LIA Laboratory Product Certification System

Issue 5

theLIA Laboratory

Contents

1. INTRODUCTION

This system document sets out the Product Certification activities which are necessary to assess and certify a product against a Technical scheme document (TSD).

The detailed process and procedures for the operation of this system are contained within the LIA Laboratory Quality & Operations Manual (QOM).

Product Certification is defined as a system for determining the conformity of a product with specific requirements through an initial technical conformity assessment, an initial factory production control (or client's laboratory) conformity audit and on-going surveillance (based on the type of certification scheme as specified in ISO/IEC 17067). This surveillance is carried out by the testing of product samples taken from the factory, and/or the open market is undertaken where required by the appropriate Technical Scheme Document. For surveillance assessment of client's laboratory, comparison testing, with comparing results populated by LIA Laboratory and client's laboratory, from testing of LIA Laboratory reference sample(s), is conducted.

The Product Certification system is based on the recognised Product Certification Standard EN ISO 17065 and demonstrates that a product conforms to the requirements of an appropriate British, European or international standard.

A conformity assessment shall include at least one of the following modules (based on type and requirements of certification scheme(s)):

- Initial Type Testing / Calculation / Technical Appraisals.
- Manufacturer's Factory production control process and procedures.
- Client's laboratory control process and procedures.
- Ongoing factory surveillance audit.
- Periodic ongoing product performance tests.

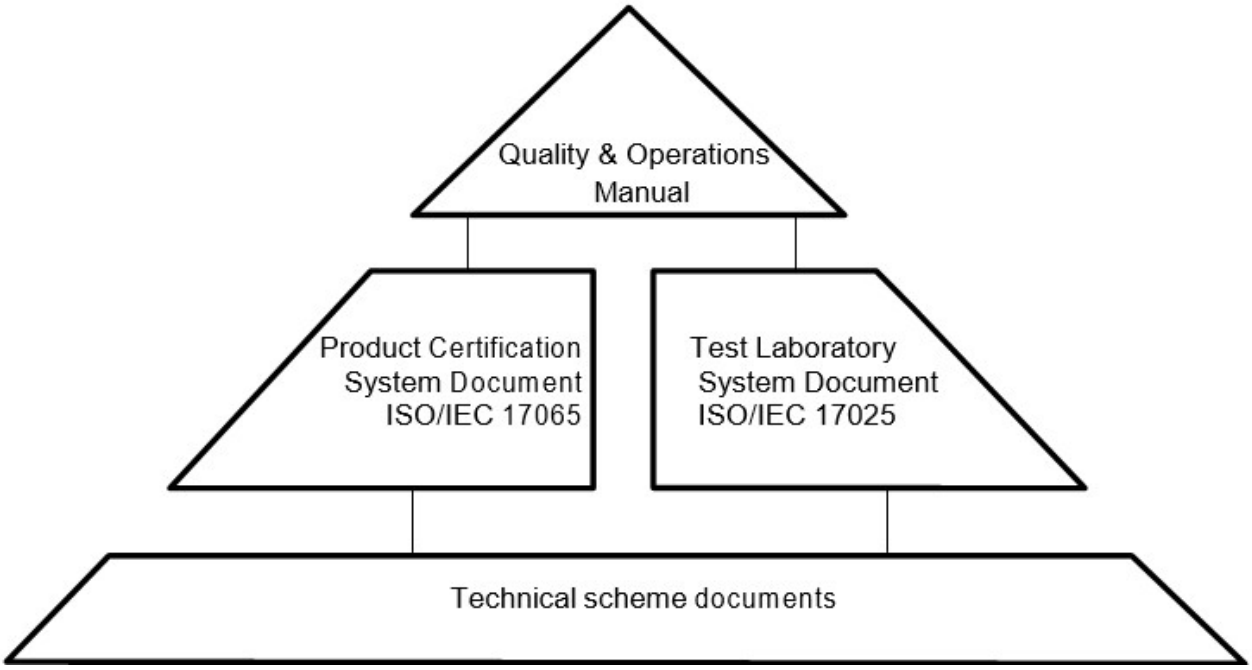
The resultant certification is specific to clearly defined products or systems.

Whilst product certification is a review of the product performance evidence and quality assurance processes, it does not imply, or provide a guarantee of the products performance.

The objectives of the system are:

- To assist Companies to gain market acceptance for their product.
- To provide specifiers, regulators, inspection authorities and retailers with the appropriate information and assurance for them to identify suitable products.
- To enable the Company to differentiate the performance of their products from others in the marketplace.
- To improve the quality and performance of products.
- To demonstrate that products are safe.
- To add value to their product through specification.
- To provide unambiguous evidence of conformity with the Product Standards.

2. DOCUMENTATION HEIRACHY – WITHIN THE PRODUCT CERTIFICATION MANUAL



3. DEFINITIONS & ABBREVIATIONS

The following definitions and abbreviations are used throughout the document. Other definitions are as given in the relevant standards.

Company	Company holding certification with LIA LABORATORY
Factory Production Control (FPC)	The permanent internal control of factory production control processes by means of traceable, documented and controlled procedures and work instructions undertaken by the Company.
Initial Conformity Assessment	Initial evaluation of type test evidence and factory production control procedures by means of document assessment and/ or audit visit.
Initial Type Test (ITT)	The complete set of tests or other process (e.g. Calculation) described in the Technical scheme document, to determine the performance of samples of products representative of the product type, for the mandated characteristics.
Product	A component or system, for which the Company is taking responsibility for conformity.
Product Certification System	The LIA Laboratory System, giving the framework for carrying out product certification.
Product Group/ Sector Group	Products that are grouped as defined within the Construction Products Regulation.
Product Scope	The approved technical detail and product range for each certified product type for a Company
QMS	Quality Management System (e.g. one meeting ISO 9001).
Technical scheme documents (TSD)	Documents which detail certification requirements and, where appropriate, performance criteria for specific products or processes. This could include a national or international standard, approval guideline, or other suitable document as described in ISO guide 7.
Surveillance Conformity Audit	Periodic evaluation of factory production control procedures and product technical assessment by means of an audit visit.
Product Verification Test (PVT)	On-going evaluation of the product by means of an technical re-assessment of the certified product.
Technical Appraisal	A documented review of the test evidence provided in support of the application against the requirements of the Technical scheme document.

Technical scheme documents can be based upon:

- LIA Laboratory specific requirements,
- National standard (e.g. BS, ASTM),
- International Product Standards (ISO, IEC),

- Harmonised European Standards (EN).

4. CORE ELEMENTS OF PRODUCT CERTIFICATION SYSTEM

The Product certification system is applicable to manufactured products, processes or services. Where appropriate, a favourable conformity assessment will lead to the issue of one, or more of the following:

- A LIA Laboratory Certificate,
- A LIA Laboratory Schedule of Certification,
- A LIA Laboratory detailed Product Scope(s),
- A LIA Laboratory test report,
- A license to use the appropriate mark of conformity,
- Certificate is presented in LIA Laboratory online certificates database.

4.1. Initial Conformity Assessment and Certification Process

The aim of the applicant Company's system shall be to demonstrate that the product conforms to the relevant Technical Scheme Document (TSD). The initial conformity assessment is achieved by Initial Type Testing (ITT), Technical conformity assessment of results and Factory Production Control (FPC) or results of Client's laboratory assessment, as required by the Technical Scheme Document.

An initial audit visit will usually be undertaken of the manufacturing facility (or client's laboratory) to ensure that an appropriate FPC system has being implemented correctly prior to admittance. An exception may be made if the Company is transferring certification from another certification body, subject to review and recommendation by a LIA Laboratory Certification Officer.

The Initial Conformity Assessment process consists of the following steps:

Step 1: The client requests LIA Laboratory for certification of the product against appropriate Technical Scheme document.

Step 2: The Company establishes the Product Range.

Step 3: LIA Laboratory undertakes a client's documentation review to ensure that they have the capability to perform the certification. LIA Laboratory will check with the client if they can provided product(s) for initial type testing (as selected by Certification body). If factory process control or client's laboratory process and procedures control is required, LIA Laboratory will request client to provide additional evidence for initial inspection.

Step 4: The Company implements the FPC as detailed in the appropriate Technical scheme document (if FPC is requested by TSD).

Step 5. LIA Laboratory undertakes the necessary ITT (if applicable, based on TSD requirements). In case, the report and/or certificate of other accredited testing house is recognized by LIA Laboratory, thee ITT doesn't have to be conducted at LIA Laboratory (e.g. mutual recognition of IECEE CB test reports and certificates).

Step 6: LIA Laboratory audits the manufacturing facility to assess that the FPC (or client's laboratory process and procedures) has been implemented correctly and that the requirements of the Technical Scheme Document are being complied with.

Step 7: LIA Laboratory verifies the audit report documents, completed non- conformities and any supporting evidence. A LIA Laboratory Certification Manager will consider the recommendation of the technical experts and/ or auditor and will make the certification decision.

Step 8: Subject to a positive decision, LIA Laboratory will issue the company with a Certificate and other appropriate documents as listed in section 4 above.

4.2. Initial Type Testing (ITT)

The product(s) as manufactured must have ITT reports and undergo a Technical Appraisal to demonstrate that they meet the technical requirements of the Technical Scheme Documents and that the performance declarations represent the true behaviour of the product. ITT may take the form of:

- Testing,
- Calculation,
- Classification without the need for further testing.

Typically ITT will relate to some or all of the following requirements:

- Safety,
- Photometric,
- Performance,
- Life testing.

The relevance of these requirements to a particular product will be detailed in the relevant Technical Scheme Document. The results of the ITT conformity assessment are summarised in on the certificate. Any resultant performance values or performance categories are also detailed in the certificate.

4.2.1. Identifying Products to Test and the Product Range

Where necessary, and in order to avoid testing every single product which is not usually justified or necessary, LIA Laboratory will determine which products or aspects are to be assessed.

The methodology for the assessment will be to isolate the parameters within the product range which will affect performance. From a consideration of the various parameters, products will be grouped into ‘families’ where the performance is basically similar and from each of those ‘families’, the product perceived to be most vulnerable will be selected for test. It is assumed that if the most vulnerable case passes the test requirements, the other more robust designs within that ‘family’ can also be assumed to meet the test requirements. The selection decisions will be recorded.

When selecting type test sample(s) from a range of products of similar construction for type test verification, the product(s) chosen shall be those which represent the most unfavourable combination of components and housing.

The range of products shall be manufactured by the same manufacturer, under the same quality assurance system. The type variants of the range should be essentially identical with the respect to materials used, components and technology applied.

Additionally, for identification of samples for assessment, the guidance provided by relevant safety standard shall be taken into account (e.g. Annex S of BS EN 60598-1).

The differences to consider during evaluation of the family variants can be:

- Construction,
- Critical components,
- Shape, size and weight,
- Ratings,
- Means of connection to mains supply,
- Availability for indoor and/or outdoor use,
- IP rating,
- IK rating,
- Electrical Class of protection,
- Etc.

4.2.2. Acceptable Test Evidence

Testing may be carried out by LIA Laboratory, or the results of testing carried out by other competent bodies assessed against the requirements of the Technical Scheme Document. LIA Laboratory reserves the right to determine the competency of external laboratories and will only accept data at their discretion. The procedure for this is defined within the Quality and Operations manual.

The required ITT for each scheme is defined within the appropriate Technical Scheme.

ITT can be used by the Company that has been supplied by a system supplier who provides the test evidence and manufacturing instructions. There needs to be a written agreement between the company and the system supplier which allows the Company to use the system supplier's intellectual property. The Company must fully understand the manufacturing process and any limitation defined by the scope of the certificate.

4.2.3. Sampling

For ITT the sampling process should ensure that specimens are representative of the product produced. The specimens could be from normal production or made specifically for the ITT, (with providing evidence/confirmation that special sample was prepared in accordance with the typical manufacturing process used).

A sample will be representative of the Company's Product Scope. The frequency of sampling will be based on the number of products and number of performance characteristics incorporated in the certification. It's solely LIA Laboratory certification body representative decision to identify samples(s) for ITT.

Samples for PVT shall be identified by certification body representative and then samples shall be selected randomly by LIA Laboratory representative during the factory inspection (or from the market, as per TSD) directly from production line, from the Company's warehouse or from stock either at the premises of a wholesaler or agent. The products will be marked in a unique and non-removable way and will be verified by LIA Laboratory prior to the test. Safe delivery of the products to the nominated test laboratory shall be the responsibility of the Company.

LIA Laboratory certification body has absolute discretion over the acceptance of initial type test evidence in support of the Product Certification Technical Scheme Document.

4.3 Factory production control (FPC) / Quality management system

The manufacture of the products shall be conducted under the control of an appropriate Factory Production Control system. In some cases this may form part of the Company's Quality Management System. However it is still necessary to demonstrate that the relevant parts of the QMS meet the requirements of the Technical Scheme Document and are specific to the products covered by the Product Scope.

The Factory Production Control system shall be documented in a systematic manner in the form of written policies and procedures. The production control system documentation shall ensure a common understanding of quality assurance and enable the achievement of the required product characteristics. The FPC system should be appropriate to the product and manufacturing process. Typically a factory production control system should address the following:

- Tasks and responsibilities of the FPC organisation defined and documented,
- Measures to identify and record any instances of non-conformity,
- Include procedures to correct instances of non-conformity
- Meet the requirements of the relevant Technical scheme document
- Establish a relationship between ITT values and FPC,
- Product manufacturing process,
- Record results of these operations,
- Maintenance and calibration of machinery
- A procedure for dealing with customers complaints.

4.3.1. Factory audit

The aim of the LIA Laboratory FPC audit is to investigate the effectiveness of the FPC system and its implementation.

The QMS - FPC shall be subject to periodic audit in accordance with the Technical Scheme Document. Any non-conformity raised during an initial audit must be responded to and closed prior to certification being granted by LIA Laboratory. In addition to the factory production control documentation any additional supporting documentation required will be detailed in the Technical Scheme Document and will be reviewed during the audit.

4.3.2 Customer facility audit (service certification)

The aim of the LIA Laboratory's customer facility audit is to investigate the effectiveness of the customer's facility(ies), systems and their implementation.

The customer's facility shall be subjected to periodic audits in accordance with the relevant Technical Scheme Document (LIA Laboratory services certification schemes). Any non-conformity raised during an initial audit must be responded to and closed prior to certification being granted by the LIA Laboratory. In addition to the customer facility control documentation, any additional supporting documentation required will be detailed in the relevant Technical Scheme Document and will be reviewed during the audit.

5. CERTIFICATION PROCESS

5.1 Contract review process

Before proceeding with the quotation proposal, LIA Laboratory will review the enquiry from the client to confirm:

- The requirements for certification are clearly defined, documented and understood,
- That client can provide sufficient evidence to support certification process (e.g. product datasheet, product code explanation, list of alternative family variants, list of national differences, etc.)
- Filled Application form (SF09-01) is available,
- That LIA Laboratory has the necessary logistical, technical and auditing resource to undertake the certification activity,
- If applicable, LIA Laboratory has to check for outsourcing testing or certification services. If there is decision to outsource any service, the client shall be always informed for his confirmation.

Once contract review is finished and clients agree with proposed quotation and testing and certification plan, LIA Laboratory certification body shall prepare detailed certification plan (TS-1) and testing plan (TS-2).

5.1.1 Post Audit Review

Upon completion of the audit report by the auditor, including review and closure of any non-conformances following submission of evidence from the customer, the auditor shall forward the audit report to the LIA Laboratory certification by post or email (or save all evidence provided into certification folder).

Upon receipt the certification administration team will open the email/file and launch the documents.

An administrative review shall be conducted to ensure the following:

1) Ensure that all the relevant documentation is enclosed in the file for review.
2) Check that the audit team are competent for the task.
3) Ensure that audit documentation has been translated into English, where necessary.
4) Once all correct documentation has been received certification evaluation shall be prepared.
5) Review the certification documentation to ensure that the content meets the requirements of the Technical Scheme Document/Standard.
6) Comments/findings from the technical review will be recorded in the 'COMMENTS' section of form SF10A-10, SF10A-11 or reported in the Evaluation report.

Where documentation is found to be missing/incorrect, send request to the Auditor / International local office for corrective action. Should any open non-conformances be discovered, or supporting evidence is missing then the relevant auditor shall be contacted and clarification requested.

Audit reports shall be reviewed by a competent person to check the assessment has been carried out to the relevant scheme document and all the necessary parts are present. The competent person carrying out the review shall not have been involved in the assessment process.

5.1.2 Post Certification Decision Review

Upon completion of the review, including review and closure of any non-conformances following submission of evidence from the customer, the reviewer shall forward the report to the LIA Laboratory certification by post or email (or save all evidence provided into certification folder).

Upon receipt the certification administration team will open the email/file and launch the documents.

An administrative review shall be conducted to ensure the following:

7) Ensure that all the relevant documentation is enclosed in the file for review.
8) Check that the audit team are competent for the task.
9) Ensure that audit documentation has been translated into English, where necessary.
10) Once all correct documentation has been received certification evaluation shall be prepared.
11) Review the certification documentation to ensure that the content meets the requirements of the Technical Scheme Document/Standard.
12) Comments/findings from the technical review will be recorded in the 'COMMENTS' section of form SF10A-10, SF10A-11 or reported in the Evaluation report.

Where documentation is found to be missing/incorrect, send request to the reviewer for corrective action. Should any open non-conformances be discovered, or supporting evidence is missing then the relevant auditor shall be contacted and clarification requested.

Reports shall be reviewed by a competent person to check the assessment has been carried out to the relevant scheme document and all the necessary parts are present. The competent person carrying out the review shall not have been involved in the assessment process.

5.2 Product scope

A Product Scope may be produced and it may include reference to:

- the test standards,
- Test report and/ or Technical Appraisal reference numbers associated with the Technical scheme document,
- Product range and product families,
- Specification of critical components,

Only products/processes detailed within the scope/schedule of certification and in the case of product, manufactured at the named locations, can be covered by LIA Laboratory's certification.

5.3 Certification Evaluation, Certification Decision, Technical Appraisal, Supporting Evidence

The certification body representative shall evaluate the audit report and Technical Appraisal of the ITT to determine that the product conforms with the Technical scheme document. The Audit Report and Technical Appraisal form the basis for the certification decision.

When a positive certification decision has been made a Certificate and appropriate documents listed in section 4 above will be completed and sent to the Company.

5.4 Certificate

The certificate is issued to the Company upon completion of certification. It will identify at least the following (based on requirements of TSD):

- Certified Company name and address,
- Manufacturer address,

- The scheme name and relevant technical standards,
- The Company's unique certification number.
- Technical details of product(s).

Once certificate is issued, information about certificate will be uploaded into LIA Laboratory online certificates database, where validity of the certificate can be checked. The absence of any products listed on certificate but not on the LIA Laboratory certification website indicates that certification of that product is no longer valid.

The certificate is valid for a maximum of 3 years from date of approval, unless otherwise stated in the relevant Technical Scheme Document. Providing all scheme requirements have been maintained by the client, the certificate will be renewed from date of expiry of the previous certificate. A certificate can only be issued providing a successful audit has taken place within the preceding twelve months.

5.5 Certification logo

After successful certification, client shall be awarded with LIA Laboratory logo (based on requirements of TSD). All LIA Laboratory and certification logos shall be used according to relevant product certification system requirements as specified in the LIA Laboratory Logo Usage Policy.

The marking proposed by the company for each luminaire has to be approved by LIA Laboratory.

5.6 Ongoing Surveillance Audit

Once conformity with the Technical scheme document has been confirmed and the certificate and scope issued, the client will be subject to periodic surveillance audits to ensure continued conformity with the Technical Scheme Document (based on the type of certification scheme and requirements of TSD). This will address both FPC and the extent of certification. The surveillance audit cycle will commence from the anniversary of the initial audit visit.

The Company will have a minimum of one audit of the factory annually unless the Technical scheme document states a different interval. These visits will be conducted in a similar manner to the initial audit and subject to completion of any non–conformities raised.

5.7 Product Verification Test

Ongoing product conformity verification, where required by the Technical scheme document, will take the form of audit testing. The purpose of the verification is to confirm that the certified product continues to meet the certification requirements.

Where the certification covers a range of products it will normally only be necessary to conduct PVT assessment with a limited number of products from each manufacturing site. The specification of audit test samples will be determined by LIA Laboratory each year. Specification of samples selection is defined in TSD.

In the event of an unsatisfactory audit test result the cause of the failure or reduced performance must be identified by the client and resolved in line with the LIA Laboratory non-conformity procedure.

5.8 Re-assessment Surveillance Conformity Audit

A re-assessment audit will be taken at the end of the certification cycle (usually 3 years). A Re-assessment Surveillance Conformity Audit is the same as the Surveillance Conformity Audit except that after the close out of any non-conformities a new certificate will be issued with a new expiry date and the certification cycle will be re-started.

The certification body shall be aware of re-certification intervals. The re-certification data shall be recorded in CCR-1 spreadsheet (refer to each individual certification scheme tab to check for recertification date).

Certification body shall schedule re-certification audits ahead of time to align with re-certification date (this includes time necessary to close findings and complete product verification tests).

5.9 Changes to extent of certification

A client can have the extent of its certification reduced at its own request or due to its failure to comply with one or more elements of the scheme requirements.

If a client wants to increase the extent of its certification, then it needs to either own or have permission to use any additional ITT.

If a company undertakes a test to extend its ITT and submits all the necessary evidence for a new product range or extension of scope, or is using ITT prepared by other testing laboratory, then an initial conformity audit may be required as decided by LIA Laboratory.

5.10 Provisional certification

In the circumstances where a certificate is not issued in due time (see point 5.8), the certification body can issue provisional certificate to cover the time necessary to recertify the product. This is to cover any product verification tests or to give time to client or certification body to close any findings.

The provisional certificate validity is maximum six months. Provisional certificate is provided in discretion of the certification body.

6. LIA LABORATORY TECHNICAL RESOURCES, PROCESS AND PROCEDURES

6.1 Technical resources

Sufficient technical resource shall be maintained at LIA Laboratory to manage the System and Schemes.

All certification decisions will be made by LIA Laboratory certification body.

Technical expertise will be maintained either internally, or within partner organisations with recognised technical competence. All resources must be compliant with the LIA Laboratory confidentiality and impartiality agreement.

All auditors must be approved for the appropriate scheme prior to undertaking an audit in accordance with LIA Laboratory Quality & Operations Manual.

6.2 Demonstration of competence

All personnel involved in the certification process shall have demonstrated competency in carrying out the activity being undertaken.

7. PRODUCT IDENTIFICATION AND USE OF THE LIA LABORATORY LOGOS

The client will operate a traceability system which identifies the products during production. It is a requirement that all products covered under the Product Certification System are identified as being approved by LIA Laboratory as required by each Technical Scheme Document.

8. CUSTOMER FEEDBACK

Any complaint received by LIA Laboratory will be handled in accordance with LIA Laboratory system procedure. Customer complaints procedure is defined in LIA Laboratory Quality & Operations Manual.

9. WITHDRAWAL & SUSPENSION OF CERTIFICATION

It is the intention of the Laboratory that in proven cases of ongoing non-conformity, then certification shall either, be reduced in scope, suspended, or withdrawn. It may also be terminated at the request of the customer.

The customer shall be given every opportunity to avoid reduction in scope, suspension or withdrawal. The process of certificate withdrawal or suspension is specified in Quality and Operations manual (section 7.11.B Termination, reduction, suspension of withdrawal of certification).

10. WITHDRAWAL & SUSPENSION OF A TECHNICAL SCHEME DOCUMENT

LIA Laboratory reserves the right to withdraw a LIA Laboratory Technical Scheme Document at any point in time without consultation. Where a document is withdrawn a 12 month notice period will apply to all clients certified against it.

After the 12 month period the certification project(s) issued against the technical scheme document will no longer be active, and no longer be supported by LIA Laboratory. On withdrawal of the Technical Scheme Document the certificate holder must immediately cease to promote or claim compliance. Any reference to the certification in promotional literature (e.g. leaflets, brochures, website, etc.) must be immediately removed.

11. NORMATIVE REFERENCES

ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories
ISO/IEC 17065	Conformity assessment - Requirements for bodies certifying products, processes and services
ISO/IEC 17021	Conformity assessment - Requirements for bodies providing audit and certification of management systems
ISO/IEC 17067	Conformity assessment — Fundamentals of product certification and guidelines for product certification schemes
BS EN ISO 9001	Quality management systems - Requirements