



ARROW ELECTRONICS, INC.

Quality Programs: Administration

A separate, independent corporate quality organization exists within Arrow. The organization, led by the Director of Corporate Quality Programs, generates quality policies and procedures and ensures that they are effectively implemented in compliance with applicable government, international, customer, and supplier requirements.

A Quality Manager is located at each distribution center and value-added center with the primary objectives of ensuring compliance to corporate quality policies and facilitating continuous quality improvement efforts. Quality Managers are responsible for a number of activities, including internal auditing, training, corrective action analysis, technical support, and customer/supplier interface.

The Arrow Quest process provides a Total Quality Management (TQM) approach ensuring that quality awareness and continuous improvement principles indoctrinate all Arrow employees, from corporate headquarters to the warehouses and field personnel. TQM at Arrow is a top-down process, with a goal to ultimately satisfy our customers.

Quality Documentation

Arrow's top-level quality document, the Quality Assurance Manual, defines and governs the quality policies and quality operating procedures (QOPs). The QA Manual is developed and maintained by the Corporate Quality Group.

Each facility maintains controlled detailed work instructions, the Quality Operating Instructions (QOIs), which are in compliance with the policies and procedures stated in the QA manual. QOIs can be found at each work area and are written so that operators can easily understand the step-by-step instructions for performing the given task. Workmanship standards are also available for packaging/labeling and for value-added operations.

Document & Change Control

The QA Manual is maintained and controlled by Corporate Quality. QOIs are maintained and controlled within each facility. All document changes must be reviewed and approved by the Quality Manager and a history of all changes is recorded. Subsequent revisions are issued to the holders of the controlled copies and the obsolete documents are promptly discarded. Copies of QA Manuals issued to customers are uncontrolled. However, changes and updates can be provided, if requested.

Sales Review

All customer requests for quote and purchase orders (verbal or written) are thoroughly reviewed by the sales and marketing representatives (SMR), including all purchase order and quality requirements and any drawings or specifications that may further define the customer requirements for the product ordered.

The SMR verifies that all customer requirements are completely understood and that Arrow is capable of meeting these requirements. The SMR enters the order on the Direct Order Entry System, identifying part number, quantity, stocking facility, and customer due date. Special customer requirements can be processed through a special handling code or by entering information in the variable data field of the order entry screen.

A hard copy of the entered order is printed out and verified for accuracy to the customer P.O. and corresponding paperwork. A written or verbal confirmation can be provided to the customer to verify accuracy, if requested by the customer before the order is entered. Once the order is verified for accuracy it is electronically transferred to the applicable facility order queue for processing.

Purchasing Control

As a distributor, Arrow procures product only from suppliers in which it has an existing franchise agreement. This franchise agreement provides product management with an approved supplier list. Procurement is triggered to replenish inventory or to fill customer orders that cannot be filled with available warehouse inventory.

An evaluation and review of supplier quality systems and capabilities is performed during the franchising process. Only suppliers with premium quality systems and capabilities and proven quality results will be considered as potential suppliers. Suppliers must continue to provide quality products and services to remain an Arrow supplier. The Arrow Supplier Rating System measures performance of our suppliers.

Training

Quality training is the cornerstone of Arrow Quest. All employees receive Quality Awareness training in addition to specific training in their functional area. Quality training modules are also available for SPC, Team Dynamics, and Team Leader/Facilitator courses.

All warehouse and value-added operators receive ESD training. Training is provided to operators on an ongoing basis as part of weekly quality meetings. Periodic training sessions are also provided when there are major operational or procedural changes.

A separate training Department exists at Arrow to coordinate training efforts. There is a mandatory weeklong new hire orientation program, which includes quality training. Computer-based training (CBT) courses are used extensively as an effective means for training and ensuring trainee proficiency. Training courses are lead by qualified trainers and are documented for future reference and improvements. A master training matrix is maintained to ensure that all employees have completed training courses.

Quality Audits

Internal quality audits are performed by Corporate Quality in order to ensure compliance to the applicable specifications (including ISO 9002) and corporate quality policies and procedures. All management and functional areas are addressed. Audit results are forwarded to upper management. Corrective actions must be responded to within 30 days.

ESD audits are performed on a daily (heel straps/wrist straps), weekly (workstations, operators), and quarterly (ESD control system to EIA-625) basis.

Record Retention

All records that affect quality are filed and retained for auditing, tracking, and reference purposes. Quality records include, but are not limited to, inspection and SPC data, audit data, corrective actions, sales orders, packing slips, supplier rating data, Field Quality Reports, calibration reports, purchase orders, and military paperwork.

Records are retained on-site or at a record retention center. All records are easily identified, indexed, filed, stored, and maintained. Retention time for record type is clearly identified. Military records are retained for a minimum of five years.