	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 1 of 22

Central Technologies has developed a Quality Management System, and the associated procedures and work instructions, to be compliant to ISO 9001:2000. Utilizing this Quality Management System, Central Technologies intends to follow a path of continuous improvement. All associates and suppliers are required to follow the procedures outlined in the Central Technologies Quality Management System documentation.

INTRODUCTION

Central Technologies, founded in 1994, specializes in providing quality inductive components, including standard and custom inductors, chokes, coils, beads, toroids and transformers.

The President of Central Technologies is the senior executive responsible for operations.

Central Technologies maintains an Organization Chart designating positions of company officers, managers, and team leaders. **(See CT Org Chart - QFC-06)**

The Central Technologies Quality Manual conforms to American National Standards Institute/American Society for Quality (ANSI/ASQ) Q9001: 2000 / ISO 9000 Quality Management Systems Standard approved December 13, 2000.

The SCOPE of Central Technologies Quality Management System encompasses the design, manufacturing and management of subcontracted manufacturing of inductors for the distribution network.

In keeping with the philosophy that quality is an integral part of our business plan and structure, we adopted the standard to confirm our commitment to the development and improvement of the Quality Management System. We shall supply products and or service that meets or exceeds customers' expectations as they are converted to specific requirements.

As a market leader in the component distribution industry, we realize the need to effectively implement and continuously improve our Quality Management System as specified in the standard.

It is essential that we remain focused on the customer's needs and requirements to ensure their total satisfaction in the use of our product and or service to achieve our business goals.

1. QUALITY MANUAL MAINTENANCE

1.1 Maintenance

1.1.1 The primary objective of the quality manual is to document the Quality Management System of Central Technologies. The President and Management Team will review this manual at least once per year.

1.1.2 The Management Representative is responsible to ensure that the Quality Management System is established, implemented and maintained with the attendant awareness throughout the organization.

1.2 Control

1.2.1 The Management Representative will revise the appropriate section(s) of the manual, update the revision page, and send out an company e-mail when changes have been completed.

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 



1.2.2 The "Controlled" copy of the Quality Manual will reside on the CT ISO intranet Site in a "read only" word document. Changes to this document can only be made by the Management Representative.

1.2.3 Any "Printed" hard copies of the Quality Manual taken off the intranet or provided to customers and other interested parties are considered "Uncontrolled".

1.3 Distribution

1.3.1 Distribution of the Quality Manual is the responsibility of the Management Representative. The purpose of the Quality Manual distribution is to ensure the effectiveness of the operations and control of the processes. The Quality Manual and any revisions are posted on the company's intranet site and are made available by the Management Representative.

2. TERMS & DEFINITIONS

2.1 None at this time.

3. REFERENCES

3.1 ISO 9001:2000 - Quality Management Systems Requirements (Revision 2000)

4. QUALITY MANAGEMENT SYSTEM

4.1 General Requirements - Central Technologies has established, documented, implemented, and maintains a Quality Management System. As we progress we are continually improving the overall effectiveness with regards to the requirements of ISO 9001:2000.

<u>LEVEL 0</u>	<u>ISO 9001 Standard</u>
<u>LEVEL 1</u>	<u>Quality System Manual</u>
<u>LEVEL 2</u>	<u>Operational Procedures</u>
<u>LEVEL 3</u>	<u>Work Instructions</u>
<u>LEVEL 4</u>	<u>Records, Forms & Flow Charts</u>

LEVEL 1 – The Quality Manual provides a general overview of the Quality Management System, Quality Policy and Quality Objectives. Each section of the quality manual includes the method by which Central Technologies meets the standard requirement or refers to a procedure or work instruction, if appropriate.

LEVEL 2 – Operational Procedures define how Central Technologies complies with standard requirements and responsibilities. Procedures reference Work Instructions, Forms, Flow Charts and Records where applicable.

LEVEL 3 – Work Instructions, where needed, provide detailed step-by-step instructions. Work Instructions reference Forms, Flow Charts, and Records where applicable.

LEVEL 4 – Forms, Flow Charts and Records provide documented evidence of implementation.

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



4.2 The documents that make up the Quality Management System are listed on the **Document Master List (See QFM-01)**. The following key has been established to outline the numbering and lettering convention for preparing the quality manual, operation procedures, work instructions, forms and flow charts. The numbering convention is as follows – Sample – “QOP-01”.

4.2.1 The first letter represents the department for which the document is from – Sample – “QOP-01”:

4.2.1.1 S = Sales,

4.2.1.2 P = Purchasing,

4.2.1.3 W = Warehouse, including Shipping & Receiving,

4.2.1.4 H = Human Resources,

4.2.1.5 Q = Quality Assurance, including Management Review.

4.2.2 The second and third letters indicate the type of document – Sample - “QOP-01”:

4.2.2.1 OP = Operational Procedure

4.2.2.2 WI = Work Instructions

4.2.2.3 FC = Flow Charts

4.2.2.4 FM = Forms

4.2.2.5 QM = Quality Manual

4.2.3 The set of numbers that follows are in consecutive order by broken down by the type of Document. i.e. “QOP-01, SOP-02”; “QFM-01, PFM-02”; “SOP-01, HOP-02”.

4.3 Central Technologies Quality Management System is based upon a “process approach” to quality management, demonstrated by our commitment to:

4.3.1 Identify the processes needed for the Quality Management System and their application throughout the organization,

4.3.2 Determine the sequence and interaction of the processes,

4.3.3 Determine criteria and methods needed to ensure that both the operation and control of these processes are effective,

4.3.4 Each Department Manager/Supervisor is responsible for monitoring and maintaining the availability of resources and information necessary to support the operation and monitoring of these processes,

4.3.5 Monitor, measure and analyze processes in accordance with the **Internal Audit Procedure (See QOP-04)**, the **PO Receiving (See WOP-51)**, the

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



Management Review Board Procedure (See QOP-06), and the Electronic Instrument Calibration Procedure (See QOP-19).

- 4.3.6 Implement actions necessary to achieve planned results and continual improvement of these processes through the **Preventive and Corrective Actions Procedure (See QOP-05)** and the **Management Review Board Procedure (See QOP-06)**.
- 4.3.7 Inductors Inc. manages these processes in accordance with the requirements of the American National Standard 9001-2000.
- 4.3.8 If Inductors Inc. chooses to outsource any process that affects product conformity with requirements; we will ensure control of such processes. Control of such outsourced processes will be identified within the Vendor/Supplier Agreement (**See – QFM-07**).

4.4 Documentation Requirements

4.4.1 The general principle of the Quality Manual is that the documentation of the Quality Management System shall be sufficient to ensure effective and consistent operations of the system. Central Technologies' Quality Management System documentation includes:

- 4.4.1.1 Documented statements of a Quality Policy and Quality Objectives,
- 4.4.1.2 A Quality Manual,
- 4.4.1.3 Documented Procedures required by ISO 9001:2000
- 4.4.1.4 Documents needed by Central Technologies to ensure the effective planning, operation and control of its processes, and
- 4.4.1.5 Quality Records required by ISO 9001:2000

4.4.2 Quality Manual

4.4.2.1 Central Technologies has established and maintains a Quality Manual that includes:

- 4.4.2.1.1 The scope of the Quality Management System including details of and justification for any exclusions,
- 4.4.2.1.2 The documented Procedures established for the Quality Management System, or reference to them, and
- 4.4.2.1.3 A description of the interaction between the processes of the Quality Management System. (**See Business Process Flow Chart – QFC-97**)

4.4.3 Control of Documents

4.4.3.1 Central Technologies identifies and controls documents and data in any media that relates to the requirements of ISO 9001:2000. The control of these documents is performed in accordance with the

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



Control of Documents Procedure (See QOP-08). This procedure addresses the following issues:

- 4.4.3.1.1 To approve documents for adequacy prior to issue,
- 4.4.3.1.2 To review and update as necessary and re-approve documents,
- 4.4.3.1.3 To ensure that changes and the current revision status of documents are identified,
- 4.4.3.1.4 To ensure that relevant version of applicable documents are available at points of use,
- 4.4.3.1.5 To ensure that documents remain legible and readily identifiable,
- 4.4.3.1.6 To ensure that documents of external origin are identified and their distribution controlled, and
- 4.4.3.1.7 To prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

4.4.3.2 The Management Representative maintains a **Master Document List** indicating the current revision levels and distributions (**See QFM-01**).

4.4.4 Control of Records

4.4.4.1 Central Technologies Quality Management System is documented and controlled through the use of quality records. These records are established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system.

4.4.4.2 Records are valuable to Central Technologies in the following ways:

- 4.4.4.2.1 They provide assurance that the quality requirements for the products and service were satisfied,
- 4.4.4.2.2 They show the degree of implementation and success of our quality management system,
- 4.4.4.2.3 They provide a basis for measurement and feedback essential for continual improvement.

4.4.4.3 Records are controlled according to the **Control of Records Procedure (See QOP-09)**. This procedure ensures the proper identification, storage, retrieval, protection, retention time and disposition of quality records.

5. MANAGEMENT RESPONSIBILITY

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



5.1 Management Commitment

5.1.1 Central Technologies has provided evidence of its commitment to the development and implementation of the Quality Management System by:

5.1.1.1 Our commitment to meeting customer needs, as well as, statutory and regulatory requirements,

5.1.1.2 Displaying openly our quality policy and objective(s) as a sign of our pride and commitment, and as a clear reminder of our vision and direction,

5.1.1.3 Presenting our policy and objectives to new associates in our new associate orientation, and

5.1.1.4 Continued reinforcement by management to ensure understanding and commitment at appropriate levels within our company.

5.1.2 Top Management of Central Technologies is dedicated to the development of the quality policy and objectives as described in section 5.3 (Quality Policy) and section 5.4.1. (Quality Objectives)

5.1.3 Management Reviews are conducted according to section 5.6 (Management Review)

5.1.4 Central Technologies Top Management ensures the necessary resources are available according to, section 5.4 (Planning), section 5.6 (Management Review), and section 6.0 (Resource Management).

5.2 Customer Focus

5.2.1 Top Management at Central Technologies ensures that customer needs and expectations are determined, converted to requirements, and achieved in accordance with the following sections of the ISO Standard:

5.2.1.1 Section 7.2.1 (Determination of Requirements Related to the Products),

5.2.1.2 Section 7.2.2 (Review of Requirements Related to the Products),

5.2.1.3 Section 8.2.1 (Customer Satisfaction), and

5.2.1.4 Section 8.2.4 (Measurement and Monitoring of Product).

5.2.2 Top management at Central Technologies ensures that customer satisfaction is a continuous focus of its efforts through management reviews and open communication with its associates.

5.3 Quality Policy

5.3.1 The quality policy of Central Technologies is displayed openly as a sign of our pride and commitment, and as a clear reminder of our focus and direction. The Quality Policy is as follows:

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



Central Technologies is committed to providing quality products and service that meet or exceed customer requirements and expectations and to continually monitor, measure and improve our Quality Management System.

5.3.2 The Quality Policy is communicated at all levels within Central Technologies via a New Associate Orientation, On-The-Job exposure to the Quality Management System on the CT ISO Intranet. Verification of understanding is assessed as part of the Quality Management System through Internal Quality Audits. The Quality policy and Quality objectives are reviewed during the New Associate Orientation. At the end of Orientation, an acknowledgement is provided to each associate to be signed and returned to Human Resources. The acknowledgement is retained in the associates personnel file.

5.3.3 Central Technologies Top Management ensures that the quality policy:

5.3.3.1 Is appropriate to the purpose of the organization,

5.3.3.2 Includes a commitment to comply with the requirements and continually improve the effectiveness of the quality management policy.

5.3.3.3 Provides a framework for establishing and reviewing quality objectives,

5.3.3.4 Is communicated and understood within the organization, and

5.3.3.5 Is reviewed for continuing suitability.

5.4 Planning

5.4.1 Quality Objectives

At the Management Reviews, Top Management has established measurable Quality Objectives The associated metrics allows the progress towards the attainment of the objective to support the quality policy. This also ascertains whether the objective has been reached. Measurements will be demonstrated through the use of percentages, comparative indicators, scoring/ratings and their applicability to performance.

The Quality Objectives are:

- Meet or Exceed Shipping Annual Forecast
- Meet or Exceed Booking Annual Forecast
- Achieve Less Than 2% RMA's

5.4.2 Quality Management System Planning

5.4.2.1 It is the responsibility of the Top Management to establish Quality Planning to ensure that the necessary resources are available to achieve the Quality Objectives.

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



5.4.2.2 Central Technologies ensures that:

5.4.2.2.1 The planning of the Quality Management System is carried out in order to meet the requirements given in section 4.1 - Quality Management Systems General Requirements, as well as, the Quality Objectives, and

5.4.2.2.2 The integrity of the Quality Management System is maintained when changes to the Quality Management System are planned and implemented.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

5.5.1.1 Central Technologies ensures that the responsibilities, authorities and their interrelation are defined and communicated within the Operational Procedures, Work Instructions, Forms, as well as, Flow Charts (**See CT Organizational Chart - QFC-06**).

5.5.2 Management Representative

5.5.2.1 Central Technologies has appointed an associate of the company, who, irrespective of other responsibilities, shall have the responsibility and authority that includes:

5.5.2.1.1 Ensuring the processes needed for the Quality Management System are established, implemented and maintained,

5.5.2.1.2 Reporting to Central Technologies' Top Management on the performance of the Quality Management System and any need for improvement, and

5.5.2.1.3 Ensuring the promotion of awareness of customer requirements throughout the organization.

5.5.2.2 The Management Representative has the freedom and authority to identify problems, initiate, recommend and/or provide solutions.

5.5.2.3 The Management Representative's primary responsibilities include:

5.5.2.3.1 To ensure that all associates know and understand the quality policy, quality objectives and each associate's contribution to customer satisfaction,

5.5.2.3.2 Ensure that Management Reviews are held as scheduled and monitor management review action items,

5.5.2.3.3 Maintain control of the documentation system and quality records,

5.5.2.3.4 Monitor control of non-conforming material,

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



5.5.2.3.5 Administrate the corrective action and preventive action procedures,

5.5.2.3.6 Establish the audit schedule and ensure audits are held as scheduled,

5.5.2.3.7 Champion continuous improvement through management review, corrective action and internal audits,

5.5.2.3.8 Monitor and improve customer satisfaction through weekly quality meetings and customer comments obtained from the ct website.

5.5.2.4 All Department Managers/Supervisors are responsible for executing the development and maintenance of the ISO 9001:2000 documentation, including processes, procedures and product non-conformances. This includes initiating and completing Corrective Actions.

5.5.3 Internal Communication

5.5.3.1 Associates at Central Technologies have sufficient authority and the organizational freedom to identify, document, and communicate any issues related to the processes of the Quality Management System and their effectiveness. Forms of communication shall be as follows:

5.5.3.1.1 E-mails,

5.5.3.1.2 Periodic meetings with departments, and

5.5.3.1.3 CAR's issued through the ISO Tab on the company intranet.


5.6 Management Review

5.6.1 Top Management will conduct a review of the Quality Management System at least once every twelve months. The Owner shall chair all management review meetings and all Department Managers, as well as, the Management Representative shall attend all Management Review Meetings. In the event a Department head cannot attend, they may send a qualified representative in their place.

5.6.2 The Management Representative shall compile a report on the performance of the Quality Management System, along with the opportunities for improvement and need for changes, to ensure the current suitability and effectiveness of the Quality Management System is satisfying the requirements of ISO 9001:2000.

5.6.3 The Management Review Board Meeting minutes will be maintained and stored by Human Resources Department.

5.6.4 Review Input - The Management Review Meeting agenda is as follows:

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 




- 5.6.4.1 Results of audits,
 - 5.6.4.2 Customer feedback,
 - 5.6.4.3 Process performance and product conformity,
 - 5.6.4.4 Status of preventive and corrective actions,
 - 5.6.4.5 Follow-up actions from earlier management reviews,
 - 5.6.4.6 Planned changes that could affect the quality management system,
 - 5.6.4.7 Recommendations for improvement,
 - 5.6.4.8 Training effectiveness,
 - 5.6.4.9 Product quality objectives,
 - 5.6.4.10 Product verification and validation and criteria for acceptability,
 - 5.6.4.11 Records for demonstrating product and process conformance, and
 - 5.6.4.12 The process, facilities, documents and other resource requirements for product realization.
- 5.6.5 **Review Output** - The outputs from the management review shall include any decisions and actions related to:
- 5.6.5.1 Improvement of the effectiveness of the Quality Management System and its processes,
 - 5.6.5.2 Improvement of product related to customer requirements, and
 - 5.6.5.3 Resource needs.

6. RESOURCE MANAGEMENT

6.1 Provision of Resources

- 6.1.1 Central Technologies has determined and provided the resources needed:
- 6.1.1.1 To implement and maintain the Quality Management System and continually improve its effectiveness, and
 - 6.1.1.2 to enhance customer satisfaction by meeting customer requirements.
- 6.1.2 The resource requirements for the implementation, management, and continual improvement of our Quality Management System and activities necessary to address customer satisfaction are explicitly defined in our procedures, work instructions, and the following sections of our Quality Manual:
- 6.1.2.1 Section 5.4 (Planning),

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 



6.1.2.2 Section 5.6 (Management Review),

6.1.2.3 Section 7.1 (Planning of Product Realization).

6.2 Human Resources

6.2.1 Central Technologies has identified various in-house verification activities including inspection of in-coming goods, and inspection of final product, and the personnel responsible for carrying out these activities in order to meet customer satisfaction. Personnel performing the above mentioned activities are competent on the basis of appropriate education, training, skills and experience. Performance reviews are conducted at least once per year to ensure accuracy and effectiveness of each associate and results are reviewed at the Management Review Board meetings if necessary.

6.2.2 In support of the above, procedures for carrying out audits of processes and products, and assessment of the Quality Management System, have been developed and implemented. Personnel independent of the activity being audited conduct audits of the Quality Management System.

6.2.3 Competency, Awareness & Training

6.2.3.1 Top Management of Central Technologies has determined the necessary competence for personnel performing activities affecting product quality, and shall provide training for them.

6.2.3.2 Through out this training, personnel are made aware of the importance of their activities and how they contribute to the achievement of the quality objectives.

6.2.3.3 During the Management Review Board meetings the training needs shall be evaluated for its effectiveness of the actions taken to improve our training processes. Continuous evaluations, of the effectiveness of training, shall be performed during all Internal Audits.

6.2.3.4 Central Technologies ensures that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives through the **Competency, Awareness & Training Procedure (See HOP-10)**.


6.2.3.5 Central Technologies maintains appropriate records of education, training, skills and experience for each associate in their personnel file. Files are maintained and stored by the Human Resources Department.

6.3 Infrastructure

6.3.1 Each Department Manager/Supervisor determines, provides and maintains the infrastructure needed to achieve conformity to product requirements. The infrastructure includes, as applicable:

6.3.1.1 Buildings, workspace and associated utilities,

6.3.1.2 Hardware and software process equipment, and

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 



6.3.1.3 Supporting services, i.e. transport and communication.

6.3.2 Central Technologies performs preventive maintenance on its equipment as needed maintain optimum performance of office equipment. Daily backups of the network are performed and stored offsite for security and fire protection. The documentation of the daily backups is stored on the server, as well as, the daily backup tape. The hard copy is kept in the Server Room.

6.4 Work Environment

6.4.1 It is the responsibility of each Department Manager/Supervisor to identify and manage both the human and physical factors of the work environment that are necessary to achieve conforming product. At Central Technologies such factors include, but are not limited to:

6.4.1.1 Safety,

6.4.1.2 Language,

6.4.1.3 Heat and Humidity,

6.4.1.4 Light,

6.4.1.5 Space, and

6.4.1.6 Cleanliness

7. PRODUCT REALIZATION

7.1 Planning of Product Realization

7.1.1 Central Technologies plans and develops the processes needed for Product Realization. Planning of the Product Realization shall be consistent with the requirements of the other processes of the Quality Management System. See Section 4.1 (General Requirements of the Quality Management System).

7.1.2 In planning Product Realization, Central Technologies determines the following, as appropriate:


7.1.2.1 Quality objectives and requirements for the product,


7.1.2.2 The need to establish processes, documents and provide resources specific to the product (**See Business Process Flow - QFC-97**).

7.1.2.3 Requires verification, validation, monitoring, inspection and test activities specific to the product and the criteria for product acceptance. (**See Electronic Instrument Calibration QOP-19**).

7.1.2.4 All records are accessed through the Intranet under the ISO tab in accordance with the **Control of Records Procedure (See QOP-09)**.

7.2 Customer Related Processes

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 

	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 13 of 22

7.2.1 Determination of Requirements Related to the Product

7.2.1.1 Central Technologies seeks to identify, anticipate and communicate requirements and convert those requirements into products utilizing information:

7.2.1.1.1 Specified by the customer, including the requirements for delivery and post-delivery activities,

7.2.1.1.2 Not stated by the customer but necessary for specified or intended use, where known,

7.2.1.1.3 Of a statutory and regulatory nature related to the product, and

7.2.1.1.4 Any additional requirements determined by the organization.

7.2.2 Review of Requirements Related to the Product

7.2.2.1 Central Technologies reviews requirements related to the product. This review shall be conducted prior to our commitment to supply a product to the customer (i.e. submission of tenders, acceptance of contracts or orders, acceptance of changes to contracts or orders) and shall ensure that:

7.2.2.1.1 Product requirements are defined,

7.2.2.1.2 contract or order requirements differing from those previously expressed are resolved, and

7.2.2.1.3 the ability to meet the defined requirements.

7.2.2.2 Records of the results of the review and actions arising from the review are maintained in the CT Series Spec Authorization folders for new products and are stored in the Engineering Department.

7.2.2.3 Where the customer provides no documented statement of requirement, the customer requirements shall be confirmed by Central Technologies before acceptance.

7.2.2.4 Where product requirements are changed, Central Technologies shall ensure that relevant documents and database entries are amended and that relevant personnel are made aware of the changed requirements.


7.2.3 Customer Communication

7.2.3.1 Central Technologies determines and implements effective arrangements for communicating with customers in relation to:

7.2.3.2 Product information,

7.2.3.3 Enquiries, contracts or order handling, including amendments, and

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 

	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 14 of 22

7.2.3.4 Customer feedback, including customer complaints are logged in the CT Quality Database. -.

7.3 Design and Development

7.3.1 Central Technologies designs and builds inductive products. Products are built from multiple source materials. Products are designed by Central Technologies engineers from original drawings and are the work product from original designs. Products are also derived from customer-supplied drawings built to specification. Procedures include means of evaluation and assessment of quality and fitness for intended use.

7.3.1.1 Internal Work Product Design

7.3.1.1.1 Original product designs are submitted to lead engineering/product development team from engineering team members and are evaluated for manufacturing viability, tooling requirements, cost and availability of materials. **Product Realization (See SFM-17)**

7.3.1.1.2 Original product designs are submitted to sales and marketing for evaluation of demand and market equivalent comparisons.

7.3.1.2 Built to customer drawing

7.3.1.2.1 Central Technologies insures that products built to customer supplied drawings are approved and first article inspections are evaluated prior to shipment.

7.4 Purchasing

7.4.1 The Central Technologies Purchasing System includes procedures that define methodologies for the assessment of suppliers, the control of purchasing documents, and the means to verify conformance of purchased product through the **Purchasing Procedure (See PWI-44)**.


7.4.2 Purchasing Process

7.4.2.1 Central Technologies ensures that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependant upon the effect of the purchased product on subsequent product realization of the final output.

7.4.2.2 Central Technologies evaluates and selects suppliers based on their ability to supply product in accordance with our requirements. Criteria for selection, evaluation and re-evaluation in accordance with the **Control of Vendors and Sub-contractors Procedure (See QOP-11)**

7.4.2.3 Records and results of evaluations and any necessary action arising from the evaluation shall be maintained in the ERP System,

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 

	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 15 of 22

as well as, the Company Intranet in accordance with the **Control of Records Procedure (See QOP-09)**.

7.4.3 Purchasing Information

7.4.3.1 Purchasing information clearly describes the product being purchased, including where appropriate:

7.4.3.1.1 Requirements for approval of product, procedures, processes and equipment,

7.4.3.1.2 Requirements for qualification of personnel, and

7.4.3.1.3 Quality Management System requirements.

7.4.3.2 Central Technologies ensures the adequacy of specified purchase requirements prior to their communication to the supplier. Purchasing documents are maintained in the ERP System to provide a record of items purchased; quantities, and purchase dates.

7.4.4 Verification of Purchased Product

7.4.4.1 Central Technologies establishes and implements the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements. **Purchasing Procedure (See PWI-44)** and the **PO Receiving Procedure (See WOP-51)**.

7.5 Production and Service Provisions

7.5.1 Control of Production and Service Provision

7.5.1.1 Control of Production and Service Provision is maintained in accordance with the **Planning of Product Realization Procedure (See QOP-02)**.

7.5.2 Validation of Processes for Production and Service Provision

7.5.2.1 Central Technologies validates any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring and measurement. This includes processes where deficiencies become apparent only after the product is in use or the service has been delivered.


7.5.2.2 Validation demonstrates the ability of these processes to achieve planned results.

7.5.2.3 Central Technologies has established arrangements for these processes including as applicable:

7.5.2.3.1 Defined criteria for review and approval of the processes,

7.5.2.3.2 Approval of equipment and qualification of personnel,

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 

	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 16 of 22

7.5.2.3.3 Use of specific methods and procedures,

7.5.2.3.4 Requirements for records, and

7.5.2.3.5 Re-validation.

7.5.3 Identification and Traceability

7.5.3.1 Where appropriate, Central Technologies identifies the product by suitable means throughout product realization. **(See Order Processing – WOP-26).**

7.5.3.2 Central Technologies identifies the product status with respect to monitoring and measurement requirements (See section 8.2 – monitoring and measurement). **(See PO Receiving– WOP-51).**

7.5.3.3 Where traceability is a requirement, Central Technologies controls and records the unique identification of the product in accordance with the PO Receiving Procedure **(See WOP-51).**

7.5.3.4 Central Technologies does not handle customer property. However, in the event that we would, Central Technologies shall identify, verify, protect and safeguard customer property provided for use or incorporation into the product. If any customer property is lost, damaged or otherwise found to be unsuitable for use, this shall be reported to the customer and records maintained in accordance the **Control of Records Procedure (See QOP-09).**

7.5.4 Preservation of Product

7.5.4.1 Central Technologies preserves the conformity of product during internal processing and delivery to the intended destination. This preservation shall include identification, handling, packaging, storage, and protection. Preservation shall also apply to the constituent parts of a product. **(See PO Receiving - WOP-51, Order Processing - WOP-26, Final Inspection - WOP-24 and Shipping Procedure- WOP-28).**

7.5.5 Delivery

7.5.5.1 Arrangements are implemented for the protection of the quality of the product after final inspection and test.

7.5.5.2 Where required, this protection is extended to include delivery to destination.

7.5.5.3 Central Technologies preserves the conformity of products during internal processing and delivery in accordance with the **Shipping Procedure (See WOP-28).**

7.6 Control of Monitoring and Measuring Devices

7.6.1 Central Technologies determines the monitoring and measurements to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product.

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 



- 7.6.1.1 Central Technologies has established processes to ensure that monitoring and measurement can be carried out in a manner that is consistent with the monitoring and measurement requirements **(See Electronic Instrument Calibration – QOP-19)**.
- 7.6.1.2 Where necessary to ensure valid results, measuring equipment is calibrated or verified:
 - 7.6.1.2.1 At specified intervals or, prior to use,
 - 7.6.1.2.2 Against measurement standards traceable to MIL STD 45662
- 7.6.1.3 Where no such standards exist, the basis used for calibration or verification shall be:
 - 7.6.1.3.1 Recorded,
 - 7.6.1.3.2 Adjusted or re-adjusted as necessary;
 - 7.6.1.3.3 Identified to enable calibration status to be determined;
 - 7.6.1.3.4 Safeguarded from adjustments that would invalidate the measurement result;
 - 7.6.1.3.5 Protected from damage and deterioration during handling, maintenance and storage.
- 7.6.1.4 The specific requirements for the control of individual pieces of inspection, measuring, and test devices shall be defined in the **Control of Monitoring and Measuring Devices Procedure (See QOP-07)**.

8. MEASUREMENTS, ANALYSIS AND IMPROVEMENT

8.1 General

- 8.1.1 Central Technologies is committed, through planning and implementing measurements, analysis, monitoring, and improvement processes needed for the following:
 - 8.1.1.1 To demonstrate conformity of the product,
 - 8.1.1.2 To ensure conformity of the quality management system, and
 - 8.1.1.3 To continually improve the effectiveness of the quality management system.
- 8.1.2 This includes determination of applicable methods, including statistical techniques, and the extent of their use. **(See Electronic Instrument Calibration – QOP-19, and Control of Monitoring and Measuring Devices QOP-07)**.

8.2 Monitoring and Measurement

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 



8.2.1 Customer Satisfaction

8.2.1.1 As one of the measurements of the performance of the quality management system, Central Technologies shall monitor information relating to customer perception as to whether Central Technologies has met customer requirements by meeting weekly to discuss product issues and any customer comments generated by the company website.

8.2.2 Internal Audits

8.2.2.1 Central Technologies conducts internal audits in accordance with the **Internal Audit Procedure (See QOP-04)** to determine whether the Quality Management System:

8.2.2.1.1 Conforms to the planned arrangements to the requirements of this International Standard and to the Quality Management System requirements established by Central Technologies, and is effectively implemented and maintained.

8.2.2.2 An Audit Program has been planned in accordance with the **Internal Audit Procedure (See QOP-04)**, taking into consideration the status and importance of the processes and areas to be audited, as well as, the results of previous audits. The audit criteria, scope, frequency and methods have been defined. Selection of auditors and conduct of audits will ensure objectively and impartiality of the audit process. Auditors shall not audit their own work.

8.2.2.3 The responsibilities and requirements for planning and conducting audits, as well as, reporting results and maintaining records in accordance with the **Control of Records Procedure (See QOP-09)**, shall be defined in the **Internal Audit Procedure (See QOP-04)**.

8.2.2.4 The management responsible for the area being audited shall ensure that actions are taken without undue delay to eliminate detected non-conformities and their causes. Follow-up activities shall include the verification of the actions taken and the reporting of verification results in accordance with the **Corrective and Preventive Action Procedure (See QOP-05)**.

8.2.2.5 The scheduling of audits is determined on the basis and importance of the activity to be audited. Management personnel responsible for the audited activity shall take timely corrective action on deficiencies found during the audit.

8.2.2.6 The implementation and effectiveness of the corrective action taken will be recorded and subsequently verified during follow-up audit activities.

8.2.2.7 Internal audits and follow-up audit reports and Corrective Action Requests (CAR's), will be retained as a quality records.

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:



8.2.2.8 Central Technologies will conduct Internal Audits at least semi-annually.

8.2.3 Monitoring and Measurement of Processes

8.2.3.1 Central Technologies applies suitable methods for monitoring and, where applicable, measurement of the Quality Management System processes. These methods demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, corrective action will be taken, as appropriate, to ensure conformity of the product. **(See Internal Quality Audit – QOP-04, PO Receiving - WOP-51, & Final Inspection – WOP-42).**

8.2.4 Monitoring and Measurement of Product

8.2.4.1 Central Technologies monitors and measures the characteristics of the product to verify that product requirements have been met. This will be carried out at appropriate stages for the product realization process in accordance with the planned arrangements. **(See Planning for Product Realization – QOP-02, Order Processing – WOP-26, Receiving Inspection – WOP-51, and Final Inspection – WOP-24).**

8.3 Control of Non-Conforming Product

8.3.1 Central Technologies ensures that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The controls, related responsibilities and authorities for dealing with non-conforming product shall be defined in the **Non-Conformance Product Review & Disposition (See PWI-05).**

8.3.2 Central Technologies deals with non-conforming product by one or more of the following ways:

8.3.2.1 By taking action to eliminate the detected non-conformity,

8.3.2.2 By authorizing its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer,


8.3.2.3 By taking action to preclude its original intended use or application.

8.3.3 Records of the nature of non-conformities and any subsequent actions taken, including concession obtained shall be maintained in accordance with the **Control of Records Procedure (See QOP-09).**

8.3.4 When non-conforming product is corrected it will be subject to re-verification to demonstrate conformity to the requirements. **(See Final Inspection - WOP-24).**

8.3.5 When non-conforming product is detected after delivery or use has started, Central Technologies shall take action appropriate to the effects, or potential effects, of the non-conformity. The proposed use of product that does not conform is reported for concession to the customer. The description of the non-conformity that has been accepted and repaired, is recorded to define the

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature:

	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 20 of 22

actual condition, and is retained as a quality record in accordance with the **Control of Records Procedure (See QOP-09)**.

8.3.6 Repaired and/or reworked product is re-inspected in accordance with existing procedures.

8.4 Analysis of Data

8.4.1 Central Technologies determines, collects and analyzes appropriate data to demonstrate the suitability and effectiveness of the Quality Management System and to evaluate where continual improvement of the effectiveness of the Quality Management System can be made. This shall include data generated as a result of Monitoring and Measurement, as well as, other relevant sources, such as the Quality Objectives, and reviewed at the Management Review Board Meetings.

8.4.1.1 Section 8.2.1 (Customer Satisfaction),

8.4.1.2 Section 7.2.1 (Conformance to Product Requirements),

8.4.1.3 Characteristics and trends of processes and products including opportunities for preventive action, and

8.4.1.4 Supplier and Vendor evaluations.

8.5 Improvement

8.5.1 Continual Improvement

8.5.1.1 Central Technologies continually improves the effectiveness of the Quality Management System through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

8.5.2 Corrective Action

8.5.2.1 Central Technologies determines actions to eliminate the cause of non-conformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the non-conformities encountered.

8.5.2.2 The **Corrective and Preventive Actions Procedure (See QOP-05)** has been established to define the requirements for:


8.5.2.2.1 Reviewing non-conformities (including customer complaints),

8.5.2.2.2 Determining the causes of non-conformities,

8.5.2.2.3 Evaluating the need for action to ensure that non-conformities do not reoccur,

8.5.2.2.4 Determining and implementing action needed,

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 

	Title: Quality Management Systems Manual	Control No: QQM-02
	ISO 9001:2008	Revision 10 07/08/2010
		Page: 21 of 22

8.5.2.2.5 Reviewing corrective action taken, and

8.5.2.2.6 Recording the results of actions taken in accordance with the **Control of Records Procedure (See QOP-09)**.

8.5.3 Preventive Action

8.5.3.1 Central Technologies determines actions to eliminate the causes of potential non-conformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.

8.5.3.2 The **Corrective and Preventive Actions Procedure (See QOP-05)** has been established to define the requirements for:

8.5.3.2.1 Determining potential non-conformities and their causes,

8.5.3.2.2 Evaluating the need for action to prevent occurrence of non-conformities,

8.5.3.2.3 Determining and implementing action needed,

8.5.3.2.4 Reviewing corrective action taken, and

8.5.3.2.5 Recording the results of actions taken in accordance with the **Control of Records Procedure (See QOP-09)**.

Prepared by: HW	Approved by: John Thompson
Approval date: 07/08/2010	Signature: 