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Introduction

A requirement for certification by Agrément South Africa is that each certificate holder has a quality management system in place that is documented in a quality manual.

The quality management system and the implementation thereof as described in the quality manual must be approved by Agrément South Africa.

Note: No certificate will be granted until a satisfactory quality manual has been received and the quality management system approved by the Board of Agrément South Africa.

Terms and definitions

Management: coordinated activities to direct and control an organisation.

Management system: a system to establish policy and objectives and to achieve those objectives.

Quality: the degree to which a set of inherent characteristics fulfils requirements.

Quality management: coordinated activities to direct and control an organisation with regard to quality.

Quality management system: a management system to direct and control an organisation with regard to quality.

Quality manual: a document specifying the quality management system of an organisation.

Quality policy: the overall intentions and direction of an organisation related to quality, as formally expressed by top management.

General

A quality management system is required to ensure that good-quality materials and satisfactory standards of design, manufacture and, where appropriate, erection are consistently maintained within defined parameters.

When there is employee turnover, the quality manual is an aid to continuity of operations. It helps in managing operations based on rules and not people. It helps to avoid unacceptable changes in practice that sometimes occur as a result of changes in personnel.

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To achieve this, the following guidelines for the preparation of a quality management system have been prepared. The guidelines, which are based on universally accepted principles of quality management, will help certificate holders and applicants to prepare and implement an acceptable quality management system for their Agrément-certificated product or building system.

The quality manuals must deal separately with the procedures for:

- the manufacturing process, and
- the erection or installation process (which must include transportation and storage, if applicable).

It is emphasised that the points mentioned in this document demonstrate only the type of information required, and each certificate holder and applicant must write his own quality manual and checklists, based on the specific requirements of his particular system or product.

The certificate holder must identify the processes and procedures needed for an adequate quality management system, and ensure that operation and control of these processes and procedures are effective and documented in the quality manual.

Several specialist quality-management consultants are active and available in South Africa, and can assist certificate holders in drawing up an appropriate quality manual for Agrément purposes, applicable to their quality management systems and circumstances, should the need for specialist assistance exist.

The quality management system must be planned and drawn up in harmony with a company's existing administrative and technical programmes. It must ensure quality throughout all operations, including design, development, training, incoming materials, processing, manufacturing, testing, quality checks, assembly, maintenance, in-house inspections, corrective actions, filing, packaging, documentation, storage, shipment, erection, etc. Personnel who perform quality-related functions must have sufficient experience and well-defined authority, responsibility, and the freedom to identify, evaluate and rectify problems regarding quality.

A quality manual for manufacturing must be drawn up separately from the quality manual for installation or erection.

In cases where the certificate holder is certified to SANS 9001:2000 (ISO 9001 registered), Agrément South Africa nevertheless requires a quality manual that addresses the Agrément-certificated product or system specifically, and Agrément South Africa reserves the right to inspect and check the quality management system and records, as well as factories and sites.

Implementation

It is essential to the achievement of consistent quality that certain processes during manufacturing and hold-points in the different stages of erection of buildings or the application of building products must be identified. These processes and hold-points must be listed and addressed in the form of checklists in the quality manual as part of the quality management system. Each checklist or item in the checklist must be approved or rejected, and the checklist must be signed by a competent person responsible for quality and for carrying out inspections.

In cases of variance, the requirements of the Agrément certificate and the quality manual shall have precedence over other specifications, codes of practice and product manuals.

Relevant points which are applicable in the specific circumstances must be addressed and documented in the quality manual in such a way as to prove the effectiveness of the certificate holder's management style, and that there is control over all the procedures and processes during manufacturing or erection and use of the Agrément-certificated product or building system.

The certificate holder must include, and elaborate on, the following headings for both the manufacturing and erection/installation processes, where applicable:

- management responsibility
- contract review
- design control
- purchasing
- process control
- inspections, testing and measuring equipment
- control of non-conforming products
- corrective and preventive action
- product identification, control and traceability
- control of records
- handling, storage, packaging and transportation
- training
- internal quality audit.

Aspects to be addressed in the quality manual

An important aspect to keep in mind is that Agrément South Africa cannot know how the certificate holder will control the quality of his Agrément-certificated product or building system, except through his quality manual. Therefore, document all the procedures and control measures necessary for proper quality management. Most of them will already be in place, and must merely be documented in the quality manual.

Guidance on some of the aspects that, if applicable, need to be addressed when you draw up a quality manual in accordance with your quality management system are given below. Add to it if necessary.

Management responsibility

Write your quality policy, which must be concise and convey to employees, customers and others what you do to ensure that an acceptable level of quality is achieved. The quality policy must be relevant to the certificate holder's goals and the expectations and needs of his customers.

Describe how you, the certificate holder, will ensure that your policy is understood, implemented and maintained at all levels of the organisation, including licensees and contractors, appliers, etc. (qualified installers).

Describe who accepts responsibility for ensuring that the quality management system is effective and updated from time to time.

Describe the responsibilities of personnel, or provide an organogram. The responsibility, authority and interrelations of administrative personnel, technical personnel, personnel who manage, supervise, perform and verify work, must be defined and documented.

Agrément South Africa must be advised of every building site where the Agrément certificated building system is used by sending the standard Agrément form **QC/4 Project registration**, to Agrément South Africa. Describe who is responsible to do that.

Top management must provide evidence of its commitment to quality management.

Contract review

Understand needs of the customers, contractors, and all those concerned. Commit to writing:

- a description of what the customer requires
- a description of any amendments
- how satisfactory completion of the work is to be assessed
- how contract amendments are to be properly authorised by the certificate holder and client, and filed.

Describe how the certificate holder will address the above points, and how he (or the licensee or qualified installers) will ensure that he has the ability to meet the defined requirements, and describe a channel and forms for customer feedback, including customer complaints.

Design control

Ensure that the conditions of certification and the contract are strictly complied with by documenting the procedures that cover design, planning, interfaces, etc.

Describe what is to be designed, by whom, and who will supervise or check it when manufactured or built, and how.

Describe how the interfaces and communication between the different groups involved in design and development will be managed and how compliance with the Agrément certificate will be ensured.

Purchasing

The certificate holder must ensure that all the purchased products conform to the requirements specified, and that suppliers are evaluated and selected to supply products or material in accordance with the certificate holder's requirements.

Describe the purchasing process and documentation needed to ensure proper quality of the purchased products. Also describe the inspection or other activities necessary for ensuring that purchased products meet the specified requirements.

Process control

Control procedures and work instructions for all operations, processes and building stages must be planned and documented. These must include drawings, procedures, specifications, site inspections, checklists, tests, final approvals, etc.

Relevant records must be kept and maintained to demonstrate achievement of the required quality.

Make sure relevant documents are available at locations where people carry out quality-related procedures. Documents must include not only documents or data essential to planning, design, packaging, manufacture, inspection, installation and erection of products, but also written procedures which describe how functions must be controlled, who is in control, what is to be controlled, when and where.

All supplies and services must be controlled where it is necessary to assure conformance with specifications.

Different procedures and methods must be described for quality management of the processes of manufacturing and erection or application. How quality management over licensees or qualified installers will be done must also be clearly described.

Manufacturing

Describe the different monitoring points or stages, and the methods and available documents for controlling acceptable quality standards of the manufactured products.

Describe how quality will be assured where manufacturing is contracted out.

Describe the processes of controlling documents, data, quality checks, checklists, etc.

Site control

Describe how the certificate holder will ensure proper quality through all processes during application of his product, or during all the different stages in case of a building system. The quality manual must contain examples of relevant checklists and clearly indicate who has to sign (approve) them.

Describe, if applicable, any hold-points that must be signed before the work can continue, and indicate who will take responsibility and give permission to continue with the next stage by signing the hold-point checklist.

Describe whether any testing is necessary (e.g. of cubes, sand), and how often, who will do it, and how the test results will be treated, whether positive or negative.

Describe the control of checklists and other documents.

Licensees or qualified installers

If the certificate holder plans to make use of licensees or qualified installers, describe the procedures that will be used to evaluate possible licensees, applicators, contractors, etc. before appointment as a licensee or qualified installer.

Describe the procedures to be followed to ensure that the quality of their work will be of a high standard, acceptable and in accordance with the conditions of the Agrément certificate and the quality management system of the certificate holder.

Remember, the certificate holder remains responsible for the final product or building structure, whether manufactured, applied or erected by himself, a licensee or a qualified installer.

Inspections, testing and measuring equipment

Procedures and criteria for inspections and testing during and after production and/or erection must be documented.

This ensures that the final product meets the quality requirements. Records of all testing and inspections must be signed by a designated responsible person and filed.

This applies to purchased goods, different manufacturing processes, the application of products, and the erection of building systems, as well as the final approval of products or building systems.

Describe the general procedures to show that the material, product or building element used has been inspected, or tested and approved as being in accordance with the specifications in the relevant Agrément certificate.

Describe the procedures for ensuring that measuring and testing equipment is controlled and calibrated on a regular basis. Certificates or other proof of calibration must be filed.

Control of non-conforming products

Procedures must be implemented and documented to ensure that a product that does not conform to specifications or requirements is identified and controlled to prevent its unintended use or delivery.

Describe the procedures adopted to identify and prevent non-conforming products from being used again, or to ensure that non-conforming building components are broken down.

Corrective and preventive action

Documented procedures for the prevention and ready detection of discrepancies and for timely and positive preventive or corrective action, must be established and maintained.

Any defects must be found and the cause identified. Records must be produced of final inspections and tests, and records of

complaints from customers must be analysed and appropriate action taken.

Describe the procedures used for implementing corrective or preventive action, as well as the complaint-handling procedures.

Product identification, control and traceability

Where appropriate, documented product identification on an item or lot basis must enable the tracing and recalling of construction elements or products either during the manufacturing and the erection stages, or after being supplied to the customer. An effective filing system must be in place.

Describe the procedures for the identification of individual products or batches and the way this identification must be recorded.

Control of records

All records that demonstrate that the quality management system is operating effectively and that finished products and building systems conform to its specified requirements must be maintained.

The quality manual must include instructions and procedures concerning the records to be controlled.

Records must be filed and indexed for ease of retrieval. The records must remain legible for the required retention period.

Records must be traceable to the product or building system they describe.

Licensees' quality records, and pertinent quality records from qualified installers, must be finally retained by the certificate holder for the entire retention period. The retention period for records must be specified both in the quality manual and on the record form.

Describe the procedures and administration of the filing system that will be implemented and maintained to control quality and other relevant records and documents.

Handling, storage, packaging and transportation

Describe and document the procedures and methods for handling, storage, packaging and transportation. Check periodically for deterioration, shelf life, spoilage, etc.

Appropriate methods for authorising despatch and receipt or acceptance on site must be described.

Training

Only personnel who have participated in the training programme and gained sufficient experience will be regarded as competent persons and may act as supervisors, inspectors, trainers, licensees or qualified installers.

Describe the training process, re-training, certification as a trained user, registration as trained workers, place where training will take place, etc.

Internal quality audit

The certificate holder must conduct regular audits on his factory and building sites, as well as on the factories and building sites of his licensees or qualified installers, in order to ensure good quality of the Agrément-certificated product or building system.

Describe the audit plan and documentation of results and actions, if necessary.

Remember, the certificate holder takes full responsibility for work done, final products, applications and building constructions completed by his licensees, or qualified installers.

Continuing quality management is a condition of certification. Unsatisfactory quality management at any time during the validity of the certificate can result in the certificate being suspended or even cancelled by the Board of Agrément South Africa.

Acknowledgement

In drawing up these guidelines, Agrément South Africa consulted the following publications:

- *Guidelines for the preparation of a quality assurance system for Agrément South Africa*
- *SANS 9001:1994 Quality systems—Model for quality assurance in design, development, production, installation and servicing*
- *SANS 9000:2000 Quality management systems – Fundamentals and vocabulary*
- *SANS 9001:2000 Quality management systems—Requirements*
- *SANS 9004:2000 Quality management systems—Guidelines for performance improvements.*