QUALITY POLICY MANUAL

(Policy, Scope, Organisation and Systems)

COMPANY PROFILE

Established in 1855 on the existing site, close to the centre of Birmingham, Currie & Warner was originally established as a brass foundry. Until the end of the 19th century the Company was mainly a supplier and machinist of brass castings for the piano and gas lamp industry.

With the first availability of production turning machines, at the start of the 20th century, the Company began to move more in the direction of being a turned-parts producer.

Progressively, the emphasis changed from casting work to machining of brass bar, until in the early 1950's the first available multi-spindle automatic lathes were introduced from the Wickman Machine Tool Company, which was sited only 20 miles away in Coventry.

However, it was not until the early 1980's that the Company's profile began to blossom, as one of the Country's leading manufacturers of high volume, precision turned parts, specialising exclusively in brass or copper-based alloys.

The catalyst was the management "buy-out" in 1982 by the current owner, Mr. Martyn Lloyd, who instigated a move towards technical innovation at the highest quality level.

With the award in 1986, of the UK quality standard certification BS 5750 Part II, the momentum for change had reached a peak.

At that time, Currie & Warner's export achievements were nil, but with the technical expertise built up over many years and the newly acquired quality registration, the Company set about exporting to Europe and USA.

Today, the Company is considered as one of Europe’s leading exponents of specialist turned parts in brass, with an enviable record in both the UK and overseas markets.

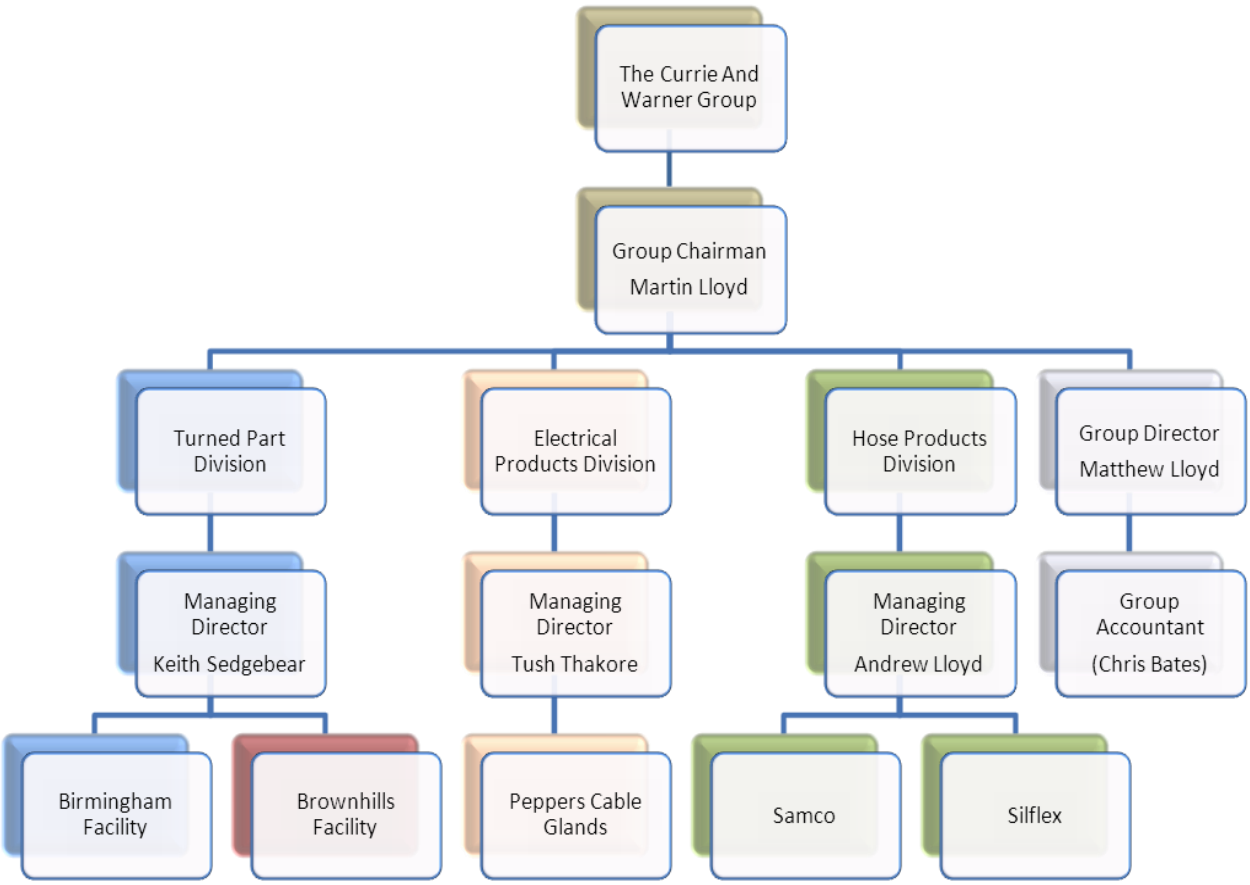
The principal elements to this success have been the ingenuity of the Company's engineers in developing specialist tooling techniques, to overcome some of the most complex machining problems.

More recently, the Company has seen a considerable investment in computerised systems to accurately control all aspects of design, manufacture, quality and administration.

As Currie & Warner moves into the next century further high-technology investment will ensure the Company's status as a leader in the highly competitive turned parts industry.

CURRIE & WARNER HOLDINGS

GROUP STRUCTURE



Product Distribution

Gas Industry
Water Fittings and Plumbing (HVAC)
Electrical Industry
Pneumatic Industry
Telecommunications
Window Fittings
Automotive
Fire Protection
Life Jacket Inflation Devices
Renewable Energy
Heat exchangers

Exporting To

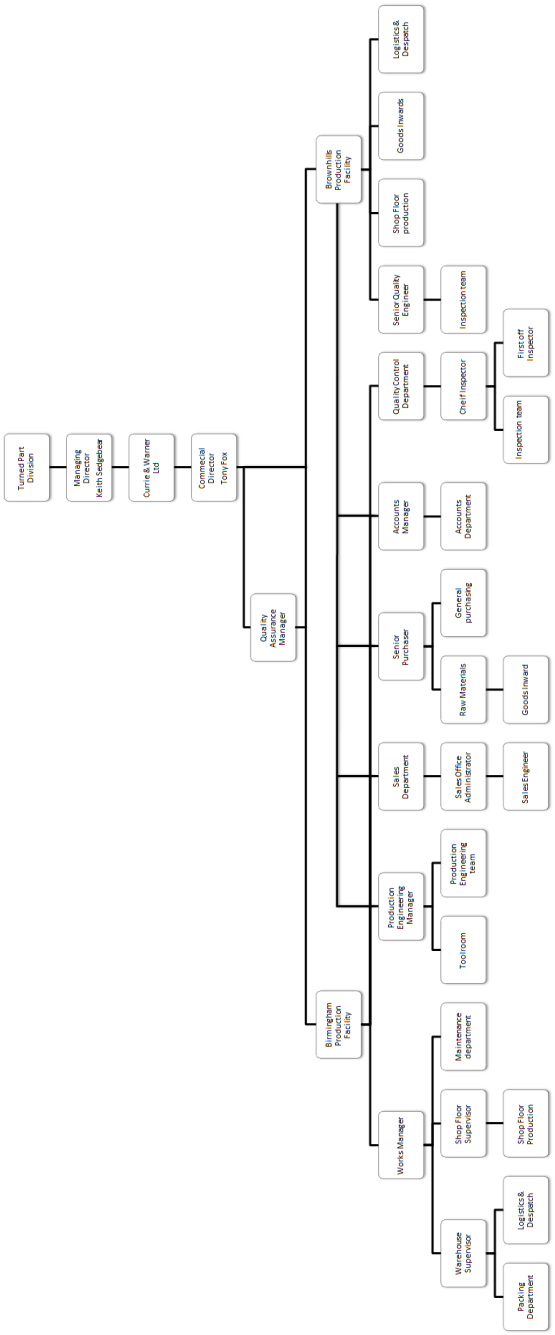
Denmark
USA
Sweden
Germany
Bulgaria
Hungary
Mexico
China

Combined Company Manufacturing Capability 2 Sites

13 x Wickman 1" x 6 Multi-Spindle Auto
20 x Wickman 1.3/4" x 6 Multi-Spindle Auto
3 x Wickman 2.1/4" x 6 Multi-Spindle Auto
1 x Wickman 3.1/4" x 6 Mutli-Spindle Auto
2 x CNC Twin Spindle Lathes
20 x CNC Single Spindle Lathes
1 x CNC Machining Centres
1 x CNC Driller
4 x Cleaning Facility Plant

Various single spindle, rotary transfer, special purpose and 2nd operation machinery

Company Structure



5.3 Quality Policy Statement

Currie & Warner Ltd is fully committed to a Quality Policy which shall ensure delivery of its products and services "defect free and on time".

The Policy of the Company is to:

- Manufacture and supply parts which fully conform to the Customer's requirements, relating to quality, reliability and delivery.
- Use the Company's considerable experience and knowledge in the production of repetition turned parts, to assist Customers in the cost effective design and development of both existing and new products.
- Ensure that Suppliers of raw materials, goods and services conform to all requirements and are of a consistently high quality, to enable the Company to achieve its commitments to all Customers.
- Continually improve the effectiveness of the Quality Management System by the setting and achieving of quality objectives / improvement opportunities within a given time scale.
- Maintain an adequate level of profit while ensuring that quality performance and reliability are as a minimum, comparable with any similar competitor.
- Ensure that all specified standards as well as any statutory or regulatory requirements are strictly adhered to.
- Recognise that the responsibility for quality lies with all employees of the Company and hence to stimulate and encourage interest and pride in their work.
- Conduct periodic quality system audits to ensure that all elements of the Quality Management System are continually assessed for conformance with the Quality Policy Manual and the requirements of BS EN ISO 9001:2008.
- Fully and effectively communicate the Quality Policy of Currie & Warner Ltd throughout the organisation.
- Hold frequent Quality Management System Review meetings to enable continual review of the suitability of the Quality Policy and all aspects of the Quality Management System.
- Embrace a culture of Continual Improvement throughout the organisation employing a quality strategy of waste reduction and increasing competitiveness.

Signed .....T.Fox..... Date 1st April 2016

T.Fox
Managing Director - Currie & Warner Limited

Contents

4 Quality Management Systems

Related Documentation:

BS EN ISO 9001:2008

Currie & Warner Ltd Quality Policy Manual

Currie & Warner Ltd Quality Procedure Manual

Currie & Warner Ltd Authorised Documents Manual

Currie & Warner Ltd Authorised Stamps Log

Quality Control Procedures:

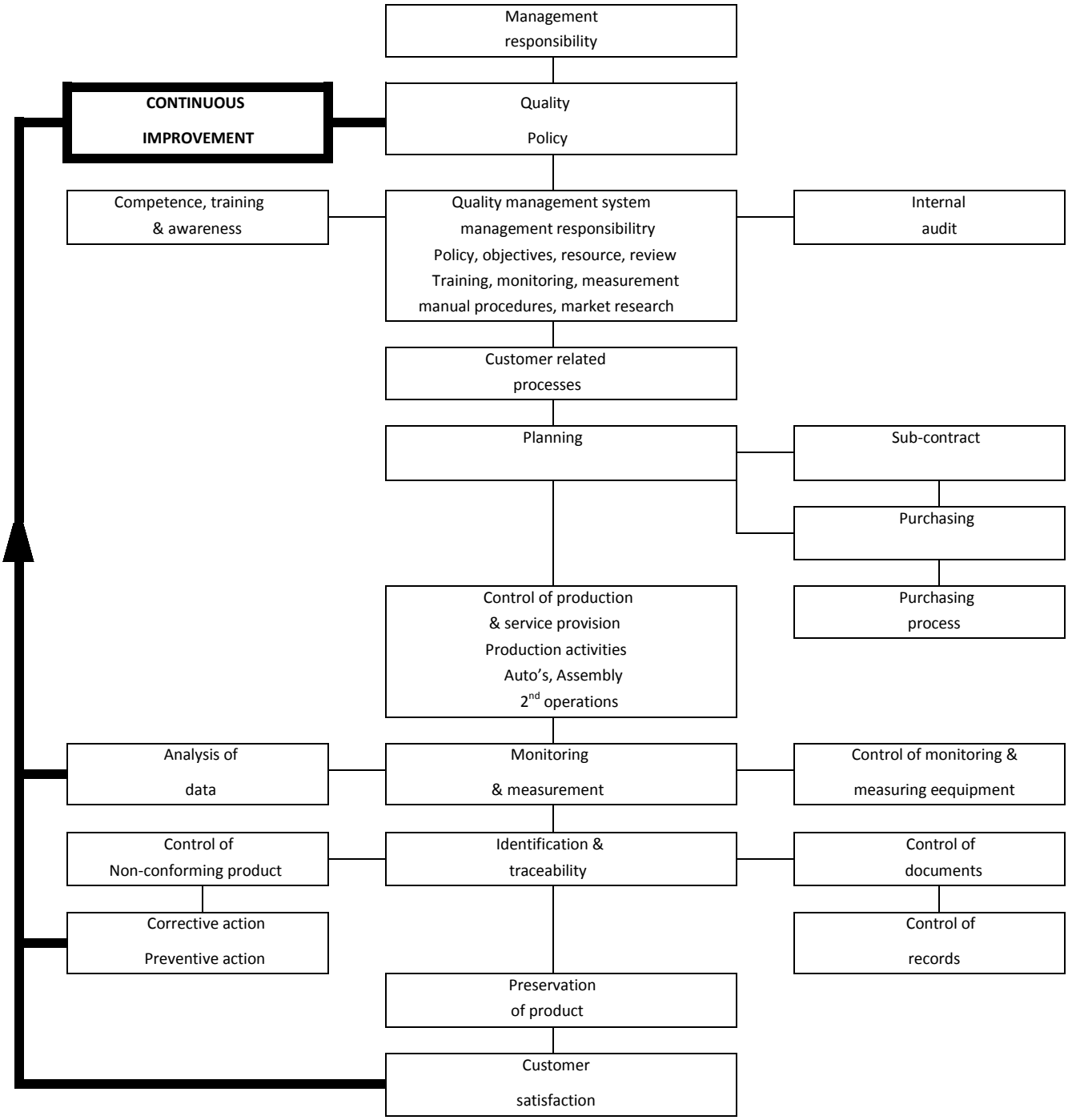
QCP 01 - Document Control

QCP 02 - Issue and Control of Drawings

QCP 12 - Quality Records

4 Quality Management Systems

4.1 General Requirements (Business Process)



4 Quality Management Systems

4.2 Documentation Requirements

4.2.1 General

The scope of Currie & Warner's activities shall be the manufacture of precision turned components to Customer specifications whilst specialising in technically difficult components to close tolerances and high surface finishes.
The scope of the Quality Management System in operation is such that it encompasses the Brownhills manufacturing facility and is coordinated from Birmingham (parent site) utilising existing and well established procedures with specific additions.

4.2.2 Quality Manual

The Quality Management System (QMS) is defined and documented across three tiers of documentation.

Quality Policy Manual

The Quality Policy Manual, documents the Quality Policy of the Company, and complies with the requirements of BS EN ISO 9001:2008.

The Quality Policy Manual shall include detail and justification for any exclusions from BS EN ISO 9001:2008 if applicable.

Quality Procedures Manual

The Quality Procedure Manual is cross referenced to the Quality Policy Manual and contains the procedural documents which describe how policy is turned into practice. They also demonstrate how the Company considers, plans and controls its operations to meet the Customer's specified requirements.

The procedures define the quality related records, which are maintained and analysed to assist control of the system.

Quality Documents Manual

The Quality Documents Manual contains all documents used within the scope of the Quality Management System in an electronic PDF format.

4.2.3 Control of Documents

It is Currie & Warner's policy to ensure the effective operation of the quality system, through the control of essential Company quality documents.

Controlled documents shall include:

- Quality Policy Manual
- Quality Procedure Manual
- Quality Documents Manual
- Product and Customer Component Drawings and Specifications
- Product Quality Plans / Process Layouts / Visual Displays
- National & International standards
- Work Instructions (inc Sub-Contract)

The documents are issued to nominated individuals and the latest issues are available at workstations as necessary.

4 Quality Management Systems

Changes and modifications are authorised by nominated representatives prior to use. All changes/amendments will be detailed logged in the appropriate amendment records. Individuals controlling the issuing of documents shall ensure that all holders have access to or have the latest information.

The Quality Management System provides for the withdrawal of obsolete documents. Should they be retained for reference only they shall be suitably identified and stored in the "OBSOLETE" folder on the server. Hard copies are stamped “Obsolete” and stored in the relevant file. The review of Quality documents shall be carried out by the original issuing authority, which in all cases shall be under the direct control of the Quality Assurance Manager.

4.2.4 Control of Records

Currie & Warner Ltd recognises the need to demonstrate objective evidence, to show effective control of the product and Quality Management System. Documented procedures ensure that records shall remain legible, readily identifiable and quickly retrievable.

The types of records controlled are as follows:

- Calibration records
- Internal audit reports
- Training records
- Nonconformity reports (8D Reports- Customer / Internal / Concessions)
- Raw material purchase orders and certification
- Supplier Rejections (NCR’s)
- Approved Supplier List
- Records of Inspection
- Drawing control
- Customers’ orders
- Quality Management Review

Records shall be retained that demonstrate full product traceability. All records shall be stored such that they are protected from damage, loss or deterioration due to adverse environmental conditions.

Quality records shall be retained archived and disposed of as described in QCP 12.

Quality records are available for evaluation by Customers’ as supporting evidence of the Company’s Quality Management System.

5 Management Responsibility

Related Documentation:

BS EN ISO 9001:2008

Currie & Warner Ltd Quality Policy Manual

Currie & Warner Ltd Quality Procedure Manual

5 Management Responsibility

5.1 Management Commitment

The Managing Director shall have ultimate responsibility for the Quality Management System (QMS) of Currie & Warner and for the quality of the products of the Company.

The Managing Director shall demonstrate his commitment to the QMS by establishing and signing a Quality Policy Statement, which shall be communicated to all Employees via the works notice board and at induction training. The Quality Policy shall include Currie & Warner's commitment to meeting Customer, statutory and Regulatory requirements.

The Managing Director or delegated representative shall chair regular management system review meetings which shall include the setting and review of quality objectives / improvement opportunities and a review of resources in all areas.

5.2 Customer Focus

Currie & Warner's commitment to Customer focus can be demonstrated via membership of the BTMA (British Turned parts Manufacturing Association) and by the regular attendance of trade shows.

Currie & Warner also recognises the need for the accurate determination of all requirements, in order to provide complete Customer satisfaction.

All Customer requirements shall be reviewed prior to the acceptance of sales orders to ensure that:

- Currie & Warner has a clear and unambiguous statement of the Customer's needs.
- The requirements are within the current capabilities of the Company.
- The need for any additional skills or resources is identified.
- Any discrepancies are resolved with the Customer's representative before the order is formally acknowledged.

Upon the above criteria being satisfied a written acknowledgment shall be sent to the Customer. Records of the activities relating to Customer focus shall be maintained.

5 Management Responsibility

5.3 Quality Policy

Currie & Warner Ltd is fully committed to a Quality Policy which shall ensure delivery of its products and services "defect free and on time".

The Policy of the Company is to:

- Manufacture and supply parts which fully conform to the Customer's requirements, relating to quality, reliability and delivery.
- Use the Company's considerable experience and knowledge in the production of repetition turned parts, to assist Customers in the cost effective design and development of both existing and new products.
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- Ensure that all specified standards as well as any statutory or regulatory requirements are strictly adhered to.
- Recognise that the responsibility for quality lies with all employees of the Company and hence to stimulate and encourage interest and pride in their work.
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- Fully and effectively communicate the Quality Policy of Currie & Warner Ltd throughout the organisation.
- Hold frequent Quality Management System Review meetings to enable continual review of the suitability of the Quality Policy and all aspects of the Quality Management System.
- Embrace a culture of Continual Improvement throughout the organisation employing a quality strategy of waste reduction and increasing competitiveness.

5 Management Responsibility

5.4 Planning

5.4.1 Quality Objectives

Quality objectives and improvement opportunities shall be discussed, set and reviewed at Quality System Review meetings. A method of measurement of the improvement opportunity shall be established and data gathered. A plan shall be formulated to achieve the desired improvement. The objective shall continue to be monitored and the measurements taken shall be used to demonstrate any improvement.

A quality objective will be deemed to be closed when improvement targets have been achieved within an agreed time scale.

Where an objective is deemed to be unachievable within a set time frame the Quality Management Review team will review, amend and adjust the objective / target accordingly.

5.4.2 Quality Management System Planning

The Quality Management System of Currie & Warner shall be planned so that:

- The documented quality manual and therefore the Quality Management System are in accordance with the requirements of ISO 9001:2008.
- Quality objectives / improvement opportunities are set, measured, monitored, reviewed and recorded.
- Any changes to the system are controlled and recorded as an amendment so that the integrity of the system is maintained.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

Managing Director

The Managing Director or shall have ultimate responsibility for the Quality Management System of Currie & Warner and for the quality of the products of the Company. The Managing Director or his representative shall ensure that the Quality Management System, as defined by this manual, is practiced by all Employees, is communicated throughout the organisation, and is continually reviewed to ensure its effectiveness. He shall also ensure that any necessary training is identified and carried out.

Quality Assurance Manager

The Quality Assurance Manager is responsible to the Managing Director. He shall maintain Currie & Warner's documented Quality Management System and all inspection functions practiced within the Company including the management of suppliers.

5 Management Responsibility

Commercial Director

The Commercial Director is responsible to the Managing Director. He shall oversee the Sales Team, Raw Material Procurement and Production Planning. He is specifically charged with ensuring that quality aspects are not overridden by production / delivery pressures.

Production Engineering Manager

The Production Engineering Department is responsible to the Commercial Director. They shall endeavor to prevent / solve any potential quality concerns at the production engineering stage by applying sound engineering techniques to machine layouts and tooling. They are specifically charged with designing quality into the Company's products thus achieving Customer satisfaction.

Sales Team

The Sales Team is responsible to the Commercial Director for the maintenance of the Company's Customer base and the order intake. He shall be responsible for obtaining the Customers specification and for the review of requirements related to the product. At Brownhills the Managing Director is directly responsible for the Company's Customer base and the order processing, he shall be responsible for obtaining the Customers specification and for the review of requirements related to the product.

Works Manager

The Works Manager is responsible to the Commercial Director for all manufacturing processes, equipment and plant maintenance of the Birmingham facility.
The Works Manager is responsible to the Managing Director for all manufacturing processes, equipment and plant maintenance of the Brownhills facility.

All Employees

All Employees are responsible for:

- Adherence to working instructions.
- Continuous improvement and the achievement of product quality.
- Notification to quality control and management of any nonconformance.

5.5.2 Management Representative

The management representative for Currie & Warner shall be the Quality Assurance Manager, who has been authorised by the Managing Director to ensure that the Quality Management System is fully implemented and maintained. The Quality Assurance Manager shall:

- Promote Customer requirements to all Employees throughout the organisation via the Quality Policy Manual, quality plans and when necessary verbal communication.
- Report the performance of the Quality Management System at six monthly review meetings.
- Identify any concerns or improvement opportunities to the Management Team.

5 Management Responsibility

5 Management Responsibilities

5.5.3 Internal Communication

The major tool for internal communication shall be the Quality Manual. All items of importance regarding the Quality Management System shall be displayed on the quality notice board.

The minutes of management review meetings shall be distributed to the relevant personnel.

In the event of either a system (identified during auditing) or product (identified by inspection) nonconformity then all necessary information shall be recorded and passed to the relevant personnel as per the procedures for internal auditing (QCP 13) and the control of nonconforming product (QCP 08).

5.6 Management Review

5.6.1 General

The Quality Management System of Currie & Warner shall be reviewed to ensure its continuing adequacy and effectiveness, as a minimum, every 6 months encompassing both manufacturing sites.

The review meeting shall be attended by the following personnel:-

- Managing Director/Commercial Director
- Quality Assurance Manager
- Senior Quality Assurance Engineer
- Inspection Supervisor
- Production Engineering Manager
- Works Manager
- Company Accountant
- Other Designated Personnel

The Quality Assurance Manager shall chair the meeting and anyone unable to attend shall send apologies and any information required by the meeting agenda.

Records of the meeting shall be maintained in the form of minutes and copies passed to the relevant personnel.

5 Management Responsibility

5.6.2 Review Input

The input of the meeting shall be in the form of an agenda which shall include, as a minimum, the following:

- Review of any follow-up actions required from the previous meeting
- Review of the quality system including any changes required
- Review of external audits (e.g. BSI)
- Review of internal audits
- Review and consideration of the quality policy
- Adequacy of resource in all areas
- Review of corrective and preventive actions carried out and their effectiveness.
- Review of Currie & Warner's performance (both process and product)
- Review of Customer satisfaction / feedback
- Setting of quality objectives / improvement opportunities
- Review of quality objectives / improvement opportunities

5.6.3 Review Output

The output of the review meeting shall be the making of decisions / carrying out of actions as required and detailed in the minutes of the meeting. All actions shall be carried out within the designated time scale and reviewed at the next system review meeting.

6 Resource Management

Related Documentation:

BS EN ISO 9001:2008

Currie & Warner Ltd Quality Policy Manual

Currie & Warner Ltd Quality Procedure Manual

6 Resource Management

6.1 Provision of Resources

Resource requirements shall be determined and deployed so that:-

- The Quality Management System is not only maintained but also continually improved.
- Customer Requirements are achieved.

The adequacy of resources in all areas shall be reviewed at management review meetings and any deficiencies addressed by the setting of appropriate quality objectives / improvement opportunities.

6.2 Human Resources

6.2.1 General

All personnel who have a direct effect on conformity to product requirements shall be continually assessed for competency within their working environment. Records shall be maintained to include

- The level of education achieved.
- Any training undertaken.
- Skill & competency level.
- Experience.

6.2.2 Competence, Training and Awareness

Upon joining Currie & Warner all personnel shall be subjected to a Company induction. A training record shall be established which will include all relevant information regarding the individual's ability to competently carry out their responsibilities in line with the Quality Management System and all Customer requirements. The training record shall include education, training, relevant skills and experience.

Should a need for further training be identified either immediately, at review meetings or at any other time during the employment of an individual then a program shall be agreed.

A Training Manager shall be appointed who shall be responsible for:

- Maintaining all records related to competence, awareness and training.
- Supervising the Company's apprenticeship scheme.
- Evaluating the effectiveness of all training activities.

Operators shall be given ongoing training after first off inspection but before production commences to ensure that they are fully aware of the quality / Customer requirements of individual parts.

6 Resource Management

6.3 Infrastructure

The infrastructure requirements of Currie & Warner shall be assessed, provided and maintained so that Customer requirements can be strictly adhered to.

It is the responsibility of the Works Manager to ensure that the factory building and offices are adequately maintained to provide a suitable environment for manufacture and storage of product. The manufacturing environment will be maintained to a standard that is safe, productive and promotes product conformance.

All manufacturing equipment (e.g. mutli-spindle auto lathes, cleaning plants, swarf plants, heat-treatment plant, heating systems, compressors, etc.) shall be subjected to ongoing maintenance. This shall be the responsibility of the Works Manager who will delegate the work to either C&W's maintenance department (priority of work shall be advised by the Commercial Director) or to subcontractors depending on the nature of the work to be carried out. All maintenance of manufacturing equipment shall be recorded and retrievable.

The Managing Director shall be responsible for the computer system of C&W. This shall include upgrades, the provision of suitable programs and system backups.

All supporting services to the C&W business i.e. subcontracted transportation, telecommunications, the site security system, subcontracted site offsite cleaning, etc. shall be continually reviewed by the management team of C&W for their continuing suitability and effectiveness. Offsite warehousing provision / facilities are the responsibility of the Commercial Director and are controlled by the computer system.

6.4 Work Environment

Currie & Warner shall maintain a working environment conducive to the production of components that fulfill all Customer requirements.

The main considerations to achieve a suitable working environment are:

- Temperature.
- A level of light suitable for operating machines and monitoring and measuring product.
- Housekeeping to a high standard.
- The provision of suitable protection e.g. machine guarding, Personal Protective Equipment (PPE) etc.

The working environment at C&W shall be continually reviewed by the management team for its continuing suitability and effectiveness. This shall be demonstrated by carrying out Site audits as part of the ISO 14001 Environmental Management System.

7 Product Realization

Related Documentation:

BS EN ISO 9001:2008

Currie & Warner Ltd Quality Policy Manual

Currie & Warner Ltd Quality Procedure Manual

Quality Control Procedures:

QCP 03 - Process Control
QCP 04 - Assessment of Subcontractors
QCP 07 – Calibration
QCP 11 - Packaging, Preservation & Storage of Product

7 Product Realization

7.1 Planning of Product Realization

As a minimum requirement, all goods that may have an influence on the Company's finished product quality (which are primarily brass bar at the Birmingham facility, stainless steel, aluminium, and brass bar at the Brownhills facility) are inspected for type, visual condition, quantity and transit damage.

Product is controlled during manufacture, initially by First-Off Inspection (sample quantity as described in QCP05) before the machine is permitted to run.

C & W's policy of operator control is achieved by production personnel carrying out and recording in-process inspection in accordance with the job specific quality plan. The frequency and sample inspection quantity will be specified on the quality plan.

At the end of the production run a Last-Off Inspection (sample quantity as described in QCP06) is carried out by inspection personnel.

Final inspection of the product is carried out, to confirm compliance to specified requirements and is achieved with reference to a specific Customer purchase order, or works order specification, together with other inspection verification documents.

All Inspection activities are controlled by the Company's computer system. Inspection data is kept on computer, from which associated data can be traced.

It is the Company's policy to maintain records of all inspection and tests as evidence of Quality Assurance conformance.

7.2 Customer -Related Processes

7.2.1 Determination of Requirements Related to the Product

The Company recognises the need for accurate knowledge of Customer specified requirements, in order to provide complete Customer satisfaction.

A review of Customer requirements is carried out prior to acceptance of a Sales Order. This will include requirements for delivery and post-delivery activities (e.g. completing part shipments, returning packaging materials such as plastic containers and documentation) and any statutory and regulatory requirements related to the product.

7 Product Realization

7.2.2 Review of Requirements Related to the Product.

Currie & Warner Ltd accepts that it has a responsibility to make sure; it has a clear and unambiguous statement of the Customers' requirements.

Contracts are defined as the Company's written acknowledgment to the Customer.

These contracts are reviewed to ensure that they are within the current capabilities of the Company, or whether additional skills and resources will be required to meet the obligations of the Company.

Any subsequent changes to the contract by the Customer shall result in an amended acknowledgment being raised.

When orders have been received their contents are reviewed, and any differences are resolved with the representative before orders are formally acknowledged.

The activities relating to contract review are recorded and maintained on file.

7.2.3 Customer Communication

Communication with Customers takes place via a variety of methods including direct contact during visits, post, fax, electronic mail and telephone. The methods of communication are used to determine product information and details of enquiries, schedules, contracts and contract amendments. Communications with Customers will also provide feedback on supplied products including any complaints.

7.3 Design and Development

Design is excluded from the activities of Currie & Warner as all manufactured parts are produced to a Customer specification.

7.4 Purchasing

7.4.1 Purchasing Process

The Company's policy is to purchase goods and services that are controlled to assure conformance with specified requirements. All procurement documents are systematically prepared and reviewed so that all the technical and quality requirements necessary to ensure the quality of items and materials are clearly specified.

The Company's policy shall be to purchase from approved suppliers who have been selected and evaluated to ensure any supplied product conforms to C&W's quality requirements.

7 Product Realization

C&W's criteria for selection, evaluation and re-evaluation of all suppliers may be based on historical evidence of performance or on a formal and on-going assessment of their quality system by the Quality Assurance Manager. The re-evaluation shall be carried out every 6 months via the approved suppliers list (which is controlled by the Purchaser) and annually at the quality management review.

Where, as a matter of expediency, it is not possible to purchase from an approved supplier, a temporary approval may be granted for one consignment. In these circumstances additional receiving inspection and monitoring shall be used.

Any requirement for subcontracted turned parts shall be at the discretion of the Commercial Director, who may choose to seek advice from the Quality Assurance Manager.

7.4.2 Purchasing Information

All purchase orders shall give an accurate description of the product to be purchased including any specific product or system requirements.

All purchase orders shall be reviewed and countersigned by a C&W Director or Group Financial Controller.

7.4.3 Verification of Purchased Product

Whilst Currie & Warner Ltd follows a policy of purchasing goods and services from approved suppliers, a level of goods inwards inspection is adopted corresponding to the level of confidence we have in the supplier.

As a minimum requirement all goods that may have an influence on the Company's finished product quality, which is primarily brass rod (additionally Brownhills -aluminium and stainless steel) shall be inspected for type, visual condition, quantity and transit damage.

The Company will not release incoming product for use until it has been inspected or otherwise verified.

In the event of purchased items requiring verification by C&W or C&W's Customer at the subcontractor's premises then this information shall be specified on the purchasing documents.

7.5 Production and Service Provision

7.5.1 Control of Production and Service Provision

Currie & Warner Ltd is acutely aware, of the need to plan its manufacture around Customers JIT requirements.
To assist in planning to meet these manufacturing demands, the Company makes full use of its computer system for all production provision and development of production schedules.

Production schedules are implemented through internal component drawings, quality plans, visual displays, tooling layouts and route cards.

7 Product Realization

Manufacturing supervisors are responsible for ensuring that, the working environment is conducive to producing work of the required standard.

Production engineers who are well qualified and trained, are charged with the responsibility to "engineer quality into the Company's product" at the earliest and every stage.

All work instructions in the form of internal component drawings, tooling layouts, tool drawings, and special gauge drawings are produced using CAD workstations - specifically Autocad.

The internal component drawings are a reproduction of the Customers drawings and issue and are a controlled document.
While management is responsible for planning quality into our products, by ensuring materials and resources in the form of monitoring and measuring devices are available, the individual operator is responsible for the quality of his work and carrying out the monitoring and measuring.

To assist our workforce in obtaining the standard required, they are provided with written instructions in the form of production schedules, tooling layouts, quality plans, visual displays and route cards.

The efforts of the production operatives to monitor and measure, is supported by an independent inspection function.

This function is not designed to relieve the operators of their responsibility to control the quality of their own work, but to verify that the monitoring and measuring activities are effective.

Currie & Warner recognises the need to carry out suitable maintenance on all equipment having a direct bearing on the finished product so as to ensure continuing process capability.

Servicing is excluded from the activities of Currie & Warner at present because the components are manufactured to Customer specifications and any servicing requirements of finished Customer articles are normally carried out by the Customer.

7.5.2 Validation of Processes for Production and Service provision

In instances where product is supplied to the Customer that is subsequently subjected to surface finish treatment (plating) the part is manufactured with allowances to tolerance (pre-plate gauging).
All products manufactured at Currie and Warner (both sites) is verified at all process stages in accordance with the relevant inspection procedures.
It is general practice, that the finished product is deemed as "self-colour" where the Customer takes responsibility for external processes that Currie and Warner have no control.
Validation of the manufactured finished part can be achieved be by despatching samples to the Customer for each delivery.

7.5.3 Identification and Traceability

It is the policy of Currie & Warner Ltd, to provide systems for product identification and traceability.
To achieve this, the Company has introduced a fully computerised system with data entry at various points in the manufacturing process.
Materials that are held in the raw material stores are identified by labeling which details product type, source of supply and inspection status.

7 Product Realization

During work in progress, the job is controlled and identified by the internal works order no., individual route cards on every container of product and computer controls.

This computer control enables constant "live" monitoring of the Customers product at all stages, to ensure delivery targets are met.

All of Currie & Warner's products are traceable, through the route card number, which appears on every box / basket of product. Which will ensure the traceability of purchased raw material and its origin. All traceability, material supply, production and inspection data is held on computer.

Currie & Warner Ltd recognises the need to indicate the monitoring and measurement status of products at all stages, to ensure that a verification stage is not missed, nor unnecessarily repeated.

Goods received into the Company are not released for use until they have been verified as conforming to requirements and the necessary labeling and documentation have been completed. During production, inspection status is indicated by the inspectors stamp against the appropriate inspection stage on the route card.

At each process stage data is entered onto the computer system to show the work progress and inspection status of each basket of material. The status of products released after final inspection for storage or despatch to Customers is also indicated by the "PASSED FINAL" identification on the route card.

At any stage nonconforming product is identified with a red label attached to the route card and by data on the computer system. It is the Company’s policy to maintain records of all inspection and tests as evidence of quality assurance acceptance.

7.5.4 Customer Property

Any material or components supplied by a Customer for inclusion in / or with the product supplied by Currie & Warner Ltd, will be inspected at goods inwards.

A request by a Customer for additional receiving inspection or testing to be carried out, will be clarified at the time when Customer related processes are reviewed and any necessary written instructions issued.

Before being released to a storage area, "free issue" items are identified as "purchaser supplied material" with the Customer’s name and product type, to safeguard against unauthorised use or improper disposal.

The Company understands that, whilst such items do not pass into Currie & Warner's ownership, we have complete responsibility for controlling their storage, handling and use, before such items are returned to the Customer. If at any time such "free issue" items are found to be damaged or not suitable for their intended use, the Customer shall be informed immediately and further instructions requested.

7 Product Realization

7.5.5 Preservation of Product

The Company recognises the need for the protection and preservation of product quality, and emphasis is placed on correct handling, storage, packaging and delivery methods. At every opportunity Currie and Warner acts in an environmentally friendly manner, therefore the use of reusable/returnable packaging and transit materials is promoted. As is recyclability by the Customer. Component handling at all stages of production and packing is considered vital, particularly with respect to the nature of the Company's products.

The correct handling of products includes the use of suitable containers and packaging, from goods receiving, to formally handing the product over to the Customer. This includes suitable identification, labelling and accompanying documentation. Identification of product boxes at the packing stage is crucial to maintaining the Company's traceability and shall include both the Customer's and Currie and Warner's data. The Company provides accessible storage areas which are suitable for the preservation, safety, or storage time.

7.6 Control of Monitoring and Measuring Devices

The monitoring and measurement system of Currie & Warner Ltd is designed to show that the accuracy of all inspection, monitoring and measuring equipment, is suitable for its own particular use and will ensure the conformity of product to determined requirements.

As a minimum, all equipment used to verify product conformance to process requirements shall be included in the system. All monitoring and measuring activity shall have traceability to National and / or International standards (e.g. BS EN 3611). Any equipment that cannot be calibrated in-house shall be sent to an external accredited laboratory (e.g.UKAS)

All equipment shall be identified and given a unique record, which is created and maintained on computer. The record shall include the allowable usage of the equipment, the capability of its use, its traceability to known standards (if applicable) and the number of days that the particular piece of equipment has been in use.

An allowed usage frequency shall be established for each piece of monitoring and measurement equipment based on experience and historic data accumulated over a number of years.

A recall system generated from computer records shall be operated to ensure that equipment is re-calibrated once the due date has been reached. All monitoring and measuring equipment shall be handled with the utmost care.

In the event of any monitoring and measuring equipment being damaged it shall be immediately re-calibrated and appropriate actions carried out as necessary (this may include re-adjustments and if necessary the removal of the equipment from the system).

In the event of any product being manufactured whilst using monitoring and measurement equipment that is subsequently proved to not conform to its particular calibration requirement, then the product shall be re-assessed using conforming equipment.

Records shall be maintained of the results of all calibration and verification.

8 Measurement, Analysis and Improvement

Related Documentation:

BS EN ISO 9001:2008

Currie & Warner Ltd Quality Policy Manual

Currie & Warner Ltd Quality Procedure Manual
NCR Register (Spreadsheet)

Quality Control Procedures:

QCP 05 – First / last off inspection
QCP 06 – Process & final inspection
QCP 08 – Control of non-conforming product
QCP 09 – Corrective action
QCP 10 – Preventive action
QCP 13 – Internal auditing

8 Measurement, Analysis and Improvement

8.1 General

Currie & Warner shall plan and implement all monitoring, measurement, analysis and improvement processes so that:

- Conformity of product to agreed Customer requirements is demonstrated.
- Conformity of the Quality Management System to BS EN ISO 9001:2008 is maintained (via audits and management review).
- Improvements to the effectiveness of the Quality Management System are ongoing so as to increase the capability of C&W to consistently meet Customer requirements.

Product conformity shall be demonstrated via goods inwards, first off, in-process, process, final and last off inspections. Where felt appropriate by the Commercial Director, production engineering or the Quality Assurance Manager, or where Customer specified as part of the contract, quality control measures shall include capability studies, SPC and statistically based sampling plans.

8.2 Monitoring and measurement

8.2.1 Customer Satisfaction

It is the policy of Currie & Warner to achieve total Customer satisfaction. This shall be defined as the meeting of, as a minimum, all Customer requirements. Customer Satisfaction shall be monitored via the Customer feedback file. This shall comprise of:

- Customer correspondence (E-mail, Fax, letters, etc.)
- Repeat orders
- Visit reports
- Customer Complaints

The feedback file (half the information is kept in the Quality department and half in the Sales office) shall be reviewed by the Commercial Director, as a minimum, every 6 months. All findings shall be made available at Quality Review Meetings.

8.2.2 Internal Audit

To determine whether the Quality Management System of Currie & Warner continually conforms to the requirements established by Currie & Warner and hence to the requirements of BS EN ISO 9001:2008, a program of internal audits shall be conducted.

The program shall ensure that as a minimum, all processes and areas are audited once per annum.

8 Measurement, Analysis and Improvement

During Quality Management Review meetings, which shall be held, as a minimum, bi-annually, audit results of the previous 6 months shall be taken into account and if considered necessary audit frequencies amended.

The scope and frequency of audits shall be defined on computer generated audit plans and schedules. The audit program shall be carried out by personnel who are fully aware of the requirements of BSENISO 9001:2008 and who have no direct involvement in the process or area that they are assigned to audit. The details of conducting and reporting audits shall be defined in a documented procedure (QCP 13 - procedure for internal quality audits).

In the event of audit non-conformity the root cause of the problem shall be identified. The supervisor responsible for the particular process or area concerned shall carry out any necessary corrections and corrective and / or preventive actions to remedy the problem. The audit result shall be maintained electronically together with hard copy evidence files held in the quality office. The audit schedule will be updated with the audit result and a repeat audit rescheduled with appropriate time scale to ensure system compliance through remedial actions taken. Escalation of non-conformities, where action has not been rectified in an appropriate time scale, will take place at the next Quality Management Review Meeting at Senior Management level.

8.2.3 Monitoring and Measurement of Processes

It is the policy of Currie & Warner to monitor all the processes which make up the Quality Management System (shown in 4.1 - general requirements) It is the policy of Currie & Warner to measure, where possible, the processes which make up the Quality Management System. Measurements of the processes shall be undertaken by the use of monitoring and measuring devices and where deemed necessary by the Quality Assurance Manager, Production Engineering or the Customer by use of statistical techniques.

All process monitoring and measuring shall be achieved by the use of internal audits, verification plans (e.g. Quality objectives / improvement opportunities), statistical techniques and monitoring and measuring devices. All monitoring and measuring of processes shall be carried out by competent personnel and shall be reviewed during Quality Management Review Meetings. In the event of product nonconformity, then the process attributed to the nonconformity shall be subject to corrective action to ensure future conformity of the product.

8.2.4 Monitoring and Measurement of Product

It is the policy of Currie & Warner to monitor and measure all products so as to ensure that Customer requirements are achieved. Monitoring and measuring shall be carried out at every stage, which affects the quality of the finished product.

8 Measurement, Analysis and Improvement

All goods that have an influence on finished product quality, which is primarily brass (Aluminum and Stainless Steel- Brownhills), shall be inspected for type, visual condition, quantity and transit damage. No incoming product shall be released for use until it has passed inspection or otherwise verified.

It is the policy of Currie & Warner to control product during manufacture. Customers order quantities shall be broken down into production runs. Each production run shall be subjected to 1st-off (before the machine is allowed to start production) and last-off inspection by a member of the QA Department.

In-process inspection shall be carried out by production personnel. Product shall be inspected with reference to written instructions (i.e. a drawing and quality plan) and results recorded.

Final inspection of the product, to ascertain conformity to specified requirements, shall be carried out (with reference to the quality plan) by quality personnel. Product shall not be released for despatch (unless agreed with the Customer via the procedure for concession QCP08) until final inspection has confirmed that the product meets requirements.

Records of all monitoring and measuring activities shall be maintained and entered onto the computer system. Records shall include the Company clock number of the individual who performed the inspection activity.

8.3 Control of Non-Conforming Product

Currie & Warner shall ensure that all non-conforming material and product is identified and whenever possible isolated in a designated quarantine area. The identification shall include nonconformance details and where applicable, reference to a nonconformance document (e.g. NCR report).

The controls and authorities relative to the disposal of nonconforming material and product shall be detailed in procedures (e.g. QCP 08 - Procedure for the control of nonconforming parts & material).

Currie & Warner shall ensure that in cases of non-conforming product a corrective and preventive action (where appropriate) is carried out to prevent any future reoccurrence.

8 Measurement, Analysis and Improvement

Existing non-conforming product shall be disposed of by either sorting, reworking, gaining a Customer concession or if these options are not viable, then by scrapping the product concerned.

Any concessions requested of a Customer shall be agreed in writing before any despatch action is instigated.

Any product that is reworked shall be subjected to the next stage of inspection (either process or final inspection) to demonstrate that the components have been successfully rectified to meet requirements.

Any material that is discovered to be non-conforming after production has commenced (e.g. subsurface defect) shall result in both the material and any product made from the material being quarantined for further disposition. Should the non-conformity be discovered after product has been despatched then the Quality Assurance Manager and the Managing Director shall debate the effects of the non-conformity on the product and if necessary the Customer shall be informed.

Records of non-conformance shall be maintained which shall include the nature of the non-conformity and any subsequent corrective and preventive actions.

8.4 Analysis of Data

All data gathered from the monitoring and measuring activities of Currie & Warner shall be analyised during Quality Management Review. The data shall be used to determine:

- The effectiveness of the Quality Management System by identifying strengths and weaknesses.
- Opportunities for improvements to be made (i.e. the areas where a weakness has been detected).
- Areas where preventive actions are required.
- Observation of trends and consideration of similar product / processes

The data shall also be used to determine Customer satisfaction and the performance of Suppliers.

8.5 Improvement

8.5.1 Continual improvement

Currie & Warner is committed to continually improving the effectiveness of the Quality Management System through use of the Quality Policy, quality objectives, audit results, analysis of data, corrective and preventive actions and Quality Management System reviews. Improvement opportunities / areas will be identified, analysed, actioned and recorded as a key element of the Quality Management System review meeting agenda.

8.5.2 Corrective Action

Currie & Warner strive to eliminate all defects, errors and non-conformities by implementing remedial corrective action. The primary objective is to ensure that any failure within a system, product or process is not repeated. All such failures are recorded and reviewed, cause determined and corrective actions implemented to eliminate repetition.

Appropriate techniques will be utilised in the pursuit of a true root cause definition i.e 8D Tops (8 Discipline Team Oriented Problem Solving), 5 Why Analysis.

Records of corrective actions will be maintained and procedural amendments documented (ref.4.2.4)

The effectiveness of corrective actions will be reviewed at the Quality Management Review Meetings.

8.5.3 Preventive Action

Currie & Warner strive to eliminate the causes of all defects, errors and non-conformities by the implementation of preventive action. The primary objective is to prevent the occurrence of any failure within a system, product or process in the first instance. Potential failures will be identified, determined and actions implemented to prevent their occurrence.

Appropriate techniques will be utilised in the pursuit of robust preventive actions i.e 8D Tops (8 Discipline Team Oriented Problem Solving), 5 Why Analysis, FMEA, Quality Planning.

Records of preventive actions shall be maintained and procedural amendments documented (ref.4.2.4)

Preventive countermeasures and their effectiveness shall be reviewed at the Quality Management Review Meetings.

Issue of Quality Manuals

Quality manuals are not issued to departments, but are issued to a quality folder on the quality server. The nominated person is responsible for cascading to others within their department, so that all Employees become familiar with the Company's policy. Master hard copies of all three tiers of Quality System Manuals

Amendments

The Quality Assurance Manager is authorised by the Managing Director to review and amend quality manuals (policy and procedures) when necessary. The Quality Assurance Manager and delegated nominee are responsible for of the two hard copies and the electronic copy of the manuals is amended and that the obsolete sections are withdrawn and new sections issued. The manual amendment records shall be recorded and kept by the Quality Assurance Manager as part of the Quality System Manual.

Nominated Access to Server

Quality Assurance Manager

Inspection Server

Managing Director

Works Manager

Commercial Director

Production Manager

Management Accountant

Quality Policy Manual Amendment Record

Any changes, modifications or additions of / to the manual must be recorded in this amendment issue record.

Issue	Page No.	Section No.	Details of the Amendment	Date Amended	Authorised by
A	All		Initial issue of 9001:2000 manual	25/03/2003	D.Bennett
B	Page 24 Page 34	7.1 8.2.4	Policy on 1st off amended to allow more than 50,000 parts per run. Operator check frequency changed to hourly (minimum). Run quantities amended to allow more than 50,000 parts per run (in line with above).	30/08/2005	D.Bennett
D	Page 3 Page 4 Page 5 Page 17 Page 18 Page 22 Page 26 Page 32 Appen. A	Table Info Table Titles 5.6.1 6.3 7.4.1 8.2.1 Holders	Amended to reflect changes in group structure Amended to reflect changes to manufacturing capability Amended to reflect changes in personnel / job titles All amendments below are due to various changes to job titles following promotions / retirements (except where otherwise stated).	25/02/2008	D.Bennett
E	Page 6 Page 7 Page 8 Page 9 Page 10 Page 11 Page 13 Page 15 Page 16 Page 19 Page 20 Page 21 Page 23 Page 31	Info 6.2.2 7.6 Title Table 4.2.1 Title 5.3 5.4.2 5.6.2 Title 6.2.1 6.2.2 Title Title	Amended to reflect issue of ISO9001:2008. Reworded to reflect issue of ISO9001:2008. Reworded to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008. Reworded to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008. Effectiveness of corrective and preventive actions added to management review agenda. Amended to reflect issue of ISO9001:2008. The term 'product quality' replaced by 'conformity to product requirements' in line with ISO9001:2008. Reworded to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008. Amended to reflect issue of ISO9001:2008.	26/02/2009	D.Bennett

QUALITY POLICY MANUAL

Issue	Page No.	Section No.	Details of the Amendment	Date Amended	Authorised by
	Page 32 Page 33 Page 36	8.1 8.2.2 8.2.2 8.5.2 8.5.3	Amended to reflect issue of ISO9001:2008. The term 'necessary corrections' added to part of clause dealing with issues identified by internal audit. The effectiveness of corrective actions added to management review agenda. The effectiveness of preventive actions added to management review agenda.		
F	Page 3 Page 4 Page 5 Page 17 Page 37	Table Page Table 5.5.1	Group structure updated. Company capabilities updated. Company structure updated. Management responsibilities updated. Works Manager details added. Works Manager added to nominated manual holders list.	27/07/2012	D.Bennett
G	Page 26	7.4.2	General Manager added to GPO/RMPO authorization signature	30/10/2012	K.J.Lock
G	Page 5	Page	Change to Quality Manager	30/10/2012	K.J.Lock

Issue	Page No.	Section No.	Details of the Amendment	Date Amended	Authorised by
01	1-39	All	Document content has been refreshed and amended as necessary and reformatted. C&W Brownhills site specific requirements encompassed in this revision. • Quality Policy Manual amended and updated to include Currie and Warner Brownhills site specific requirements. • New format, revision change control, and layout amended to encompass Currie and Warner Brownhills and ensure continuity of amendments via a numbering system. • Quality documentation tiered (1st 2nd 3rd) complete review undertaken.	13.01.14	D Bonnick
02	6	n.a.	K.Sedgebear replaced by T.Fox. Quality Policy Statement endorsed by T.Fox.	01.04.16	D.Bonnick