isolation, control and disposition of all non-conforming product.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility
Receiving Personnel Verify at receiving inspection that material provided by suppliers is in with customer and/or ES & EL Engineering specifications.	
	Arrange to inform suppliers when non-conforming product is received.
Shipping Personnel (Inspectors & Packagers)	Perform the Final Inspection Procedure to verify that production at ES & EL Engineering conforms to the quality plan as generated from the customer blueprint, purchase order and other quality standards.
Production Personnel	Maintain production standards. Perform Production Inspections as required. Notify supervisor of suspected non-conforming product.
Department Supervisors/Lead Inspector	Identifies standards in order to define conforming product and nonconforming product.
Quality Assurance	Isolates all non-conforming product in a designated area when required.
Manager	Provides for any "accepted", "hold do-not-use", "rework", or "scrap" dispositions.
	Serve as members of the Material Review Board (MRB)

Policies

- 1. Non-conforming product is defined as material that does not meet: -
 - Product Requirements
 - Customer specifications
 - Other specified standards set by ES & EL Engineering
 - Cannot be used in production.
- 2. Non-conforming product encompasses: -
 - Incoming raw material ref: Verification of Purchased Product



- Customer supplied product ref: Control of Customer Property
- Product processed in-house and moved from station to station ref: Production Inspections
- Finished parts detected during final inspection Production Inspections
- Finished parts detected and returned by customers ref: Customer Complaints
- 3. Segregated areas for non-conforming product are located throughout the company and identified with signs, floor tape, or other appropriate means. Non-conforming product areas may be used to store non-conforming product, suspected nonconforming product, or product that cannot be processed further without Management or MRB intervention.
- 4. "Hold", "Scrap" and "Rework" markers are available in the non-conforming product areas. Product that can be dis-positioned quickly or is readily identifiable may be identified with a generic "Hold", "Scrap," or "Rework" marker, provided that MRB dispositions are recorded on the Purchase Order or Production Inspection Report. Product that cannot be dis-positioned quickly, or is not readily traceable to a Job Tracking number or some other positive identification should be affixed with a completed Hold Tag, Scrap Tag, or Repair/Rework Tag.
- 5. When it is not practical to move a product to a designated non-conforming product area, the product may be conspicuously marked with an appropriate tag or marker to prevent unintended use.
- 6. Non-conforming product once identified shall not be used in production without the approval of the MRB (Material Review Board). Suspected non-conforming product, or product awaiting MRB intervention should not be removed from a designated non-conforming product area without MRB approval.
- 7. Members of the Material Review Board have the experience, knowledge and training necessary to make the appropriate decisions regarding the disposition of non-conforming material. The purpose of the Material Review Board (MRB) is to review all non-conforming product exposed during:
 - Receiving Inspection
 - Production Inspections
 - Final Inspection
 - Decide on the disposition of non-conforming product.
- 8. The qualifications, scope of approval and authority by which employees are members of the Material Review Board are defined and documented within their training records. Typically, the Material Review Board shall consist of one or more of the following personnel when required: -
 - CEO



- Director
- Quality Assurance Manager
- Quality Engineer
- Any personnel judged to have an impact on a solution towards the disposition of non-conforming product.
- 9. When the Material Review Board sends an order into rerun, the results shall be recorded on the Escape Form. Non-conformances detected within the company shall be coded as an "Internal Non-conformance". Non-conformances detected by a customer shall be coded as a "Customer Complaint." The Escape Form shall document the actions taken to eliminate the detected non-conformity, as well as the actions taken to contain the effect of the non-conformity on other processes or product.
- 10. Repairable is defined as non-conforming material that is physically segregated from conforming material and can be reprocessed to conform to specification. Corrected non-conforming product is subject to re-verification to demonstrate conformity to requirements.
- 11. Scrap is defined as material that is non-conforming and has been processed beyond a point of reclaim. Product dis-positioned for scrap is conspicuously, permanently marked or positively controlled to prevent unintended use.
- 12. Product intended for Aerospace or Tier 1 customers that is dis-positioned for scrap shall be rendered unusable.
- 13. Product intended for Commercial, Tier 2, or Tier 3 customers that is dis-positioned for scrap may be discarded in a controlled scrap barrel.
- 14. A "Hold-Do Not Use" is defined as material that is potentially non-conforming and waiting for disposition by the Material Review Board.
- 15. All employees at ES & EL Engineering are responsible for quality and have the authority to initiate action to contain non-conformities.
- 16. Any output that is produced and passed on to the next production step is assumed to be in compliance to specification.
- 17. The results of an MRB disposition may be recorded on the Purchase Order, Production Inspection Report, or Escape Form. A Hold, Scrap or Rework tag does not need to be retained as a quality record unless is it the sole source of documentation. A Hold, Scrap or Rework tag retained as a quality record should be maintained with the Purchase Order.



- 18. Non-conforming customer supplied property is disposed in accordance with Control of Customer Property.
- 19. Non-conforming incoming raw material is disposed in accordance with Verification of Purchased Product.
- 20. Non-conforming product detected and returned by a customer is disposed in accordance with Customer Complaints.
- 21. If a non-conformance is discovered after product has shipped, the customer is to be notified without undue delay (same business day if possible) with a clear description of the non-conformity and the information necessary to identify any affected parts. The Escape Form shall be used to document the actions taken to alert the customer and control the non-conforming product. When appropriate, affected suppliers, distributors, other internal departments, or regulatory authorities shall be notified in a timely manner as well.
- 22. When a non-conformity results in a departure from contract requirements, ES & EL Engineering does not disposition non-conforming product as "use-as-is" unless specifically authorized by the customer. Records of the authorization shall be maintained. Prior to shipment, customer must provide concession prior to any shipment.

Procedure

Non-conforming product at ES & EL Engineering is controlled using the following individual procedures: -

- 1. In-Process/Final Inspection Non-Conforming Product
- 2. Repairable of Rework
- 3. Rejected or Scrap
- 4. Rerun an Order

In-Process Inspection/Final Inspection Non-Conforming Product

Use the steps in the table below to control non-conforming product identified during inprocess inspection.

Step	Action	Person(s) Responsible
1	Non-conforming product identified during in-process inspection or final inspection. Ref: <u>Production Inspections</u>	Production Personnel



2	Production is stopped and department supervisor/lead inspector is notified.	Production Personnel
3	Non-conforming product reviewed for disposition.	Department Supervisor/Lead Inspector
4	Identified non-conforming product marked with a <u>Hold Tag</u> .	Department Supervisor/Lead Inspector
5	Material Review Board member notified in order to review non-conforming product samples and applicable reports.	Department Supervisor/Lead Inspector and/or Material Review Board
6	Decide disposition of non-conforming material.	Department Supervisor/Lead Inspector and/or Material Review Board
7	Record results of disposition <u>Hold Tag</u> . If appropriate, record the nature of the non- conformance and any subsequent actions taken on an <u>Escape Form</u> .	Department Supervisor/Lead Inspector and/or Material Review Board
8	Dispose of material.	Department Supervisor and/or Material Review Board

Repairable or Rework

Use the steps in the table below to control non-conforming product identified as rework.

Step	Action	Person(s) Responsible
1.	Non-conforming product reviewed and designated as repairable or reworkable.	Department Supervisor and/or Material Review Board
2.	Repairable or Rework tag affixed to identified rework material.	Department Supervisor and/or Material Review Board
3.	Product is reworked.	Production Personnel
4.	Reworked product inspected to ensure conformity to the original requirements.	Department Supervisor and/or Material Review Board
5.	Repairable or Rework form is forwarded to the quality assurance department to be maintained as a quality record.	Department Supervisor and/or Material Review Board



Rejected or Scrap

Use the steps in the table below to control non-conforming product identified as Rejected or scrap.

Step	Action	Person(s) Responsible
1.	Non-conforming product reviewed and designated as rejected or scrap.	Department Supervisor and/or Material Review Board
2.	Scrap Tag, is attached to material. If appropriate, non-conforming material may be disposed of immediately without the issue of a scrap tag.	Department Supervisor and/or Material Review Board
3.	Scrap material is placed in designated area to prevent unintended use or delivery. Permanently mark material as "scrap" if appropriate.	Department Supervisor and/or Material Review Board
4.	Scrap material is disposed of properly.	Department Supervisor and/or Material Review Board
5.	Proceed to "Rerun" an order	Department Supervisor and/or Material Review Board

Rerun an Order

Use the steps in the table below to rerun an order.

Step	Action	Person(s) Responsible
1.	Order must be rerun due to non- conformance.	Department Supervisor and/or Material Review Board
2.	Documents/Information of the non- conformance and disposition of product is forwarded to the quality assurance team. Department Supervisor and/or Material Review Board	
3.	An <u>Escape Form</u> is generated.	Quality assurance team
4.	On purchase order;	Quality assurance team
	 Staple a red Rerun tag to the top Note if the order is to be rerun for the complete or a partial quantity Describe the nature of the non- conformance on the top flap 	



	4. Amend the listed processes as necessary to correct the immediate cause of the non-conformance5. Assign an appropriate ship date6. Initial and date	
5.	Order is returned to production.	Quality assurance team

CORRECTIVE AND PREVENTIVE ACTION

Corrective Action

Purpose

To establish a consistent method for taking action to eliminate the cause of nonconformities in order to prevent recurrence.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility	
Personnel	Identify non-conforming product and process non-conformities and communicate them to their supervisors.	
Department Supervisors	Communicate non-conformances to Management either verbally or through an <u>Escape Form</u>	
	Identify and forward data relative to correcting non-conforming product and processes to Management.	
	Provide corrective action plans to Management as assigned.	
Management	Review data on reported non-conformances on a regular basis.	
	Establish and implement plans to correct, improve or prevent non- conformances.	



Quality Assurance Team	Initiate, monitor and track corrective action requests.
	Assist Department Supervisors in establishing and implementing corrective action plans.
	Provide input to the establishment of a corrective action plan to Management
	Follow up on Corrective Action Requests to ensure they are carried out properly and measure their effectiveness.

Policies

- 1. Corrective action refers to the: -
 - Identification of a problem causing non-conforming product.
 - Analysis of the process and/or its components to isolate the deviation
 - Implementation of a course of action to correct the problem.
- 2. Corrective actions shall be measured for effectiveness by Management through: -
 - Follow up research
 - Customer returns
 - Customer Complaints: ref Customer Complaints
 - Follow Up Internal Audits: ref Internal Audits
 - Process Inspection Reports: ref Production Inspections
- 3. A Corrective Action Request (CAR) is a form used to: -
 - document and formalize a course of action designed to resolve a problem, or
 - improve a process related to production.
- 4. The Corrective Action Request is generated by: -
 - ES & EL Engineering Management
 - a customer
 - any person designated by ES & EL Engineering Management.
- 5. Corrective Action Requests are assigned a unique serial number and should be coded with a prefix appropriate to the nature of the CAR: -
 - P = Process/Product Non-conformance Corrective Action Request
 - A = Internal Audit Corrective Action Request
 - C = Customer Complaint Corrective Action Request
 - E = External/Customer Audit Corrective Action Request
 - S = Supplier Corrective Action Request



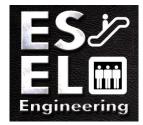
- X = Preventive Action Request
- 6. The Corrective Action Request Form shall contain: -
 - Evidence of the non-conformance
 - Nature of non-conformance
 - Root cause of the non-conformance
 - Action taken to prevent recurrence of the non-conformance
 - Evidence of the effectiveness of the corrective action plan
- 7. Management will determine an appropriate time frame for the activities outlined in the CAR, as well as a time frame for any follow up activities.
- 8. When the corrective action process has determined the cause of a non-conformity, it should be determined if additional non-conforming product exists due to the cause and if further action is required.
- 9. Management is responsible for periodically reviewing open corrective actions to ensure that they are being investigated, acted upon, followed up for effectiveness and closed in a timely manner. The amount of time appropriate to complete a corrective action request shall depend of the nature and severity of the non-conformance, the scope of the action required and the risk that ES & EL Engineering's customers may receive non-conforming product.
- 10. ES & EL Engineering's top management shall take appropriate action when timely and effective corrective actions are not achieved. Possible actions may include: -
 - Re-assessment of the priority of the CAR.
 - Re-assignment of due dates and/or personnel responsible.
 - Initiating a CAR or special audit to determine the breakdown in the Corrective Action process.
- 11. The process for flowing down corrective action requirements to a supplier that is responsible for product non-conformities is defined in Purchasing.

Procedure

Implementation of Corrective Action

Use the steps in the following table to implement a corrective action.

Step	Action	Person(s) Responsible
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1.	 Review one or more of the following inputs: - 1. Escape form 2. Audit finding 3. Customer complaints 4. Trends of process non-conformances 5. Trends of product non-conformances 	ES & EL Engineering Management Quality Assurance Team
2.	Determine that action can be taken to prevent the recurrence of product or process non-conformances	Management Quality Assurance Team
3.	Describe the problem in the appropriate area of the <u>Corrective Action Request</u> and forward to the appropriate personnel for root cause analysis.	Management Quality Assurance Team
4.	Perform root cause analysis of the described problem to achieve a thorough understanding of the causes of the non-conformance and document on the <u>Corrective Action Request</u> .	Assigned Personal
5.	Develop a corrective action plan to eliminate the causes of the non- conformance and document on the <u>Corrective Action Request</u> .	Assigned Personal
6.	Implement the corrective action plan as described in Step 5 and record the results on the <u>Corrective Action Request</u>	Assigned Personal
7.	Wait sufficient time and collect objective evidence that the corrective action plan has been effective and document on the <u>Corrective Action Request</u> . If it is determined that the corrective action plan has not been effective, return to Step 4	Assigned Personal
8.	When effectiveness has been determined, close out the <u>Corrective</u> <u>Action Form</u> and report results to Management.	Assigned Personal

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9.	Review corrective actions and their results in Management Review Meetings to ensure the continuing effectiveness and continual improvement of the Quality Management System	Management
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Preventive Action

Purpose

To establish a consistent method for taking action to eliminate the causes of potential nonconformities in order to prevent their occurrence.

Responsibility

The table below identifies the people and their responsibility relating to this procedure:

Person	Responsibility	
Personnel	Identify potential non-conformities in ES & EL Engineering's products or processes and help management determine their causes.	
Management	Evaluate the need for action to prevent the occurrence of non- conformities.	
Quality		
Assurance Personnel	Establish and implement plans to correct, improve or prevent future non-conforming product.	
	Analyze the sources of information for potential non-conformities and issue Preventive Action Requests to designated departments as required.	
	Follow up on Preventive Action Requests to ensure they are documented and carried out properly and without undue delay.	
	Review preventive actions during Management Review Meetings.	
Department Supervisors	Identify and forward data relative to preventing non-conforming product to Management.	
Assigned Personnel	Provide and implement preventive action plans in a timely manner.	



Policies

- 1. The preventive action process at ES & EL Engineering is part of the corrective action process and is used to promote a proactive approach towards identifying and correcting deficiencies in the Quality Management System.
- 2. Preventive action is directed at future activities that have the potential for causing non-conformities in our parts or processes.
- 3. Preventive Action Requests are to be implemented in a timely manner appropriate to the severity of the potential non-conformity and reviewed for effectiveness when sufficient time has elapsed to generate relevant data.
- 4. Preventive Action Requests, recorded on Corrective Action Requests are assigned a unique serial number and should be coded with a prefix "X". Taking corrective action is a problem solving process, while preventive action is a risk analysis process. The Coordinator should be consulted if the initiator of CAR is unsure as to whether the action requested is corrective or preventative in nature.

Step	Action	Person(s) Responsible
1.	The potential for a future non-conformity in ES & EL Engineering parts or processes is discovered. Forward Information/evidence to ES & EL Engineering Management.	Personnel Management
2.	Evaluate the risk/severity of the potential future non-conformity to determine if it appropriate to issue a PAR using <u>Corrective Action Form</u> . If the potential non-conformance does not warrant action at that time, the procedure ends here.	Management Quality Assurance Team
3.	Create a new PAR on <u>Corrective Action</u> <u>Form</u> and forward it to the appropriate personnel.	Management Quality Assurance Team
4.	Perform and document a root cause analysis to determine the sources of the potential non-conformity.	Management Quality Assurance Team Department Supervisors Assigned Personnel

Procedure



5.	Develop and document a corrective action plan to eliminate/minimize the causes of the potential non-conformity.	Management Quality Assurance Team Department Supervisors Assigned Personnel
6.	Implement and document the corrective action plan. Collect data to demonstrate the effectiveness of the action and report progress to ES & EL Engineering Management as appropriate. Management as appropriate.	
7.	Review the effectiveness of the corrective action plan in preventing the potential non-conformity when sufficient evidence has been collected. If the corrective action plan has not prevented the non-conformity from occurring, repeat steps 3 through 7 as necessary.	Management Quality Assurance Team Department Supervisors Assigned Personnel
8.	Close out the PAR.	Management Quality Assurance Team
9.	Review at Management Review Meetings. <u>Ref - Management Review</u>	Management Quality Assurance Team



HANDLING, STORAGE, PACKAGING, PRESERVATION, INVOICING AND DELIVERY OF PRODUCT

Scope

This section of the Quality Assurance Manual covers the procedures followed by ES & EL Engineering for the handling, storage, packaging, preservation, invoicing and delivery of product. ES & EL Engineering ensures that appropriate storage areas for product are used at all times.

Storage of Goods

Scope

This procedure describes the storage of goods by ES & EL Engineering: -

- All goods with particular emphasis on perishable, limited lifetime and hazardous goods are maintained, as required, so as to preserve them in a fully serviceable condition whilst in storage.
- Should any alteration from its recorded incoming or standard configuration be deliberately carried out to an item(s) of stock whilst in storage, the new configuration is clearly labelled as such and communicated to the Accounts Department for recording in the stock inventory system.
- Static sensitive product is stored in the manufacturer's original static protective packaging.

Handling of Goods

Scope

This procedure describes the handling of goods by ES & EL Engineering: -

- Goods are handled so as to preserve them in an "as received" condition until finally dispatched.
- At regular intervals, coinciding with 3 monthly stock takes, the condition of stored goods is assessed in total. Any damage, deterioration, defect or incompleteness of goods is noted and a Corrective Action Request Forms raised as appropriate.



Where heavy goods require handling, a sack-barrow and correct anatomical lifting procedures are employed. Heavier items which would exceed safe handling limits at the ES & EL Engineering premises and which are to be immediately on-sent to a customer, are inspected, received into stock and handled on a case-by-case basis at the secure warehouses of the ES & EL Engineering Customs agent.

Inward Order Processing

Scope

This section describes the initial processing of inward orders by ES & EL Engineering.

Basic Office Systems Employed

This procedure describes the basic office systems employed by ES & EL Engineering for the processing of inward orders.

ES & EL Engineering operates a Basic Business Software System. This Software System plays a vital part in the order processing procedures.

Manual packing slips may be invoked at ES & EL Engineering Head Office as follows:

- a) In extraordinary circumstances e.g. If the Software System is off line;
- b) For conducting stock transfers to other branches;
- c) For the dispatch of customer supplied goods or stock items to overseas principals for either repair, return for examination, return after evaluation, or credit.

Formal verbal/written orders, or simple verbal purchase requests, accompanied by either cheques, cash or VISA card instructions, are processed in all cases via a Cash Sale Invoice via the Software System.

Receiving and Logging of Customer Orders

This procedure describes the initial processing of Customer Orders by Lord Consulting.

Orders received by field staff are communicated promptly to the Head Office.

Customer Orders are processed in the first instance by the appropriate administration personnel within one working day of receiving the order as is practicable.

Orders received verbally are transcribed immediately to a Triplicate form. The following details are recorded on the form: -

- Sales order number
- Customer Name
- Customer Purchase Order Number
- Date of Order
- Invoicing Address



- Delivery Address
- Item description, quantity and price for each line of the Customer Order
- Any special requirements sought by the customer (e.g. special delivery requirement, relevant promotional items to be included with the goods)
- A reference to the origin of any special pricing

The Customer Order is forwarded to the appropriate administration personnel who initiate the Contract Review Process.

Contract Review

This procedure describes the contract review performed by ES & EL Engineering when processing a Sales Order, once the Sales Order is received by the administration personnel.

- Inward orders are processed, in the first instance, by the Sales Staff within 1 working day of receiving the order, as practicable.
- Processing of inwards orders begins by employing the Contract Review Procedure in the Act of Receiving Orders, this being more fully documented in Contract Review of ES & EL Engineering Quality Assurance Manual.
- Specific procedures are followed for the verifying of the description of the goods, the availability of the goods, the pricing of the order, the commercial details and any specific terms and conditions imposed. All of these procedures are conducted sequentially and completed in total, prior to any necessary approach being made to the customer, according to the Contract Review process, to resolve any matters of concern.
- In the event that the customer needs to be approached under this process, the approach is conducted in writing.

Verification of Goods Description

This procedure describes the description verification of ordered product performed by ES & EL Engineering when processing inward orders.

All descriptions of ordered goods and accessories are checked for the existence of sufficient information to ensure an unambiguous determination of the customer's requirements. In the event that an ambiguity is found to exist, or an error or omission has been made by the customer in describing the goods accurately enough to process the order "with complete confidence", the customer is notified of the problem and the specification confirmed.



Verification of Goods Availability

This procedure describes the verification of goods availability performed by ES & EL Engineering when processing inwards orders.

- ♣ As an integral part of carrying out the Contract Review Procedure, the goods in question are checked for availability (and, thus, against the customer's actual or implied delivery conditions) in a number of ways, detailed as follows:
 - a) By reference to the "Stock Inquiry" sub menu of the "Inventory Control"
 - b) By being sighted on the warehouse shelves
 - c) By being sighted and picked from the warehouse shelves
- During any of these availability checks, a Stock Transfer, for a full or partial quota of the goods in question, may be sought to secure the availability of goods for dispatch.

Verification of Order Pricing

This procedure describes the verification of the contract price by ES & EL Engineering when processing Customer Orders.

- 4 All orders are checked for validity of pricing, if any, stated on the order.
- Should an order make reference to an ES & EL Engineering quotation, the processing member of staff sights the quotation and verifies that both the quotation was valid at the date the order was written and that the pricing per item is as per the quotation.
- Pricing used to process an order is as per the ES & EL Engineering Price book with the following exceptions:
 - a) The pricing was provided by a valid ES & EL Engineering quotation
 - b) The order/product category has been identified as an area of heightened sensitivity to pricing. Orders of this type are referred to the appropriate Product Manager for pricing approval. This approval is notified by the Product Manager's dated signature and brief approval statement on an attachment appended to the order itself.
 - c) The pricing pertains to a documented and notified ES & EL Engineering product promotion that was valid at the time the order was prepared.

Verification of Commercial Details of the Inwards Order

This procedure describes the verification of commercial details performed by ES & EL Engineering when processing Customer Orders.

All orders are checked by the appropriate administration personnel for the validity and currency of the customer's credit account, where monthly terms have either been nominated or implied by the customer.



The order is reviewed to ensure that commercial details are in compliance with those appropriate and agreed with the Customer. In the event of any concern, the issue is referred to the General Manager. The General Manager's agreement or otherwise is noted on an appended document attached to the Sales Order, dated and signed. Should the issue of approval be particularly sensitive, the General Manager would seek the opinion and counter signature of the Commercial Manager or Managing Director.

Verification of Specific Terms and Conditions of the Order

This procedure describes the verification of specific terms and conditions as performed by ES & EL Engineering when processing customer orders.

- All orders are checked for the existence of any special terms and conditions in any of the following categories: -
- a) Orders conditional on meeting a customer's specific and clearly stated requirement in the area(s) of either delivery, technical matters, commercial matters, or with regard to terms and conditions:

In the event that such an order is received and delivery or technical conditions cannot be addressed "with full confidence" by the order processing staff, it is passed to the respective Product Manager for further instructions. The checking and acceptance, or otherwise of conditional clauses pertaining to commercial matters or to terms and conditions is conducted in the first instance by the General Manager.

b) Orders accompanied by either a statement from the customer that the order is subject to their terms and conditions of sale, or accompanied by a full transcription of their terms and conditions:

In the event that the order is so qualified is valued in excess of R10,000; the order is forwarded to the General Manager for approval or otherwise.

- c) Orders requesting delivery and invoicing after a nominated date: These are denoted "Forward Orders".
- d) Back orders requesting invoicing ahead of the anticipated arrival of the goods (e.g. an invoice required before the end of the customer's financial year: These orders are processed normally with the following differences...
 - After the initial contract review, the processing of the packing slip and the invoice are done in immediate succession, despite the goods not being in stock.
 - The invoice is annotated manually with the details of the expected delivery of the invoiced items.
 - Two copies of the top copy of the invoice are made. One copy is passed to the Debtor file with an attached cover note to highlight that the goods have been invoiced in advance of their arrival into stock and that payment is not to be expected until after arrival of the goods.



- The second copy of the invoice and the top copy of the packing slip are placed in the Backorder file, awaiting arrival of the goods.
- After processing the file, copy of the packing slip and invoice are filed and the original top copy of the invoice is mailed to the customer
- Upon the receipt of the goods into stock, the goods are dispatched as per the normal procedures under the cover of the top copy of the packing slip. At the same time, the photocopy of the invoice is detached and used to prompt the debtor file with a note to the effect that the account is now ready for collection.
- e) Where a longer period of credit than the 20th of month following invoice date has been negotiated, a photocopy of the invoice is passed to the debtor files with the credit terms highlighted.

Preparation of Packing Slips/Order Confirmation Forms

This sub section describes the preparation of Packing Slips/Order Confirmation Forms during the processing of inward orders by ES & EL Engineering.

Orders are processed according to whether the goods required are ascertained to be either all ex stocks, not ex stocks (either having to be ordered on the customer's behalf or supplied when further stocks arrive..."back ordered"), a mixture of ex stock items and items needing to be back ordered, forward orders, orders with "Non Standard Arrangements" and cash sales.

All Ex Stock

This procedure describes the processing of inwards orders for ex-stock goods by ES & EL Engineering.

- Customers' orders are processed by the appropriate Administration Personnel to Packing Slip stage either directly via the Business Software System "Enter Orders" sub menu of the "Order Entry" module or by using the Manual Packing Slip Form.
- After the Packing Slip is printed/written for each order, a double check is carried out, as practicable, against the original copy of the customer's order to prevent any omission of detail. Care is taken to identify that the pricing verification has been accurately carried out.
- By of recording the entry of the order information and the successful generation of the Packing Slip Form under the Business Software System, the original copy of the paperwork used to generate the order is stamped with the ES & EL Engineering "Entered-Ref/Date/Initials" red stamp and the following details recorded on the stamped section:
 - "REF" Packing Slip Number
 - "Date" Date Order was originally entered in the computer
 - "Initials" Initials of the person who conducted the data entry



- The top copy of completed Packing Slip Forms are passed at this stage to the Warehouse Person to arrange dispatch.
- The bottom copies of completed Packing Slip Forms are filed in numerical sequence in the Packing Slip file.
- The original customer order paperwork used to prepare the Packing Slips is filed alphabetically in appropriate filing systems.

Back Orders

This procedure describes the processing of back orders by ES & EL Engineering.

- All orders for goods that are not available from stocks are entered via the Business Software System in an identical manner as that described for ex-stock, with the exception that the Business Software System will offer the option to place goods on Back Order. Having selected to Back Order goods the Packing Slip is completed with an appropriate standard message advising the approximate ETA of goods.
- **4** The original customer order paperwork is stamped and notated.
- The top copy of the Back Order Packing Slip is mailed to the customer as advice of the expected delivery of Back Order items.
- The bottom copy of the Back Order Packing Slip is stapled to the original customer order paperwork and filed in the Back Order file.
- A copy of the Back Order Packing Slip is passed to the respective Product Manager, or his designated ordering assistant, as notification that stock is to be ordered from the appropriate supplier. Upon completing the ordering of goods, the originator records the order number on the original customer paperwork held in the Back Order file.
- Back Orders are finally released upon the presentation to the ES & EL Engineering Office of a Goods Received Docket indication the arrival of the respective Goods and once the goods have been entered in to stock in the Business Software System.

Forward Orders

This procedure describes the processing of Forward Orders by ES & EL Engineering.

- Customers may request that the goods on their order be supplied and invoiced after a nominated date. These are referred to as "Forward Orders"
- **4** Forward Orders are processed as follows:



The original customer order paperwork is notated with "Process and Deliver goods on...(date). It is then placed in the "Orders to be processed" drawer.

If the forward ordered goods are available from stocks at the time of order processing, but are requested to be dispatched in whole or part at a "significant" period of time out from the order processing date, the respective Product Manager is consulted as to whether to reserve the current goods, action an order for more or a combination of both courses of action.

Non-Standard Arrangements

This procedure describes the processing of orders with non-standard arrangements by ES & EL Engineering.

- On rare occasions orders are received with "Non Standard Arrangements" specially requested by the customer. Such arrangements may pertain to the purported description of the product, the quantity of goods purported to be supplied or the purported delivery date of the goods.
- Provided that the Commercial Manager verifies that the arrangement does not contravene any established commercial practice or the Local Government legislation and provided that the respective Product Manager verifies the validity of the request from a policy standpoint, the request is accepted and communicated in writing by the accepting member of staff to all other members of staff likely to be involved in processing the transaction.

Cash Sales

This procedure describes the processing of cash sales by ES & EL Engineering.

- All transactions for goods paid for in advance of uplifting or on delivery of the goods are referred to as Cash Sales
- Transactions can either be conducted "over the counter", remotely via credit card instructions or by forwarding of cash or cheque with the order instructions.
- **4** All cash sales are preceded by contract review procedures.
- A Cash Sale invoice is raised via the Cash Sale" sub menu of the "Order Entry" module in the Business Software System. The invoice is noted "Payment received with thanks" and the top copy sent to the warehouse for dispatch of the goods. The bottom copy is filed in numerical sequence in the "Invoice" file.
- If payment is by cash or cheque, the payment is then processed as for all other payment receipts.



- If payment is by credit card (only Visa and MasterCard accepted) then the payment is processed as follows:
 - a. Purchases over R10000 to be approved by Visa centre.
 - b. Phone or email orders are processed using Visa phone order form.
 - c. "In person" orders processed using multi copy "Credit card sales form.
- ↓ For cash sale orders received by ES & EL Engineering sales reps, then the customers official order or ES & EL Engineering manual order form is sent with the customers cheque, cash or credit card details to Head Office, within one working day where practicable, for processing.
- If the cash sale order is received for goods that are ex-stock a Back Order Packing Slip with the appropriate terms of payment is prepared.
- If an order is accompanied by the money, the Back Order Packing Slip is noted as such and the top copy sent to the customer. The bottom copy is filed in the Back Order file with a copy sent to the appropriate Product Manager for goods to be ordered. The payment is then processed.
- If no money accompanied the order, the Back Order Packing Slip is then processed. On arrival the goods are placed on the "Goods on Hold" shelf with a copy of the Back Order Packing Slip pending arrival of the monies. Details of the customer's notification are handwritten on the Back Order Packing Slip.
- Once payment is received the Back Order Packing Slip is converted to a Cash Sale invoice and goods dispatched or uplifted by the customer.

Goods On Evaluation

This procedure describes the procedure for the processing of goods on evaluation.

- ES & EL Engineering operates a generous pre-purchase equipment evaluation policy that is extended, at the ultimate discretion of the respective Product Managers to customers who hold valid credit accounts.
- **4** Goods for evaluation are supplied only from ES & EL Engineering warehouse.
- The evaluation procedure is instigated upon receipt of either a formal purchase order/order number or written approach from the customer, qualified in each instance by a request for an evaluation. Unless otherwise negotiated, the evaluation period is two weeks.
- Evaluations are processed via the Business Software System to Packing Slip stage with the only difference being that the Packing Slips bear the additional words "GOODS ON EVALUATION, FOR SALE OR RETURN IN GOOD CONDITION BY ...", the return date being calculated and added at the same time.



- On completion of the Packing Slip and prior to printing, the Packing Slip is made "incomplete". This ensures the goods will not be inadvertently charged to the customer.
- The top copy of the Packing Slip is dispatched with the goods. The bottom copy of the Packing Slip is placed in a folder labelled "Goods on Evaluation" in alphabetical order of customer's names pending the return of goods.
- Appropriate sales personnel check the "Goods on Evaluation" file fortnightly to follow up on the return or sale of the goods.
- If goods are not returned by the prescribed date and no extension has been granted by the respective Product Manager, the bottom copy of the Packing Slip is forwarded to ES & EL Engineering Office within one working day, as practicable, for invoicing as per the usual method, with the exception that any invoice so raised is referenced to an over run evaluation period. The Packing Slip must be made "Complete" before invoicing.
- If the customer decides to keep the goods and issues a second or formal order number to cover them, the invoicing is conducted as per procedure after the Packing Slip has been made "Complete".
- For goods returned from evaluation, they are first checked for good condition prior to placing back in stock.
- ♣ The warehouse then advises ES & EL Engineering office of the return of the goods and the Packing Slip is then cancelled. This puts goods back into stock system.
- The bottom copy of the evaluation Packing Slip is then filed numerically in the "Packing Slips" file.

Dispatch and Delivery of Goods

General Dispatch Procedure

This procedure describes the general dispatch and delivery procedures employed by ES & EL Engineering.

- Initiation of dispatch procedures is upon receipt of a completed Packing Slip Form. Where practicable, dispatch of goods is the same day the Packing Slip Form is received by the Warehouse Person.
- ↓ If a transaction does not require stock control, initiation of the dispatch may be via the receipt, by the Warehouse Person, of a completed Waybill Form.
- ♣ A defined and correctly equipped area exists in each warehouse for packaging purposes.



- Goods are selected by the Warehouse Person from the appropriate designated stock holding areas of the Warehouse, verified that the goods are indeed those described on the Packing Slip and checked for completeness. A double check is performed prior to the goods being packed.
- On the Business System generated Packing Slips the quantity supplied is already printed on the form by the time the Warehouse receives the form. The top copy of the Packing Slip is placed together with the goods.
- On Packing Slips generated by the manual invoicing system the same general procedure is followed, the customer copy accompanying the goods and the posting copy forwarded within one working day, where practicable, to Head Office for an official Packing Slip to be generated.
- If the quantity of goods available ex-stock is less than the printed quantity dispatched on the Business System generated Packing Slip, the Packing Slip in question is voided by way of a ruled diagonal line and returned to the initiator with written comment on the form as to the discrepancy. The Packing Slip is regenerated with the correct information and the voided Packing Slip is discarded.
- If the quantity of goods available ex-stock is less than the printed quantity on the hand written Packing Slip, the Packing Slip is returned to the initiator with an attached note detailing the discrepancy. The Packing Slip is corrected accordingly and re-issued.
- Appropriate packaging materials and methods are selected and employed so as to ensure that the goods received by the customer are in a condition suitable for resale.
- Protective padding for packaging and packaging materials themselves are of clean and hygienic composition.
- All out going parcels are clearly labelled to ensure an unambiguous delivery to the correct or customer-nominated destination. Courier bags are filled out fully and return address details of the dispatching branch included in the relevant space. All other parcels are labelled with a proprietary window address envelope into which is inserted the appropriately folded Packing Slip. Completed parcels are recorded in the Warehouse Dispatch Record Book, with the following information recorded for each dispatch:
 - a. Method of dispatch;
 - b. Date of dispatch;
 - c. Packing Slip Number;
 - d. Customer details;
 - e. A copy of the pre-numbered freight "Track and Trace" stickers.
- Couriers and freight collection agencies are informed of the presence of packages awaiting collection to ensure goods are uplifted on the day of packaging, where practicable.



Goods for Export

This procedure describes the dispatch and delivery procedure for goods for export.

- There are four variations on the final dispatch procedure dependent on whether the method of freighting is via airfreight, sea freight or courier.
- The dispatch procedures are followed with exception of the addressing of the package and the treatment of the Packing Slip Form, the latter being omitted from the package itself.

A photocopy of the Packing Slip Form and where relevant, the Purchase Order pertaining to any action required by the consignee, is passed to the Accounts Office for filing in alphabetical order in the Export Record File.

Goods Exported by Air Parcel Post

- a) After packaging a self-adhesive Customs Declaration Form is selected as follows:
 - Form CDF1 for parcels under 2 kg;
 - Form CDF2 for parcels above 2 kg.
- b) The form is completed by the Warehouse Person and affixed to the outside of the package. Also affixed to the package is an envelope clearly labelled by the Warehouse Person with the words "Packing Slip Enclosed" containing the top copy of the Packing Slip, accompanied by the top copy of the Pro Forma Invoice if the goods being supplied are for sale. Should a Pro Forma Invoice be involved, the bottom copy is forwarded, together with the bottom copy of the Packing Slip, to the Head Office for processing.

Goods Exported by Air Freight

- a) After packaging and addressing the parcel, the top copies of the Packing Slip and the Pro Forma Invoice, where applicable and any specific instructions to the Freight Forwarder are placed in an A4 envelope.
- b) The local address of the Freight Forwarder is written on to an Address Label Form which is affixed to the front of the envelope together with the appropriate local courier sticker. The envelope is duly attached to the parcel itself with adhesive tape, covering the aforementioned customer address label, whereupon the package is forwarded to the Freight Forwarder. The latter arranges to complete and requisite Customs declarations, re packages the Packing Slip/Pro Forma Forms and dispatches the parcel to the customer.

Goods Exported by Sea Freight

a) After packaging and addressing the parcel, the top copies of the Packing Slip and the Pro Forma Invoice, where applicable, the weight and volume of the consignment and any specific instructions to the Freight Forwarder are placed in an A4 envelope.



- b) The local address of the Freight Forwarder is written on the envelope and the envelope is mailed to the freight forwarder for preparation of the requisite Customs and Export paperwork, instructions to the shipper they have nominated to carry the goods and detail of the ship e.g. name and voyage number.
- c) Upon receipt of these instructions from the Freight Forwarder in writing, a consignment note is filled out showing clearly the ship name and voyage number and the goods then dispatched by a suitable courier.
- d) In due course the Freight Forwarder sends an original copy of the Bill of Lading of the goods. This is promptly airmailed, by the Accounts Department (with a cover note), the customer to permit them to clear the goods on arrival in the destination country.
- After packaging and addressing the parcel, the top copies of the Packing Slip and Pro Forma Invoice, where applicable and any specific instructions to the nominated courier company, are placed with the goods.

The nominated courier company is phoned and they will uplift the goods.

Goods Uplifted by Customer

This procedure describes the dispatch and delivery procedure employed by ES & EL Engineering for goods uplifted by the customer.

- If a customer nominated at the time of order that they wish to collect their ordered goods personally, the goods are processed in the normal way, but are not packaged or wrapped unless requested.
- Prior to uplifting a second verification check of the goods is performed, witnessed by the customer, who confirms the details by signing all copies of the Packing Slip. The top copy is uplifted with the goods and the bottom copy filed in the Packing Slip file.
- Goods uplifted following the completion of a Cash Sale Transaction are generally not packaged or wrapped unless requested.

Invoicing of Orders

This section describes the invoicing of orders by ES & EL Engineering.

General Invoicing Procedure

All invoicing is conducted by the ES & EL Engineering office at least weekly, as practicable.



- Invoicing of the Business Software System generated paperwork is conducted initially via the "Enter/Edit Orders" sub menu of the "Order Entry" menu.
- The Business Software System automatically handles the zero rating of GST for offshore customers installed as part of customer/address information.
- Invoices are produced via the "Produce Invoices" sub-menu of the "Order Entry/Invoicing" module of Business Software System.
- Once all invoices for the period have been produced they are then printed via the "Print Invoices/Credits" sub-menu of the "Order Entry/Invoicing" module. When all invoices have been printed they are the checked for completeness of detail and correct pricing.
- When satisfied all invoices are correct they are then posted in the system via the "Post Invoices/Credits" module of the "Order Entry/Invoicing" module
- At this stage top copies of invoices are mailed to customers and bottom copies filed numerically in the "Invoices" file.

Export Invoicing Procedure

This procedure describes the general export invoicing procedures employed by ES & EL Engineering.

- The Business Software System accounting package employed by ES & EL Engineering does not allow the processing of Packing Slips and invoices in foreign currency. These are, therefore, processed manually prior to being converted to South African currency via the Business Software System.
- The procedure for producing this documentation is the same for Invoices, Pro Forma Invoices and Commercial Invoices.
- Manual Export Invoices can be produced for goods sold by ES & EL Engineering. The standard procedure for each is the same excepting when ES & EL Engineering invoices are converted to South African currency via the Business Software System.
- Export invoices are raised by the ES & EL Engineering Office using an appropriate template prepared on the Microsoft Word for Windows package.
- Each document is given a number starting with the year and followed by the next number in the sequence, i.e. 2015/123.
- The invoices show the goods sold in the currency elected by the purchaser, i.e. AUD, USD, together with payment terms and full bank account details of where the payment is to be made.
- 4 All invoices are saved in a folder designated "Export Invoices" in Microsoft Word.



- Hard copies are taken to accompany the goods for export with another copy filed in the appropriate "Export Invoices" file.
- To allow the proper allocation of payments in the Business Software System an invoice is produced for each manual export invoice with the invoiced amounts converted to South African Rand at the same exchange rate as used to calculate the original prices.
- Business Software invoices for ES & EL Engineering export customers are given the customer's unique account code already logged in the "Accounts Receivable" module of the Business Software System.
- To ensure correct recording of ES & EL Engineering sales, the Business Software System invoices for ES & EL Engineering export customers are given the customer account code SAEXPORT.
- All manual and Business Software System generated export invoices are zero rated for GST. In the Business Software System this is applied via the appropriate "Tax Default" when adding export customer details in the "Customer Maintenance/Enquiry" sub menu of the "Accounts Receivable" module.

CONTROL OF QUALITY RECORDS

Purpose

To define the controls for the identification, storage, protection, retrieval, retention time, and disposition of records

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility
Quality Assurance Manager	Administer the control of the quality records system.
Department Supervisors	Maintain quality records relating to their function.
All Employees	Fill out forms and store company related records as specified in this procedure.



Policies

- 1. Quality records at ES & EL Engineering consist of those documents that describe the results of some activity. Examples of quality records include inspections, tests, reviews, audits, measurements, training records and meeting minutes. The control of quality records refers to the originals.
- 2. The Document Master List with Revision History lists for each quality record: -
 - The document code and title,
 - The current revision and issue date,
 - A description of revision changes,
 - The index for sorting or filing the records,
 - The location of active records and the position responsible for maintaining them,
 - The active retention time for records and the total retention time for archived records,
 - The means for retrieving records,
 - The methods for disposing of the records, when their total retention time is up and they are no longer useful.
- 3. ES & EL Engineering quality records are maintained to demonstrate product quality, effectiveness of the quality system and/or conformance to specified requirements.
- 4. ES & EL Engineering personnel involved with filling out forms and storing company related records are to ensure that the records are: -
 - filled out properly, accurately and completely
 - documented in ink or with a permanent marker
 - signed and dated when appropriate
 - legible when hand written
 - printed through all copies of multiple carbons
 - stored in a clean dry area in such a manner as to prevent damage or deterioration to prevent loss
 - stored either on paper or stored on the computer (electronic media) for the proper retention period
 - made available to the customer or regulatory authority upon request, when required by contract.
- 5. Quality records are generated internally within ES & EL Engineering and externally from customers, suppliers and subcontractors.
- 6. ES & EL Engineering will adhere to specific document retention requirements flowed down by customers. These requirements are typically communicated on purchase orders or supplier quality instructions. Information regarding document retention periods maintained in the Customer Master List Database is for reference only. Unless otherwise specified, the document retention period for Tier 1 customers is a minimum of 5 years and a minimum of 1 year for Tier 2 customers.



- 7. Pens with permanent ink should be used to make corrections or changes to quality records. White-out or pencil should not be used to make corrections or changes to quality records.
- 8. Making Corrections on Quality Records: Scheduled ship dates are frequently changed on Purchase Order Envelopes. In order to keep them legible, the ship date field on the envelope may be covered over with a label to replace information. Changes should be recorded online in Job Tracking.
- 9. Typically, ES & EL Engineering asks that suppliers provide all necessary quality records so they may be retained and controlled internally. When an ES & EL Engineering supplier is required to maintain quality records, the means for retaining and controlling the records are specified on purchasing documents. When required, ES & EL Engineering suppliers should maintain quality records to the same standards as referenced in this procedure.

Procedure

The control of quality records involves the following individual procedures: -

Filling Out Quality Records

Follow the steps in the table below to assure that a quality record is properly filled out.

Step	Action	
1.	Handwritten entries should be legible.	
2.	When using multiple copy forms, entries are to be printed through all copies of multiple carbons	
3.	Fill out all the information required properly, accurately, and completely.	
4.	When appropriate, sign and date the record.	

Making Corrections On Quality Records

Follow the steps in the table below to make corrections to a quality record. Corrections to quality records are to be such that traceability and any significant history is maintained. Corrections are to be made in ink.

Step	Action
1.	ASK: Will corrections made to this document be clear and legible?



	 If "No", create a new record. If "Yes", go to Step 2. 	
2.	Cross out what is to be changed with a single line.	
3.	Initial and date what has been crossed out.	
4.	Make the change required.	
5.	Initial and date the change made.	

Maintaining Quality Records

The table below identifies the type of quality records maintained at ES & EL Engineering and how each is maintained.

Type of Quality Record	How It Is Maintained
Paper	 Protect the record from becoming dirty or soiled. Keep records away from sources of contamination. Use a plastic sleeve if appropriate.
Electronic Media (Computers)	 Use virus protection practices. Backup data on a regular basis. Maintain backups off site if appropriate.

Identifying Quality Record Retention Requirements

Quality record retention requirements are specified in the Document Master List with Revision History.

Specified retention requirements are established in accordance with the: -

- duration of the contract
- life of the product and
- requirements of applicable standards and
- government, customer, legislative, statutory, regulatory, and/or contract requirements.

Reference: Document Master List to determine the filing index, active location, responsibility, active retention time, total retention time and disposal method of the record.



Archiving Quality Records

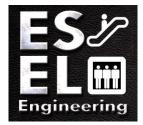
Authorized personnel use the steps in the table below to properly archive quality records. Outside storage services are not used to archive quality records.

Step	Task	Action
1.	Labeling the box	Indicate the names of the records being archived.
2.		Indicate the period covered by the records being archived. Example: From (the date of the first record) to (date of the last record)
3.		Indicate the date the box is being archived.
4.	Storing the box	 Place the records in a designated archive storage area that will: 1. Protect the record from becoming dirty or soiled. 2. Keep records away from sources of contamination.

Disposition of Original Quality Records

Authorized personnel use the steps in the table below to assure the proper disposal of original quality records.

Step	Action
1.	Review the records to be disposed.
2.	Ask: Has the useful life of the records ended?1. If "No", do not dispose of the records.2. If "Yes", go to Step 3.
3.	Ask: Have the contractual requirements of the records been satisfied?3. If "No", do not dispose of the records.



	4. If "Yes", go to Step 4.
4.	Dispose of quality records. ES & EL Engineering Management determines disposal methods for quality records based on the type of quality record, data contained in the record and/or security requirements. Records are shredded when appropriate.

INTERNAL QUALITY AUDITS

Purpose

To provide a consistent procedure for conducting internal quality audits.

Responsibility

The table below identifies the people and their responsibility relating to this procedure: -

Person	Responsibility
Quality Assurance Manager	Establishes the schedule for performing internal quality audits.
Coordinator	Designates trained internal auditors to perform and document quality system audits.
	Reviews and evaluates internal audit results at appropriate intervals.
Department Supervisors Quality Assurance Manager Coordinator	Responds to internal audit findings with appropriate corrective action.
Trained Internal Auditors	Perform internal audits.

Policies

1. Audits will be conducted using a process approach. All processes determined in our quality assurance manual will be covered per the audit schedule. The purpose of the



audits is to determine whether ES & EL Engineering's QMS conforms to our own planned arrangements and requirements and our customers' contractual requirements.

- 2. The audit schedule shall be established so that compliance with all processes is audited once a year, at a minimum. The audit schedule and frequency shall be adjusted in response to quality system priorities that are identified by ES & EL Engineering management and based on the status and importance of the activity. The Audit Cycle Schedule and Audit Plan records are maintained in the online Audit Database and printed on the Audit Cycle Schedule/Audit Plan.
- 3. Audits will be documented on an audit finding report either electronically or by hard copy.
- 4. Debriefing The area/department supervisor will be debriefed on the audit results after the audit is completed. This shall be communicated by the assigned auditors as a verbal summary. Findings will be reviewed by the Coordinator or Quality Assurance Manager, after which a copy of the completed Audit Finding Report will be available upon request.
- 5. Audit findings (non-compliances) recorded on the Audit Finding Report must be detailed and specific enough to provide the responsible area/department supervisor with complete assessment information. These findings shall be documented as defined below.
- 6. Audit findings These shall consist of:
 - C = Conformances Evidence was found that process meets requirement.
 - OBS = Observations Slight or minor deviation from process does not have a major impact on process or would not allow non-conforming product to escape.
 - NC = Major Non-conformance This is written if a number of OBS are found of similar nature or if a systemic breakdown is occurring. NC's are written when a significant failure is found to the specified requirement. Also can be written if the failure or the breakdown can cause non-conforming product to escape.
- 7. Review Audit Finding Reports are reviewed by the Coordinator or the Quality Assurance Manager. They will review the findings for accuracy. They shall discuss the audit results with the auditor(s) and determine if the non-conformances written require corrective action requests (CAR's).
- 8. Issuing Corrective Action Request (CAR)- If an audit results in findings and the Coordinator or Quality Assurance Manager determine if necessary, use Corrective Action Form to initiate corrective action. Ref: Corrective Action. If an audit finding does not warrant a full corrective action, follow up activities may be documented within the Internal Audit Report Form, that is maintained within the Audit Database.
- 9. Management Review Internal audit status and results shall be reported during all Management Review Meetings. The Coordinator or Quality Manager shall report the following: -
 - completion status of the internal audits
 - a summary of recent audit results
 - the status of audit corrective actions
 - changes to Quality Policy Manual, procedures, or work instructions
 - actions required

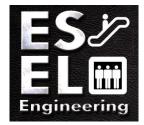


- 10. Issuing Audit Assignments The Coordinator and/or the Quality Manager is responsible for reviewing the audit plan/schedule for the coming months and issuing audit assignments to trained internal auditors. Internal Auditors can be subcontracted consultants in addition to employees.
- 11. Trained Auditors Auditors are required to have evidence of completing a two (2) day internal or external training class given by an approved/certified auditing firm. An Internal Auditor could also be considered trained if they hold an active certification from the above. If a fully trained auditor is not available, management may designate the responsibility to personnel with an appropriate amount of experience and knowledge of the auditing process.
- 12. All recorded audit results shall be listed on an Audit Finding Report even if there are no findings/non-compliances. This audit record will provide evidence that the audit was performed.
- 13. Internal Audit Check-lists may vary, but should be similar to the current Process Effectiveness Assessment Reports used by Registrars or per customer requirements.
- 14. Outputs include evidence of completed audits, corrective actions if required, retention of records. Audit results will be an input to Management Review Meetings.
- 15. Timely Corrective Action: ES & EL Engineering management responsible for the area audited shall ensure that corrections and corrective actions are taken without undue delay to eliminate the found non-conformities and their causes. The amount of time appropriate to initiate and complete a corrective action request shall depend of the nature and severity of the non-conformance, the scope of the action required and the risk that ES & EL Engineering's customers may receive non-conforming product.

Procedure

Conducting Internal Quality Audits

Step	Action	Person(s) Responsible
1.	Prepare the audit schedule and communicate schedule to auditors.	Quality Assurance Manager, and/or Coordinator
2.	Prepare audit checklist. Give audited departments and employees advance notice of audit to be conducted.	Internal Auditor Coordinator
3.	Conduct audit using process approach.	Internal Auditor



4.	Communicate audit results to the audited employees and management.	Internal Auditor
5.	Issue Corrective Action Requests as necessary based on audit results.	Quality Assurance Manager, and/or Coordinator
6.	Review audit results during periodic management review meetings.	Quality Assurance Manager, and/or Coordinator

TRAINING

Training

In our company, specific skills are required to perform each job. Also, new technologies and methods are constantly being introduced and used.

Rationale

We believe it is important for employees to be properly trained to do their jobs in an everchanging environment. This is to avoid the risk of having jobs done incorrectly or in an incomplete or obsolete manner.

We believe that effective training of our personnel will result in reduced costs by helping eliminate wasted effort and material. It will also ultimately result in increased business due to customer satisfaction from getting expected goods and services.

Policy

Thus, in order to keep our personnel properly trained for their jobs, it is the policy of this company to follow the ISO 9001 section 4.18 standard on Training and always identify the training needs and provide for the training of all personnel performing activities affecting quality. (By training needs, we mean certified education and/or on-the-job training required for a specific job description. By activities affecting quality, we mean those job duties that affect the quality of the products we make and deliver. Every activity in our business affects quality.)



Personnel performing specific assigned tasks are qualified on the basis of appropriate education, training and/or experience, as required. It is our policy to maintain our Procedure 4.18 for identifying those training needs and for providing for that training. It is also our policy to maintain appropriate records of the training.

SERVICING

Servicing

In our company, the products we deliver may occasionally need servicing.

Rationale

We believe it is important to provide support for the products we sell. This is to avoid the risk of unhappy customers and product returns.

We believe that effective servicing of our products after delivery will result in reduced costs due to eliminating wasted effort and material. It will also ultimately result in increased business due to customer satisfaction from getting expected goods and services.

NOTE: Even when not stated in the contract, some form of product service is expected. When it goes beyond what is expected, the customer will be delighted.

Policy

Thus, in order to keep our customers satisfied, it is the policy of this company to follow the ISO 9001 section 4.19 standard on Servicing and always perform servicing that meets the specified requirements, where servicing is specified in the contract.

Where servicing is specified in the contract, we maintain our Procedure 4.19 for performing servicing and verifying that it meets the specified requirements.



STATISTICAL TECHNIQUES

Statistical Techniques

In our company, we have various repetitive processes used in the manufacture of our product.

Rationale

We believe it is important to use statistical techniques to measure and validate our processes and to make sure our product characteristics are as stated. This is to avoid the risk of having incorrect information on our product's quality and on the effectiveness of its work processes.

We believe that effective use of statistical techniques will result in reduced costs due to eliminating wasted effort and material. It will also ultimately result in increased business due to customer satisfaction from getting expected goods and services.

Policy

Thus, in order to verify the acceptability of our process capability and our product characteristics, it is the policy of ES & EL Engineering to adhere to the ISO 9001 section 4.20 standard on Statistical Techniques and always use adequate statistical techniques.

It is also the policy of ES & EL Engineering to use our Procedure 4.20 for identifying those adequate statistical techniques required for verifying the acceptability of our process capability and our product characteristics.