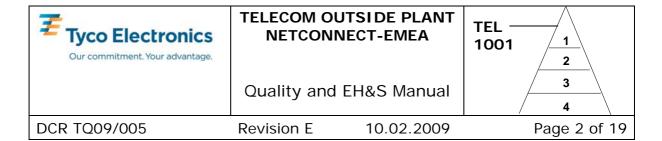


TELECOM OUTSIDE PLANT & NETCONNECT-EMEA

QUALITY and ENVIRONMENTAL, HEALTH & SAFETY MANAGEMENT SYSTEM MANUAL

TEL 1001

www.TycoElectronics.com www.Telecomosp.com www.ampnetconnect.com



MANAGEMENT APPROVAL

The signatures listed below display Telecom Outside Plant (TOSP) & Netconnect commitment to achieving total customer satisfaction through this Business Management System. They also stand for management's commitment to provide the leadership, resources, systems, training and environment necessary to adhere to our values and policies for Quality and EH&S.

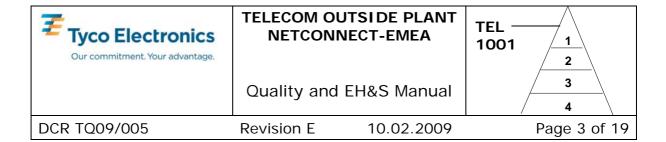
Javier GONZALEZ
Vice President
Talagam Outside Plant

Telecom Outside Plant

Steve MITCHELL Vice President Netconnect

Pieter KLINGELS Vice President Global Operations

Frank CUYPERS Quality Manager Steve STEIGERWALD EH&S Manager



1. INTRODUCTION AND SCOPE

This Manual presents the policies of the Quality and Environmental, Health and Safety Management Systems of the Telecom Outside Plant & Netconnect-EMEA Business Units.

The implementation of these policies is covered by detailed operating procedures and applies to all activities.

It is the objective of Tyco Electronics to achieve total customer satisfaction by supplying products and services that meet customers' expectations of quality, schedule, and value as detailed in their contracts, purchase orders, and specifications.

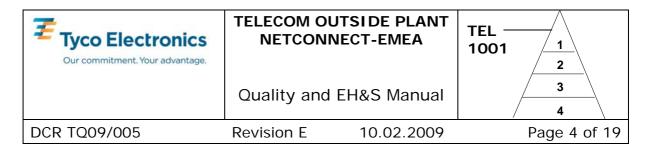
To meet this objective, the Telecom Outside Plant & Netconnect-EMEA Management System is designed to ensure that :

- All Quality and Environmental, Health & Safety (EH&S) requirements are clearly defined, recognized, understood, and maintained throughout all phases of a product's life cycle, including design, development, purchasing, manufacturing/process control, inspection, handling, storage, packaging, and shipping.
- Standardization, control, and continuous improvement of all processes needed to achieve total customer satisfaction are systematically managed and institutionalized.

Telecom Outside Plant & Netconnect are Business Units within the Network Solution segment of Tyco Electronics, with activities in design and development, manufacturing, marketing and servicing of products for copper, fibre and wireless telecommunications networks and for voice and data premise cabling systems.

The Quality and the EH&S Managers, have responsibilities, authority and freedom of action to identify and resolve quality and EH&S issues respectively with the provisions of suitable corrective action.

The Quality Manager is designated within the organization to be the customer representative on all questions of product functionality and quality during the product development process and for released products. The EH&S Manager is designated within the organization to be the representative to customers, regulatory agencies, employees or others who come in contact with our products or processes on all questions of environmental, health or safety impacts of products or processes throughout their life cycles.



2. TYCO ELECTRONICS TELECOM OUTSIDE PLANT & NETCONNECT VALUES AND POLICIES

2.1 Values Statement

INTEGRITY

We must demand of ourselves and of each other the highest standards of individual and corporate integrity. We safeguard company assets. We comply with all laws and company policies. We are dedicated to diversity, fair treatment, mutual respect and trust.

ACCOUNTABILITY

We honour the commitments we make, and take personal responsibility for all actions and results. We create an operating discipline of continuous improvement that is an integral part of our culture.

TEAMWORK

We foster an environment that encourages innovation, creativity, excellence and results through teamwork. We practice leadership that teaches, inspires, and promotes full participation and career development. We encourage open and effective communications and interaction.

INNOVATION

We recognize that innovation is the foundation of our business. We challenge ourselves to develop new and improved ideas for all that we do. We encourage, expect and value creativity, openness to change, and fresh approaches.

2.2 Quality Policy

The goal of Tyco Electronics Telecom Outside Plant & Netconnect is to be recognized worldwide for providing superior value to our customers, communities, and suppliers. We do this by developing and marketing outstanding products and services.

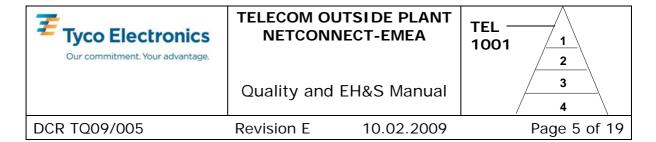
It is the goal of Tyco Electronics Telecom Outside Plant and Netconnect to continually deliver safe, effective, high-quality products and services, on time, to our customers and internal operations.

Processes and controls shall be implemented such that tasks are performed properly the first time, so that products and services meet established agreed-to requirements. Quality, customer satisfaction, continual improvement, maintaining the effectiveness of our quality management system, and compliance with customer and regulatory requirements, are the personal responsibility of every employee.

All operations will meet the quality management system requirements of ISO 9001 – these requirements provide the platform from which we will further develop our ability to provide value.

Management Responsibility

We will provide - consistent with the Values Statement - the vision, leadership, resources, systems, training and work environment necessary to implement this policy.



Customer requirements and satisfaction

We will ensure that customer requirements are determined and met, and monitor information relating to customer perception on meeting the requirements, with the aim of enhancing customer satisfaction.

Development of Products and Services

We will develop superior products and services that consistently anticipate and fulfil real customer needs.

Manufacturing and Distribution

We will manufacture and deliver products and services in a manner that meet or exceed the customers' expectations of quality, schedule, and value.

Sales and Marketing

We will clearly understand the requirements of the markets and customers that we serve, in order to build sustained customer satisfaction and brand loyalty.

Control

We will standardize, control, and continually improve all processes by which we achieve customer satisfaction. All products and services will meet or exceed all applicable Tyco Electronics specifications, contractual requirements, and regulatory requirements for product quality, testing, and performance.

Corrective and Preventive Action

We will initiate corrective action to address deficiencies, while identifying actions designed to prevent deficiencies from occurring.

Internal Audits

We will regularly conduct internal audits of our quality management systems.

Employee Involvement in Continuous Improvement

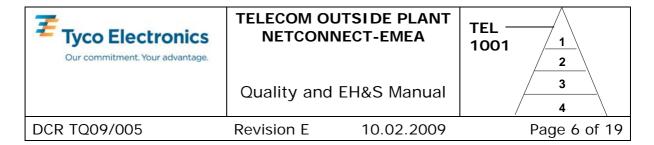
We expect all employees to work on improvements in products, services, and processes in partnership with each other, suppliers, and customers. To this end we will invest in the training and development of our employees.

Supplier Relationships

We will institute excellent supplier selection, evaluation, management, and communication - forming strong relationships with key suppliers.

Shareholder Value

By delivering products and services of outstanding value to our customers, and through excellence in our operations, we will build sustained profitability and increased shareholder value.



2.3 Environment, Health and Safety Policy

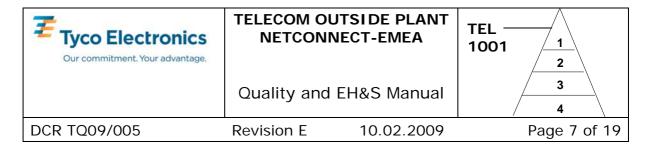
Tyco Electronics is committed to compliance with all applicable environmental, health and safety laws and to protection of our employees and the environment. In order to maintain compliance and continuously improve our performance, the following policy will guide our environmental, health and safety initiatives and actions.

Tyco Electronics is committed to:

- Operating our facilities around the world in a manner that protects our employees, public health and the environment;
- Complying with all applicable laws and regulations at every location where we operate and applying our own more stringent standards and policies wherever necessary to protect our employees and the environment;
- · Seeking to continuously improve our environmental and safety performance;
- Designing our products and processes in a manner that minimizes risks from the manufacture, use and disposal of our products;
- Reducing or eliminating the presence of lead and other hazardous materials from our products in accordance with legal requirements and customer demands;
- Seeking to conserve energy, water and raw materials and to reduce waste and emissions;
- · Being a good neighbor in the communities where we operate.

We will meet these commitments by:

- · Establishing environmental and safety goals and regularly measuring our performance against those goals;
- Making operations leaders and staff responsible for environmental and safety compliance and performance;
- Providing managers, supervisors and employees with the education and training they need to understand their environmental and safety responsibilities; and
- Communicating openly with our employees, neighbors, governments and other interested parties regarding environmental and safety issues.



3. TYCO ELECTRONICS OPERATING ADVANTAGE (TEOA)

The Tyco Electronics Operating Advantage (TEOA) is the company's enterprise wide focus on business performance and continual improvement through waste elimination and deployment of best practices.

4. QUALITY MANAGEMENT SYSTEM PROCESSES

The following section details the processes, policies and responsibilities for each of the processes of the quality management system. Policies and responsibilities for ISO 14001 are also detailed where appropriate. More supporting information on this standard can be found in applicable local site documentation. The sequence and interaction of the processes is shown in the process map of figure 1. Process numbers refer to the sections further in this paragraph, and are the key to the document structure of the quality system.

Certificates of third party registration are available on request.

Quality Management System Process Map

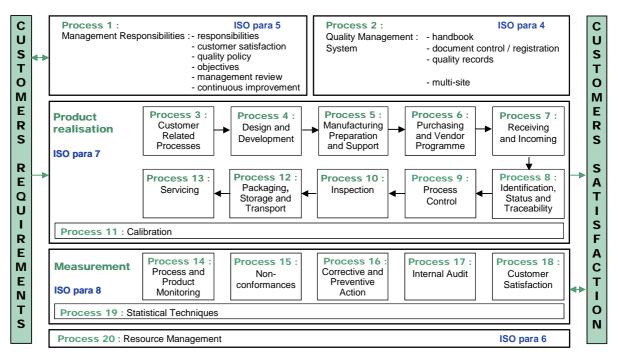
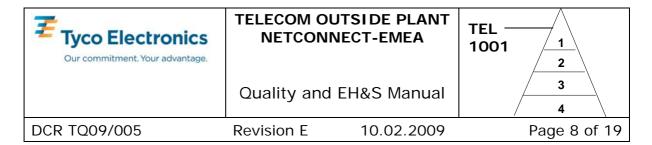


Figure 1



Process 1: Management Responsibilities

Policy

The Values and Policies Statement shown in the front of this manual, are used as the basis for planning, organisation and operation of the Telecom Outside Plant & Netconnect Business Unit.

Purpose

This element ensures that the management responsibilities are clear and that our people clearly understand the importance of quality and EH&S.

It further ensures that we frequently review the effectiveness of our systems.

Responsibilities

Each departmental manager is responsible for their planning and implementing all system elements defined in this manual.

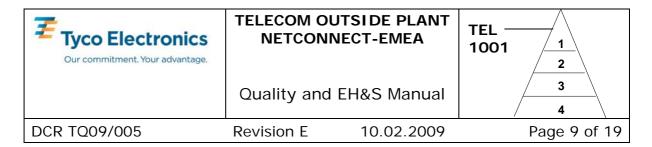
Senior management will review at least once per year the continuing suitability and effectiveness of the management system.

Business unit management is responsible for:

- setting, deploying and reviewing policies and strategies for the Business Unit with the aim of enhancing customer satisfaction
- maintaining a business plan including both short term and long-term objectives at relevant levels within the organisation, with specific targets and programs as primary drivers to achieve those objectives
- establishing and monitoring the compliance to the Business Unit's Values, Policies and Standards
- communicating and implementing Corporate and Business Unit policies and strategies
- maintaining the leadership for the Quality Management system and TEOA
- providing adequate resources and training for the performance of work and verification activities, including internal audits
- promoting the use, throughout the Business Unit of multi-disciplinary teams for problem solving
- identifying key processes and measuring improvement in customer relations, design and development, purchasing, and production.

Site management is responsible for:

- communication of the policies and objectives within the organisation
- documenting and reviewing trends in quality, EH&S, operational performance and current quality levels as a means to ensure continuing suitability and effectiveness, and communication of performance and actions to the organisation
- determining and monitoring trends in customer satisfaction
- maintaining the design control process to ensure management of appropriate activities during a product's development or entire life cycle.



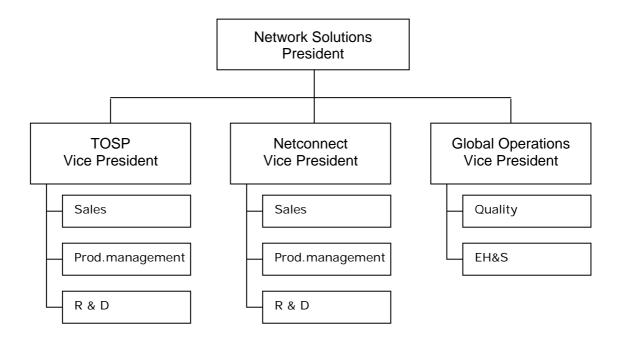
Quality and EH&S Managers are responsible for

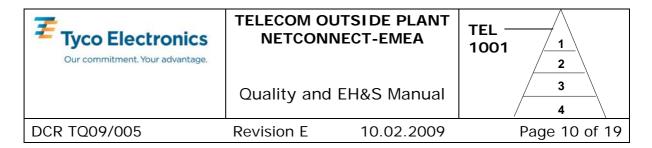
implementing and maintaining our quality and EH&S systems and are our designated local management representatives. They are furthermore responsible for reporting to the Business Unit's management on the performance of the quality and EH&S systems to management and using this as a basis for continuous improvement.

The Quality manager is responsible for ensuring that processes for the quality management system are established, implemented, maintained and their integrity monitored, and ensuring the promotion of awareness of customer requirements throughout the organisation.

All of our people have sufficient authority and organisational freedom to initiate action to prevent the occurrence of product, process, EH&S and quality system non-conformances.

Telecom Outside Plant & Netconnect Business Units





Process 2: Quality / EH&S management system

Global Documents

The Tyco Electronics Telecom Outside Plant & Netconnect Quality Management system is linked to the Tyco Electronics global quality management system. This global system is managed by the corporate organization and cross Business Unit teams, of which the quality and EH&S manager are members.

Procedures developed at Business Unit level further specify BU specific policies, processes and organizational structures. They are supplemental to the global documents and will not conflict with these documents.

Documentation system

Policy

We carry out quality and EH&S planning and maintain a documented system that complies with ISO 9001 and is working towards ISO 14001.

Purpose

To ensure:

- that we maintain documents to control work affecting customer satisfaction, local environment and community and employee health and safety;
- that we define and document how the requirements for quality and EH&S will be met;
- that we comply, on a worldwide basis, with all applicable national and local regulations plus industry codes of practice and international and corporate standards.

Responsibilities

Quality department is responsible for evaluating the effectiveness of the quality system and compliance with applicable external standards.

The Quality Manager is responsible for the preparation of all quality systems and plans as required by customer contract or TQM.

EH&S department is responsible for evaluating the effectiveness of the EH&S system and compliance with legal and other standards / codes.

Each departmental manager is responsible for their planning and implementation of all quality and EH&S elements defined in this manual.

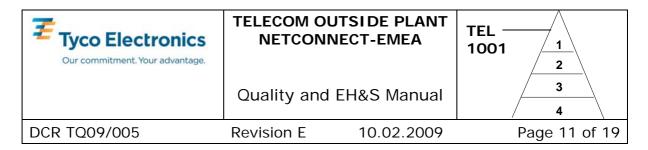
Documentation Structure

Our Quality / EH&S System consists of four levels of documentation as described in the following table.

System documentation is defined and linked in the following manner:

- Level 1: The **Quality and EH&S Management System manual** explains the policy for Telecom Outside Plant & Netconnect-EMEA Business Unit's Management System.
- Level 2: **Global Quality and EH&S Procedures** describe what Telecom Outside Plant & Netconnect-EMEA does to address the policy.
- Level 3: **Quality and EH&S** controlled procedural documentation explains how the procedures are performed at the local level.
- Level 4: **Documents** such as forms, drawings, purchasing specifications, labels etc. to support the upper tier documents.

The documents of the quality system indicate through their reference their level of hierarchy, and their link to the process map of figure 2.



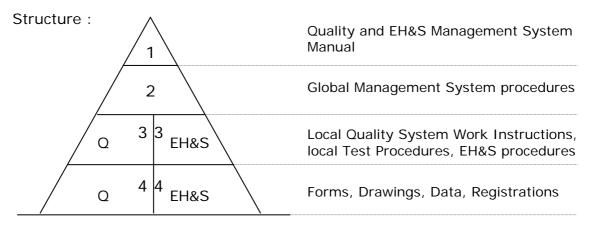


Figure 2

Document and Data Control

Policy

We maintain procedures to control all documents that constitute the Quality system and EH&S system including to the extent applicable, documents of external origin.

Purpose

To ensure that our people have the appropriate approved revision of the documents and data they need to perform their jobs.

Responsibility

Quality Assurance and Document Control, or other departments as applicable, are responsible for maintaining procedures and records to ensure the system is effective.

Control of Records

Policy

We maintain a system for control of quality and EH&S records. This includes identification, collection, indexing, filing, storage, maintenance and disposal.

The records controlled include those which provide evidence of conformance to specified requirements and effective management of the quality system.

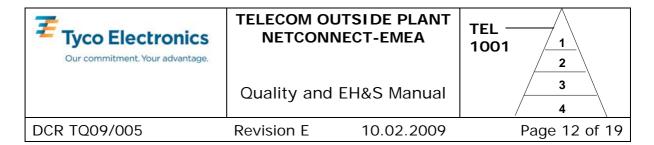
Purpose

To ensure that objective evidence is provided and maintained of compliance to the requirements and of effective control.

Responsibilities

Quality is responsible for establishing, maintaining and documenting the system for control of quality records.

Record custodians, defined in supporting documentation, are responsible for collection, filing, security, assurance of ready access and disposal.



ISO Multi-site

Policy

We maintain procedures for the organisation and coordination of the multi-site quality system.

Purpose

To ensure that the quality system of all multi-site locations is similar, correctly linked and aligned with the mother-site.

Responsibilities

Quality department of the mother site and of the participating sites are responsible for the multi-site procedure.

Process 3: Customer related processes

Policy

We ensure that each negotiated contract, sales order or tender and any subsequent amendments, are reviewed by appropriate management representation, prior to acceptance. A review of customer specifications is performed as a part of this process. In the case of the use of customer property, measures will be taken for the identification, verification, protection and maintenance.

Purpose

To ensure that

- a) contractual requirements are adequately defined and documented;
- b) it is determined, in advance, that we have the capability to meet these requirements;
- c) any exceptions to the contractual requirements are identified and resolved; and
- d) records of contract reviews are maintained;
- e) effective customer communication arrangements are established.

Responsibilities

Our sales order function maintains procedures to ensure that necessary information from this review is transmitted to those individuals requiring such information to effectively perform their responsibilities.

Process 4: Design and Development

Policy

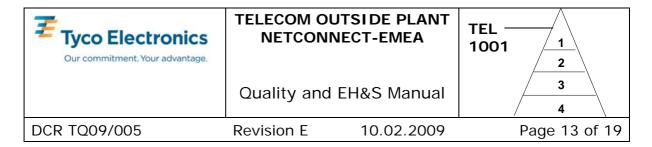
We design, develop and/or modify products to meet customer needs or to promote new technologies in the marketplace. These processes are carried out in a systematic manner and are recorded with appropriate documentation.

Purpose

To ensure, that processes for product development and modification are designed to include key customer, market regulatory and statutory and product stewardship requirements, plus that projects are adequately staffed with qualified personnel.

Responsibilities

Management is responsible for ensuring that new or changed designs are released through a systematic review process, this process being controlled and administered by Product Development as detailed in the supporting documentation.



Process 5: Manufacturing preparation and supportPolicy

We maintain planning and specification systems and processes that translate customer and product requirements into input data for manufacturing.

Purpose

To ensure that all elements required are available in order to allow manufacturing of products as meeting the applicable regulatory requirements, and the requirements agreed with the customer.

Responsibilities

Each department involved is responsible for ensuring that the required processes are defined, implemented and monitored.

Process 6: Purchasing and Vendor programme

Purchasing

Policy

We maintain several documented systems to assure that purchased material conforms to quality and EH&S requirements, is available when needed, and has been obtained with minimum total cost of ownership.

Purpose

To improve supplier performance and to ensure that purchased materials, products and services conform to prescribed EH&S requirements and quality standards, are available when needed and can be handled, used or deployed in a safe manner.

Responsibilities

Purchasing is responsible for the purchasing process.

Vendor programme

Policy

We maintain procedures for the selection, evaluation and follow-up of suppliers in compliance with the principles of TQM and continuous improvement, and with EH&S regulation and practices.

Purpose

To encourage the organisations and suppliers towards TQM.

Responsibilities

The department of Quality is responsible for the vendor programme.

Process 7: Receiving and Incoming

Policy

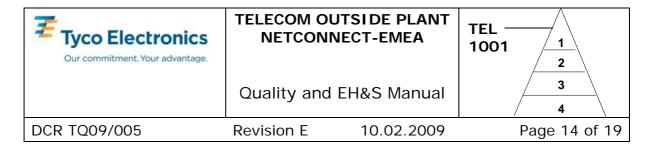
We maintain procedures for the receipt, verification and storage of incoming materials.

Purpose

To ensure that incoming materials are received, verified and stored conform to the prescribed quality and EH&S requirements.

Responsibilities

The Warehouse department and quality are responsible for the receiving process.



Process 8: Identification, Status and Traceability

Policy

We maintain documented systems for identifying, indicating inspection and test status, and tracing as necessary of items from final product completion through all manufacturing and quality operations back to the source of raw material.

Purpose

To provide inventory control plus the ability to relate cause and effect, to provide evidence of quality conformance and to enable containment of non-conforming product.

Responsibilities

Each department involved in the process are responsible for identifying the inspection and test status and for ensuring that the required traceability is recorded for their particular processes.

Quality is responsible for ensuring that required traceability records are maintained. EH&S is responsible for maintaining chemical inventories per regulatory requirements.

Process 9: Process Control

Policy

We manufacture and deliver product under controlled conditions.

Purpose

To provide standard methods for controlling production and support processes which have a direct impact on product quality, the environment, the health and safety of personnel and property.

Responsibilities

Development, Operations, EH&S and Quality personnel identify opportunities for the use of process control techniques.

Process 10: Inspection

Policy

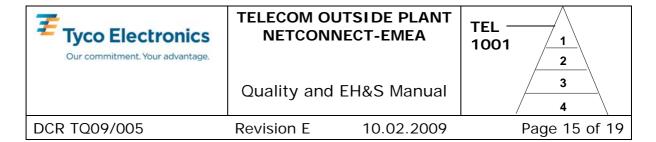
We maintains procedures and work instructions to perform incoming, in-process, and final inspection of products and for the inspection and testing of our EH&S programs.

Purpose

To ensure that all products are inspected and/or tested in accordance with written instructions at all appropriate stages of the production process and that the inspection records detailed in relevant control plans are maintained and that products released for sale meet specified requirements. Additionally, preventive activities such as inspections and drills are conducted on our EH&S programs to ensure continued suitability and effectiveness.

Responsibility

Manufacturing, Business Unit EH&S, and Quality departments are responsible for ensuring that inspections, tests, drills, surveys and monitoring activities are performed according to documented work instructions.



Process 11 : Calibration

We maintain documented calibration systems to ensure that our product complies with customer requirements.

Purpose

To ensure our customers that equipment used to manufacture and to determine the conformance of products to specific requirements or for monitoring EH&S aspects of a process, is subject to calibration. The calibration will be conducted at specified frequencies in accordance with international standards and, if applicable, may be carried out by external calibration agencies. Where no such standards exist, the basis used for calibration is documented.

Responsibilities

Each function or department is responsible for identifying equipment used to determine product conformance, specifying the required measurement capability, understanding appropriate regulatory requirements and ensuring that specified calibrations are conducted as planned according to documented procedures. Where practical, a suitable indicator is applied to the equipment to identify the calibration status. The use of non-calibrated equipment is prohibited except where specifically authorised by the Quality Manager.

Should any instrument or machine be found to be out of calibration, then the Quality Manager must be informed in order to decide if any action is required.

Process 12: Packaging, Storage and Transport

Policy

We establish and maintain procedures for safe handling and storage, packaging and delivery of product and materials.

Purpose

To ensure that products and materials are stored, packaged, labelled, and delivered safely, undamaged and per regulatory and customer requirements.

Responsibilities

Those who handle, store, package or deliver product or materials are responsible for executing the requirements of this element.

Process 13: Servicing

Policy

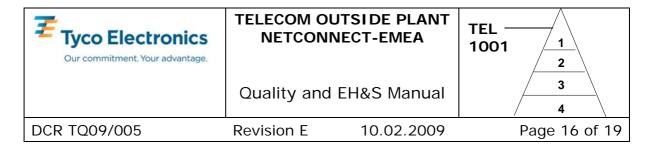
Where servicing is a specified requirement, we establish and maintain documented procedures for performing, verifying, and reporting that servicing meets the specified requirements.

Purpose

To ensure our customers that serviced products meet specified functional requirements. Servicing of products destined, or already in possession of the customer, will be managed via field support, field training, installation instructions and technical services.

Responsibilities

Business Unit Management is responsible, where applicable, for implementing the foregoing policy for the products it services. It also ensures communication of information on service concerns to the appropriate manufacturing, engineering, and design activities.



Process 14: Process and product monitoring

General

Policy

We maintain systems and processes for the measurement of the management system processes and of the characteristics of the products.

Purpose

To ensure availability of suitable information and data to evaluate the ability of the processes to achieve planned results, or to evaluate the conformity of the products.

Responsibilities

Each department involved is responsible for ensuring that the required monitoring systems are defined and implemented.

Requalification

Policy

We maintain procedures for the requalification of standard products.

Purpose

To prove that standard products continue to meet original specification parameters in function of time, process, material or vendor modification.

Responsibilities

The Quality department is responsible for the requalification programme.

Local sourcing

Policy

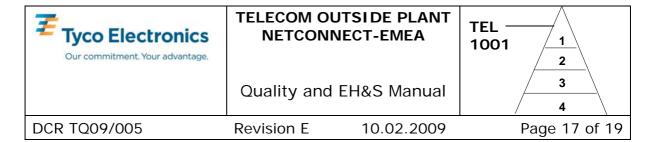
We maintain procedures for the qualification of local country manufacturers.

Purpose

To ensure a unified approach of sourcing from local country products.

Responsibilities

Local Telecom Outside Plant & Netconnect representatives, Operations, Development, Product management and Quality are responsible for ensuring that qualification of locally sourced products/services is performed according to the applicable procedures.



Process 15: Non-conformances

Policy

We maintain documented procedures to control nonconforming product and prevent its unintended use, and to control substandard conditions related to the workplace or the environment.

Purpose

To ensure that any material or product, whether incoming, in-process or final, that is found to be non-conforming or in doubt is appropriately identified and managed in accordance with documented procedures, that product has minimal EH&S impact and that we do not ship non-conforming product to our customers without their approval. To ensure that substandard conditions are reported and actions are defined to protect our employees and the environment.

Responsibilities

Functional responsibility is defined in a local procedure.

Where required by contract, the Business Unit reports to the customer the proposed use or repair of product which does not conform to specified customer requirements. We inspect reworked product in accordance with documented instructions.

Process 16: Corrective and Preventive Action

Policy

We maintain documented procedures for identifying, implementing and documenting corrective and preventive action. We initiate corrective and preventive action to a degree appropriate to the magnitude of problems and commensurate with the risks involved. We implement, verify and record changes resulting from this activity.

Purpose

To help ensure that causes of actual or potential non-conformances are eliminated thus preventing reoccurrence and supporting the continuous improvement process.

Responsibilities

The Business Unit / Site management is responsible for ensuring that all employees have authority and organisational freedom to initiate action to prevent the occurrence of product, process, EH&S and quality system non-conformances.

Management is responsible for implementing robust corrective and preventive actions.

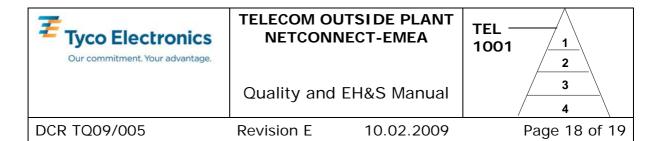
Process 17: Internal Audit

Policy

We maintain documented procedures for planning and implementing internal audits. Internal audits are scheduled on the basis of status and importance of the activities audited to reveal defects or irregularities and to indicate room for improvements.

Purpose

To ensure that internal auditing is planned, recorded and controlled to achieve verification of the implementation, monitoring and improvement of the Management System. The audits are planned so that the activities in all areas detailed in this manual are reviewed to ensure that they meet the requirements.



Responsibilities

Business Unit / Site Management is responsible for taking timely and effective action on deficiencies found during internal quality audits.

The Quality and EH&S Manager are responsible for assuring the effective and timely execution of the internal audit program.

Process 18: Customer satisfaction

Policy

We maintain documented procedures for monitoring information relating to customer satisfaction.

Purpose

To ensure that reliable information on customer satisfaction is available in order to allow identification of areas for improvement.

Responsibilities

Business Unit and Site management are responsible for the implementation of the measurement process, as well as for the definition and implementation of the resulting actions in view of enhanced customer satisfaction.

Process 19: Statistical Techniques

Policy

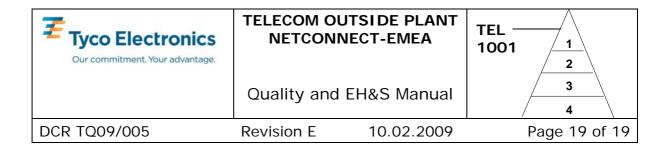
We identify the need for statistical techniques to establish, control and verify process capability and product characteristics. Documented procedures are established and maintained to implement and control the application of the statistical techniques identified.

Purpose

To ensure that we appropriately use statistical techniques to control our processes and products.

Responsibilities

Business Unit management is responsible for identifying opportunities for the use of statistical techniques.



Process 20: Resource management

Policy

We maintain a documented system for the management of competence and training. We use this system to identify and satisfy the training needs of our employees balanced against the Business Units need.

Purpose

To ensure that our people have the competences and training they need to perform their jobs well and to understand the impact of their job on the environment and on the health and safety of themselves and their fellow employees.

Management pays particular attention to hiring and placement practices in order to maximise the suitability of the person to the job , thereby ensuring the continued health and safety of personnel.

Responsibility

The responsibility for the definition of training needs of the employees lies with the individual department management.

5. AMENDMENT AND RE-ISSUE

Control and issue of this document is carried out by the Quality manager of the mother site.

In order to be sure of the latest version of this document if not accessed by intranet, or should you require specific information concerning this Quality Management System, please feel free to contact the Quality manager at

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