



Pipe Supports Limited

Quality Manual

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QUALITY MANUAL

The policies, procedures and documentation described in this manual are mandatory and are to be adhered to by all personnel employed by

PIPE SUPPORTS LIMITED.

This manual is the property of PIPE SUPPORTS LIMITED and is intended for exclusive use by employees in the implementation of the declared quality management system.

All items contained in this manual are strictly confidential.

The contents of this manual and any extracts from must not be disclosed to third parties without prior written authorisation from the Managing Director or nominated quality representative.

Approved and authorised for issue by:

A handwritten signature in black ink, appearing to read 'Richard G Jones', is written over a faint, illegible background.

Pipe Supports Group Managing Director.

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Introduction

General

This Manual presents policy and process procedural requirements for the quality management system of **PIPE SUPPORTS LTD.**

It is emphasised that the Quality Management System (QMS) requirements defined in this quality manual are complementary to the specified technical requirements for the range of products manufactured.

This QMS has been designed and is implemented taking into consideration such influences as objectives, products and processes employed.

It is not the purpose of this quality manual to imply uniformity of management systems with other organisations providing similar services and products.

This quality manual is written in recognition of the requirements of BS EN ISO 9001 2000.

Process approach

In designing and implementing this QMS we have adopted a process approach and have identified the processes employed and where required have documented the critical operations to ensure that the significant processes are operated under controlled conditions.

Relationship with BS EN ISO 9004 2000

In responding to the requirements of BS EN ISO 9001 2000 reference was made to the guidance given in BS EN ISO 9004 2000 - Guidelines for performance improvements.

Compatibility with other management systems

This manual has been developed to assist in meeting the requirements of other internationally recognised or legislative management system standards.

Currently however, this manual is restricted to addressing the requirements of BS EN ISO 9001 2000.

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1. Scope

1.1 General

This quality manual specifies the QMS of **PIPE SUPPORTS LTD**, in order that it may demonstrate its capability to provide conforming product.

The requirements are aimed at achieving customer satisfaction by meeting requirements through applying the QMS, continually improving it and by avoiding nonconformity.

This quality manual is applicable to the operations of PSL for the activities of design, manufacture & supply of pipe supporting equipment for all types of pipework installations manufactured at the company's premises situated at

Unit 22 West Stone,
Berry Hill Industrial Estate,
Droitwich,
Worcestershire,
WR9 9AS,
England.

Typical items produced include:

- Constant effort spring supports,
- Variable effort spring supports,
- Pipe clips,
- Support ancillary components,
- Isocast insulating material,
- Comlin insulating products,
- Hydraulic snubbers,
- High density PUF supports, and
- Fabricated support steelwork.

1.2 Permissible exclusions

There are no exclusions to the requirements of BS EN ISO 9001 2000.

2. Normative reference

This Quality Manual is prepared in accordance with the requirements of BS EN ISO 9000 2000 Quality management systems - Fundamentals and vocabulary

3. Terms & Definitions

The terms and definitions given in BS EN ISO 9000 2000 apply.

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FC-PSL-01

Rev.0

Date: 04-aug-03

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FC-PSL-02
Rev.0
Date:06-Aug-03

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4. Quality management system

4.1 General requirements

This quality manual defines the QMS adopted by **PIPE SUPPORTS LTD** and identifies how the QMS is documented, implemented, maintained and continually assessed.

To achieve this we have:

- Identified the processes needed to operate the QMS.
- Determined the sequence and relationship of these processes.
- Determined the criteria and methods required to ensure that the processes are operated and controlled.
- Ensured that the availability of resources and all necessary information has been obtained to support the operation and monitoring of the processes.
- Ensured that we measure, monitor and analyse the processes.
- Implemented the necessary actions to achieve the planned results and any opportunity to improve.
- Identified and control sub contract products and processes.

4.2 General documentation requirements

4.2.1 General

QMS documents include:

- Documented quality policy and quality objectives.
- Quality manual.
- Documented procedures as required by BS EN ISO 9001 2000.
- Documents/procedures required ensuring the effective planning, operation and control of processes.
- Records required by BS EN ISO 9001 2000.

4.2.2 Quality manual

This quality manual defines the scope of our business and management system, a reference to required process procedures, which are implemented in the execution of the QMS and a description of the sequence and interaction of our processes within the QMS.

Reference:

QM-PSL-01; PSL Quality Manual

4.2.3 Control of documents

Documents required for the operation of the QMS are controlled, issued and revised in accordance with a formal procedure to ensure that:

- They are approved for adequacy prior to release to personnel or customers;
- They are reviewed, updated and re-approved.
- Registers are maintained which identify the current revision status of all controlled documents.

Relevant versions of documents are issued ensuring that the documents are maintained so that they are legible, identifiable and can be retrieved for use.

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Documents received into the company are adequately identified and where appropriate their issue is controlled.

Obsolete documents are controlled to prevent any unintended use. If they are to be retained for information purposes then they will be clearly identified to indicate their status within the system.

Reference:

PP-QA-01; Documents Control Procedure

4.2.4 Control of records

Quality records are maintained to demonstrate conformance to the QMS.

Procedures for the identification, storage, retrieval, protection, retention time, and disposition of records are implemented and maintained.

Reference:

PP-QA-02; Records Control Procedure

5. Management responsibility

5.1 Management commitment

Top management are committed to the development, implementation, effectiveness and continuing improvement of the QMS.

This is demonstrated by ensuring that

- The awareness of the importance of meeting customer, regulatory and legal requirements is created and communicated throughout the organisation.
- Quality policy is established, documented and maintained.
- Quality objectives are established, documented and maintained.
- Management reviews are conducted on a regular basis.
- Resources are available to operate the business process.

5.2 Customer focus

The QMS ensures that customer requirements are determined and implemented with the aim of enhancing customer confidence and satisfaction.

5.3 Quality policy

A quality policy has been established and approved which;

- Is appropriate for our needs and those of our customers;
- Details our commitment to meeting our own and our Customers requirements and ensures continual improvement of the effectiveness of the QMS.
- Provides a framework for establishing and reviewing our quality objectives;
- Is communicated, understood and implemented throughout our whole organisation.
- Is reviewed at least annually for continuing suitability.

Reference:

QP-PSL-01; PSL Quality Policy

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5.4 Planning

5.4.1 Objectives

Quality objectives have been established at each relevant function and level within the organisation.

The quality objectives, which are defined by a series of process procedures, are measurable and consistent with the quality policy.

Reference:

QO-PSL-01; PSL Quality Objectives

5.4.2 QMS planning

Activities and resources have been identified and planned to achieve the stated objectives.

Planning is consistent with other requirements of the management system.

Organisational changes, when required, are conducted in a planned manner to ensure that the management system is maintained during the required change.

The following aspects are considered during quality planning activities:

- Processes required by the QMS.
- Resources required at different stages to achieve the desired results.
- Actions needed to achieve continual improvement.

5.5 Responsibility, authority and communication

5.5.1 Responsibility and authority

Personnel roles, relationships, together with responsibility and authority are defined by top management to ensure that the quality policy, objectives and products produced conform to client's requirements.

An organisation chart plus a series of job descriptions define the authority and interrelationship of personnel.

Reference:

FC-PSL-02; PSL Organisation Chart

5.5.2 Management representative

A management representative has been appointed who, irrespective of other responsibilities, has authority for:

- Ensuring that the QMS is implemented and maintained in accordance with the requirements of this quality manual;
- Reporting on the performance of the QMS, including requirements for improvement to top management;
- Ensuring awareness of customer requirements throughout the company;
- Liaising with external parties on matters relating to the QMS.

Reference:

FC-PSL-02; PSL Organisation Chart

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5.5.3 Internal communication

Effective internal communication is established and maintained to all personnel within our organisation as demonstrated by:

- The organisation chart,
- Job descriptions,
- Process procedures,
- The issuing of verbal and documented information relating to product and client requirements.

5.6 Management review

5.6.1 General

The QMS is subject to annual review by top management to establish its continuing suitability, adequacy and effectiveness.

A detailed management review report is generated, distributed and maintained.

This report identifies any changes that are required to the QMS, Quality policy and objectives.

5.6.2 Management review input

Management review input will include the review of current performance and improvement opportunities related to:

- Results of audits.
- Customer feedback.
- Process performance and product conformance analyses.
- Status of preventive and corrective actions.
- Follow-up actions from previous QMS reviews.
- Changing circumstances, which could affect the QMS.
- Recommendations for improvement.

5.6.3 Management review output

Management review output will include decisions and actions related to:

- Improvement to the effectiveness of the QMS and related processes.
- Improvement to product related to customer requirements.
- Resource needs.

6. Resource management

6.1 Provision of resources

Resource requirements have been determined to ensure they are adequate and are provided in a timely manner to implement, maintain, improve the effectiveness of the QMS and ensure that customer satisfaction is addressed and achieved.

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6.2 Human resources

6.2.1 Assignment of personnel

Personnel with responsibility for performing work that affects product quality are competent on the basis of applicable education, training, skills and experience.

6.2.2 Training, awareness and competency

Procedures exist to determine the competency of personnel performing tasks that affect product quality and provide training to address identified needs and evaluate the effectiveness of the training given or planned.

Records of education, training, skills and experience are maintained.

At the time of implementation of this quality manual, existing employees are deemed skilled and competent for the scope of their responsibility.

Personnel are aware of the importance of conformance with the quality policy and with the requirements of the QMS.

6.3 Infrastructure

Facilities required to ensure conformity of product are identified, provided and maintained.

The following aspects are taken into account:

- Suitability of factory and office workspace.
- Machinery/equipment
- Effective maintenance programme for workspace, plant, equipment etc.
- Health & safety regulations.
- Environmental issues i.e. conservation, pollution, waste and recycling.

The infrastructure required to achieve conformity of product consists of:

- Engineering workshop and associated facilities comprising a combined office and workshop.
- Suitable process equipment including hardware and software, to ensure that products supplied are designed, manufactured, assembled, tested and packed in accordance with customers contract specifications and/or order, applicable national and international specifications and PSL engineering specifications.
- Appropriate supporting services such as communication and transport.

6.4 Environment

The following aspects have been considered when defining and managing the work environment;

- Encouragement for creative working and personnel involvement.
- Health & safety requirements.
- Ergonomics.
- Equipment location within the workshop environment.
- Physical working environment including heating, noise, lighting and cleanliness.

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7. Product realisation

7.1 Planning of the product processes

Processes affecting product quality/service have been developed and are reviewed to ensure that they can be operated under controlled conditions and achieve outputs consistent with requirements and objectives for the particular product.

These processes are:

- Established to ensure the quality objectives for the product and the contract requirements are achieved.
- Identified, documented and suitable resources and facilities are available to produce product and satisfy customer requirements.

Validation and verification, monitoring, inspection and testing activities, including acceptance criteria of product are defined.

Records of process operations and resulting product are retained to provide confidence in the conformity of the processes and product produced.

7.2 Customer-related processes

7.2.1 Determination of customer requirements

Customer requirements are defined during the quotation stages. Information is reviewed to ensure that sufficient data is available to allow the preparation of a formal quotation.

The following are determined during this stage:

- Customer specific requirements
- Statutory and regulatory requirements
- Additional requirements

Where information is not sufficient to allow preparation of the quotation, the customer will be contacted and further information will be requested.

7.2.2 Review of product requirements

Upon receipt of a formal instruction to proceed, customer requirements are reviewed to ensure:

- Product requirements are fully defined to allow further processing.
- Verbal customer requirements are confirmed before acceptance.
- Order requirements differing from those in the original quotation are identified and resolved.
- Ability to deliver the customer requirements.

Documents that record evidence of the contract review activities are held in contract folders.

Amendments to original contractual requirements are identified, controlled, approved and relevant documents are amended and personnel notified.

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7.2.3 Customer communication

Effective arrangements exist for communicating with the customer at all stages during execution of a contract particularly during:

- Enquiry, contracts and order handling, including amendments to contract.
- Customer feedback including complaints and actions relating to nonconforming situations.

7.3 Design and/or development

7.3.1 Design and development planning

Product design and development is planned and controlled. The planning output is updated as the design and development progresses.

The following are considered during the planning phase:

- Design and development stages.
- The review, verification and validation requirements that is appropriate to each of the design and development stages.

Responsibilities and authorities for design and development are defined, including the interfaces between the various departments involved in the design process.

7.3.2 Design and development inputs

Design and development inputs relating to product requirements are defined and recorded, these include:

- Functional and performance requirements.
- Applicable statutory and regulatory requirements
- Information on similar or previous designs.
- Requirements that are considered essential for design and development.

The adequacy of the input is reviewed to ensure that it is complete, unambiguous and not in conflict with other inputs.

7.3.3 Design and development outputs

Design and development outputs are approved and presented in a suitable form to enable verification against design and development inputs.

Outputs consist of:

- Evidence that design and development inputs have been achieved.
- Appropriate information for manufacturing, procurement and service provision.
- Product acceptance criteria.
- Product characteristics essential for safe and proper use.

7.3.4 Design and development review

Suitably qualified personnel perform systematic reviews at predefined stages during the design and development process.

If appropriate, interested personnel with responsibility for other departments i.e. manufacturing, purchasing will be involved in the review process.

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D&D reviews ensure that:

- The results of design and development meet the stipulated requirements
- Problems in achieving stipulated requirements and proposals for rectification are defined.
- Records of results of reviews and any necessary actions are maintained.

7.3.5 Design and development verification

Verification is performed in accordance with the arrangements defined in the design and development plan to ensure that outputs meet the inputs.

Design and development verification activities include:

- Comparisons of input requirements against output of the process.
- Comparative methods, alternative design and development calculations.
- Evaluation against similar products.
- Testing.
- Evaluations against previous nonconformities, deficiencies of similar product.

Records of results of reviews and any necessary actions are maintained.

7.3.6 Design and development validation

Design validation is performed in accordance with the arrangements defined in the design and development plan to ensure that the resulting product is capable of meeting the requirements for the specified application.

Validation activities are completed prior to delivery of the product.

Records of results of reviews and any necessary actions are maintained.

7.3.7 Control of design and development changes

Changes to design and development are identified, reviewed, verified, validated and approved.

When appropriate, the effect of the design and development changes on previously supplied product will be reviewed.

Records of reviews to changes and any necessary actions are maintained.

7.4 Purchasing

7.4.1 Purchasing process

Purchased products and services are controlled and records are maintained to assure conformance with specified requirements.

The type and extent of control applied is dependent upon the purchased product.

Control measures include but are not limited to:

- Accuracy of purchasing data.
- Supplier appraisal.
- Provision of evidence of quality and inspection upon receipt.
- Purchasing information.

Purchasing requirements are established during contract review and material detailing stages.

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Purchase orders are placed with suppliers included within the approved suppliers list. To achieve 'approval status' suppliers must demonstrate that they have facilities and control processes to ensure that the product/service complies with the purchase specification and that they have an acceptable quality performance and service record.

7.4.2 Purchasing information

Purchase orders are raised which define the required product or service required ensuring:

- A complete description of required product is identified.
- Requirements for product approval, testing, related procedures are defined.
- Certification requirements are defined.
- Operators are suitably approved for the process.
- Special requirements for inspection/verification, expediting activities are identified.
- QMS system requirements are included.

7.4.3 Verification of purchased product

Activities necessary for ensuring that purchased product meet the specified requirements are defined and implemented.

7.5 Production and service operations

7.5.1 Control of production and service operations

Production and service activities are planned and performed under controlled conditions.

The following aspects are considered when planning activities:

- Availability of information that define the characteristics of the action or product.
- Availability of specifications and work instructions.
- Use and maintenance of suitable production equipment.
- Availability and implementation of monitoring and measuring activities.
- Methods for release and delivery of the finished product.

7.5.2 Validation of processes for production and service operations

All production processes are performed under controlled conditions in accordance with appropriate procedures.

Where the effectiveness of a production process cannot be verified by subsequent inspection, the operating parameters of the process will be defined in a documented procedure, which is then monitored and maintained.

Welding being one of the principle 'special' processes performed is fully controlled by implementation of approved procedures using approved operators.

The following aspects are considered when establishing arrangements for those production processes:

- Criteria for review and approval of the processes.
- Approval of equipment and qualification of personnel.
- Requirements for records.
- Revalidation.

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- Identification and traceability.

7.5.3 Identification and traceability

Identification

Products are identified to the applicable contract, drawing, specification or other nominated documents during all stages of manufacture, inspection, test, storage, and delivery as appropriate.

Traceability

Where traceability and the identification of components or material is a contractual requirement, this is achieved through the issue of contract specific inspection/test plans, procedures and work instructions as necessary.

Purchased materials are supplied with certification in accordance with the requirements of the appropriate specification.

This ensures that all products are produced from guaranteed materials.

Where traceability is a contract requirement this can be maintained with minimum additional involvement.

The contract or unique serial number is the means of identification and where practicable is marked on all individual items of equipment, component or material.

7.5.4 Customer property

Material supplied by customers for incorporation into products is controlled to ensure maintenance of the identification and quality.

All customer supplied material is inspected upon receipt to verify identification, quality and freedom from damage.

Materials are identified and accompanying documentation endorsed in accordance with standard inspection procedures.

Any material found to be unsatisfactory would be reported to the customer.

Unless specific storage instructions are stipulated, material will be kept in an area to prevent any unauthorised use or disposal.

Periodic inspection is performed during storage to ensure its continuing state of acceptance.

Customer supplied material is issued for incorporation in products in the same manner as our own products.

7.5.5 Preservation of product

Items are controlled in respect of handling, storage and delivery to prevent damage, deterioration or loss and to ensure conformance to specified requirements.

Process procedures are available relating to storage, handling and delivery.

Contract specific instructions are raised when required. These are issued as part of the contract documentation.

Suitable lifting and handling equipment is provided. This equipment is initially tested and certified by the supplier.

It is periodically inspected by an authorised, competent person in accordance with statutory health and safety regulations.

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Personnel handling material or equipment during all phases of manufacture use safe and adequate methods to prevent abuse, misuse, contamination, damage or deterioration. Particular attention is given to:

- Preserving the identification of the item.
- Observing labelling or marking relating to handling.
- Suitable protection methods and proper transportation methods.
- Storage conditions.

Secure storage areas and stockrooms are provided for isolation of material pending use. Adequate storage facilities are provided to minimise the possibility of damage, deterioration or loss of identification. Authorisation of material issue and stock rotation, if applicable, is controlled.

Materials are periodically inspected paying particular attention to any products with limited life or special storage requirements.

7.6 Control of monitoring and measuring devices

Monitoring and measuring equipment used to determine compliance with specified requirements and/or satisfactory process controls are registered, used, stored and calibrated in accordance with written procedures appropriate to their function and accuracy.

Results of calibration and verification are maintained

Calibration

Equipment is calibrated at intervals and to tolerances established on the basis of stability, purpose and usage. Calibration may be carried out "In-house" or by an approved sub-contractor. Reference standards used to facilitate calibration will be in a known state of calibration and be traceable to National/International Standards if applicable.

Indication of Calibration Status

All calibrated/proven equipment is, where practical, identified to indicate its calibration status and next due date.

Where this is not practical an alternative method of equipment identification is adopted which ensures positive recall when calibration is due.

The quality representative is responsible for monitoring the system and takes corrective action when:

- It is outside its calibration date
- It has failed in operation
- It is shown to be outside its designated limits
- Damage has occurred which may effect its accuracy

Review of the Calibration System

A full review of the calibration results of all measuring and test equipment will be carried out on an annual basis.

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Where such reviews indicate that equipment capabilities and / or calibration intervals are not appropriate to the specific requirements then further suitable equipment, amended calibration intervals and / or amended limits of accuracy as appropriate will be introduced.

8. Measurement, analysis and improvement

8.1 Planning

Monitoring, measurement, analysis and improvement processes are planned and implemented which:

- Demonstrate conformity of product
- Ensure conformity of the QMS
- Continually improve the effectiveness of the QMS

The type, location, timing and frequency of measurements and the requirements for records are defined in the process procedures applicable to the activity performed.

The results of data analysis and improvement activities are an input to the management review process.

8.2 Monitoring and measurement

8.2.1 Customer satisfaction

Information on customer satisfaction and/or dissatisfaction is monitored.

The methods and measures for obtaining and utilising such information and data are defined.

8.2.2 Internal audit

The QMS is audited and reviewed periodically and systematically to ensure:

- Compliance to the requirements of BS EN ISO 9001 2000.
- Compliance of the QMS as defined by this quality manual.
- Implementation and maintenance of the QMS remains effective.

An internal audit programme is generated to control internal audit activities. All company functions are audited at least once a year but more complex or problematic areas may be subject to additional audits.

The following points are taken into consideration when determining the internal audit programme:

- Status and importance of the processes and areas to be audited,
- Results of previous audits,
- Audit criteria,
- Scope,
- Frequency.

Audits are carried out by suitably trained personnel and are conducted by reference to the requirements of this quality manual, process procedures and supporting documentation. Nonconformities are recorded and a programme of corrective action is agreed.

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The manager/supervisor with responsibility for the area being audited ensures that corrective actions are taken without undue delay to eliminate detected nonconformities and their causes.

Follow-up audits are performed to verify the close out of all nonconformities and corrective actions.

Records of all audits, including corrective action details, are maintained.

Reference:

PP-QA-03; Quality Audit Procedure

8.2.3 Monitoring and measurement of processes

Monitoring and measurement of processes necessary to meet and demonstrate the processes continuing ability to satisfy its purpose are applied.

Measurement results are reviewed to maintain and/or improve the processes.

Monitoring is in the form of day-to-day nonconformities reporting and the periodic internal audit activity together with the operation of the process procedures that measure product conformity.

8.2.4 Monitoring and measurement of product

Monitoring and measurement including acceptance criteria for products are established. To ensure conformity of product, the following aspects are considered when establishing methods of measurement:

- Type of measurement.
- Appropriate means of measurement.
- Equipment, software and tools required.
- Location of measurement points within the realisation process.
- Characteristics to be measured, documentation generated and acceptance criteria.
- Customer intervention points.
- Qualification of personnel.
- Statutory and regulatory requirements.

Final inspection is performed to ensure conformity of product to the requirements of customer order, specification and PSL internal specifications.

8.3 Control of nonconforming product

All nonconforming products are clearly identified or segregated to prevent further use.

A product is considered to be nonconforming when:

- It is found to be nonconforming with the specified requirements applicable to that item.
- It is found to be nonconforming as a result of a modification to the specified requirement.
- It is found during installation to be nonconforming to the appropriate site requirement.

Nonconformity review and disposition

Nonconformities are formally recorded and reviewed to establish a course of action for rectification.

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Suitability qualified personnel are identified to take decisions and issue rework instructions to ensure that the nonconformity is sentenced.

Typical nonconformity dispositions would include:

- Nonconformity reworked to conform to requirements.
- Accepted under concession by customer, with or without rework.
- Re-assigned for alternative valid application.
- Rejected as unsuitable.

Rework activities are subject to re-inspection to demonstrate conformance to requirements.

Details of nonconformities are recorded in the Nonconformity Register.

Reference:

PP-QA-04; Nonconformities Control, Corrective and Preventive Actions Procedure

8.4 Analysis of data

The periodical review of the nonconformities reporting system and management review data is analysed to determine the effectiveness of the QMS and to identify opportunities for improvement.

Typical aspects considered:

- The suitability, effectiveness and adequacy of the QMS;
- Process and product trends;
- Customer satisfaction and/or dissatisfaction;
- Conformance to customer requirements;
- Supplier performance.

8.5 Improvement

8.5.1 Continual improvement

The effectiveness of the QMS is continually improved through the implementation and use of:

- Quality policy.
- Quality objectives.
- Internal and external audit results.
- Analysis of data.
- Corrective and preventive actions.
- Management review.

8.5.2 Corrective action

A process for reducing or eliminating the causes of nonconformity in order to prevent recurrence has been established and is implemented.

The procedure for the corrective action process defines the requirements as:

- Identification of nonconformities (including customer complaints),
- Determination of the causes of nonconformities,
- Evaluation of the need for actions to ensure that nonconformities do not recur,
- Implementation of any actions determined necessary to ensure that nonconformities do not recur,

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- Recording the results of actions taken.
- Reviewing that corrective action taken is effective and recorded.

Reference:

PP-QA-04; Nonconformities Control, Corrective and Preventive Actions Procedure

8.5.3 Preventive action

A process for eliminating the causes of potential nonconformities in order to prevent their occurrence has been established and is implemented.

QMS records and results from the analysis of data are used as inputs for preventive action, as applicable.

The preventive action process activities include:

- Identification of potential nonconformities and their causes.
- Determination of preventive action needed to eliminate causes of potential nonconformities.
- Determining and ensuring the implementation of preventive action.
- Implementation of preventive action.
- Reviewing that preventive action taken is effective and recorded.

Reference:

PP-QA-04; Nonconformities Control, Corrective and Preventive Actions Procedure