# IECQ 03-3-1

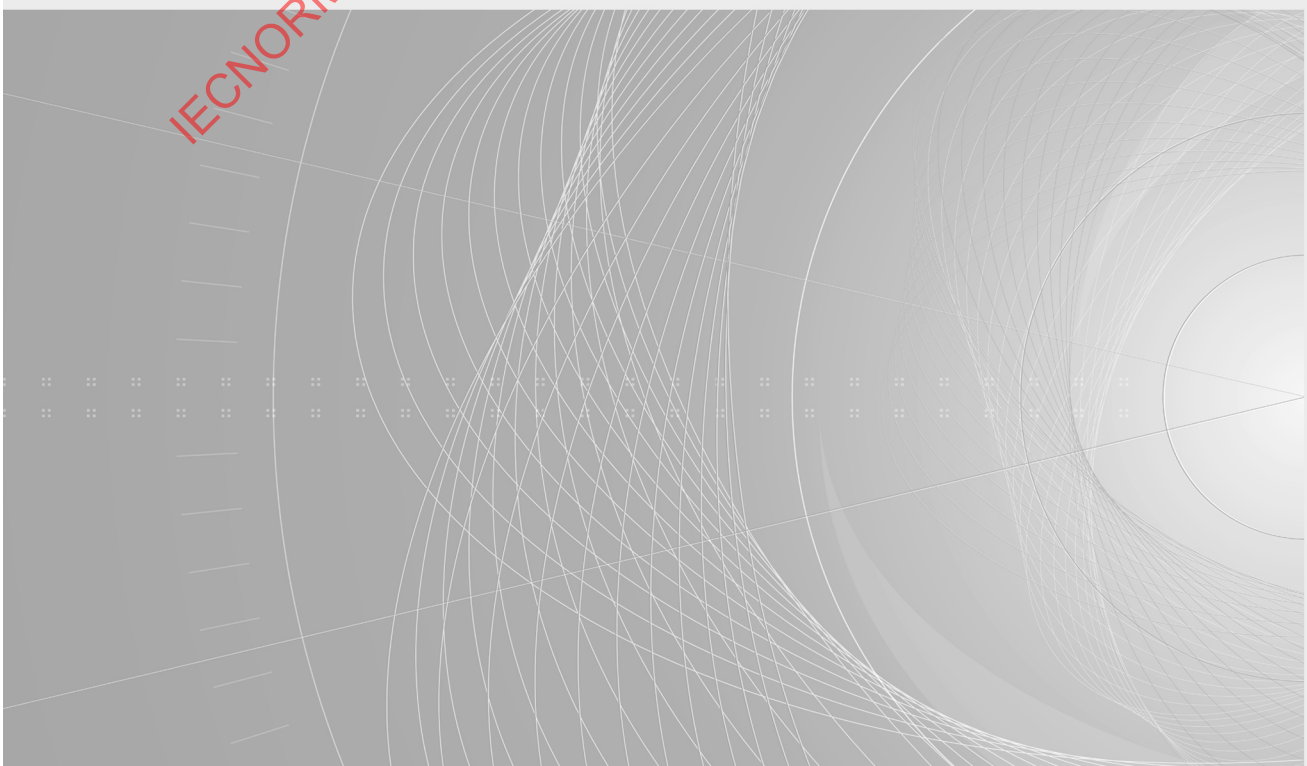
Edition 1.0 2013-02

# IECQ PUBLICATION



## IEC Quality Assessment System for Electronic Components (IECQ System)

## Rules of Procedure –
## Part 3-1: IECQ Approved Component Products, Related Materials & Assemblies Scheme, IECQ Approved Component –Technology Certification (IECQ AC-TC)



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE ZZ

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

# Rules of Procedure – Part 3-1: IECQ Approved Component Products, Related Materials & Assemblies Scheme, IECQ Approved Component – Technology Certification (IECQ AC-TC)

## FOREWORD

This publication has been prepared by the Management Committee (MC) of the IECQ.

This publication is directly related to Publication IECQ 01 containing the Basic Rules of the IECQ System.

This part IECQ 03-3-1 sets out the requirements for IECQ Approved Component – Technology Certification previously contained in IECQ QC001002-3_2005 section 6.

The text of this publication is based on the following documents:

| Document | Report on MC Consultation |
|---|---|
| IECQ MC/250/CA | IECQ MC/255A/R |

Full information on the approval by the MC of this publication can be found in the report indicated in the above table.

# INTRODUCTION

In support of the previously operated scheme Technology Approval the following section has been provided to high light the particular requirements for its implementation under this IECQ Approved Component Scheme of the IECQ System as IECQ Approved Component – Technology Certification.

Technology Certification is a method of certifying a complete technological process (design, process realization, product manufacture, test and shipment) covering the certification aspects common to all products as determined by the technology under consideration. It extends the existing suite of IECQ certification concepts by adding the following principles as mandatory aspects of Technology Certification:

- the foundation of Technology Certification is a formal system for quality management, within the organization. This requires that all employees are actively involved in the commitment to quality;
- the use of in-process control methods (of which Statistical Process Control (SPC) is an example) as defined in a Technology Approval Schedule (TAS) and tools to demonstrate adequate control of processes and products. A programme shall be in operation at the initial certification to this programme;
- continuous quality improvement strategy and its demonstration;
- monitoring the overall technologies and operations associated with the design and manufacturing processes as well as the components themselves;
- procedural flexibility due to the certification being based on a company's own quality assurance management system and market sector requirements;
- the acceptance of an organization's operational documentation to provide a means for rapid certification or extension of certification.

# Rules of Procedure – Part 3-1: IECQ Approved Component Products, Related Materials & Assemblies Scheme, IECQ Approved Component – Technology Certification (IECQ AC-TC)

## 1 Scope

This publication contains the Rules of Procedure of the Technology Certification of the IECQ, hereinafter referred to as the "Rules", for the Approved Component – Technology Certification (IECQ AC-TC).

This IECQ Approved Component – Technology Certification Rules of Procedure provides the requirements specific to this category of the IECQ Approved Component scheme and is to be used in conjunction with applicable IECQ System management Basic Rules (IECQ 01), General Rules of Procedures (IECQ 03-1), Approved Component Rules of Procedure (IECQ 03-3) and Operational Documents (ODs).



## 2 Normative references

The following publications contain provisions, which, through reference in this text, constitute provisions of these Rules. At the time of publication, the editions indicated were valid. The IECQ Management Committee shall decide the timetable for the introduction of revised editions of the publications.

IECQ 01, *IEC Quality Assessment System for Electronic Components (IECQ System) – Basic Rules*

IECQ 02, *General Requirements for the Acceptance of IECQ Certification Bodies into the IECQ System*

IECQ 03-1, *General Requirements for all IECQ Schemes*

IECQ 03-3, *IECQ Approved Component Products, Related Materials & Assemblies Scheme*

ISO 9001, *Quality management systems – Requirements*

ISO/IEC 17000, *Conformity assessment – Vocabulary and general principles*

ISO/IEC 17021, *Conformity assessment – Requirements for bodies providing audit and certification of management systems*

ISO/IEC 17050-1, *Conformity assessment — Supplier's declaration of conformity — Part 1: General requirements*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO/IEC Guide 65, *General requirements for bodies operating product certification systems*

In the event of conflict between the provisions of this document and any other directly or indirectly referenced provisions, the provisions of this document shall take precedence.

## 3 Terms and Definitions

The terms and definitions specific to this publication are as follows:

**3.1**
**Control site**
the location of the manufacturer having overall responsibility for operation of the System and all quality related matters within the certified organization, and in which the manufacturer is capable of operating at least one of the main technical processes within the scope of the Technology Approval

**3.2**
**Quality indicator**
a statistical measure of the relative quality of a process

**3.3**
**Test vehicle**
the generic term for a product-related device or test structure used to verify, analyze or monitor engineering processes or electrical/physical features

**3.4**
**Critical process step**
a step which has a major influence on the outcome of the process

**3.5**
**Technology Approval Declaration Document (TADD)**
a document describing the manufacturer's organization and scope of technology. The content of a TADD is fully described in 7.2

**3.6**
**Technology Approval Schedule (TAS)**
a technology dependent document, written in accordance with the requirements of QC 210000 describing the minimum declarations, technical requirements and controls to be demonstrated and maintained under a manufacturer's IECQ Approved Technology Certification

**3.7**
**Technology Review Board (TRB)**
a board, established to control, stabilise, monitor and improve the quality and reliability of products and services, comprising representatives from key departments (for example, marketing, sales, design, technology development, manufacture, testing and quality assurance)

**3.8**
**Contractor Manufacturer Board (CMB)**
a board comprising one or more representatives from each company participating in an IECQ Approved Component – Technology Certification, established to focus communication and control the interface between companies

## 4 Governing of the IECQ Scheme

Subclause 4 of IECQ 03-3 applies.

## 5 Principles of IECQ Approved Component – Technology Certification

**IECQ Approved Component – Technology Certification**

Subclause 5 of IECQ 03-3 applies except as follows:

The IECQ Approved Component Scheme provides the basis for the Technology Certification and the means for organizations to obtain an IECQ Approved Component – Technology Certificate that is intended to provide the international market that items produced under the IECQ Approved Component – Technology Certification comply with the organizations TADD and TAS by way of the organization having implemented processes in accordance with the formal technical and quality management system requirements. This is ensured through independent conformity assessment and ongoing surveillance by an IECQ CB of an organization's business and quality management systems and site assessments for compliance with the establishment and implementation of system procedures within the organization's business and quality management systems.

**5.1** The IECQ Approved Component – Technology Certification bases its requirements for the conformity of the organization on those of the ISO 9001. This document needs to be read in conjunction with ISO 9001.

**5.2** The process of the IECQ Approved Component – Technology Certification shall be based on the TAS and not on a generic specification.

**5.3** Where operating from more than one location design, manufacture, screening and test may take place in any geographical location provided that the IECQ AC-TC is managed from an organization holding an IECQ Approved Component or Process Certification for that purpose and they shall act as the Control Site.

**5.4** The Control Site shall have local capability to perform at least one of the main technical processes, as defined in the TAS, within the scope of the IECQ AC-TC.

**5.5** The organization shall apply in accordance with IECQ 03-1 clause 9.3 to the IECQ CB, stating the scope of the proposed IECQ AC-TC, as defined in the appropriate TAS, or draft TAS, and clearly defining the activities and technologies for which the certification is sought.

## 6 Organization structure

The Organization (Client/Applicant/Certificate Holder).

### 6.1 Management responsibility

An organization shall have the responsibilities, specified in Subclause 7.2.3 of IECQ 03-1 and the following:

a) shall provide a statement of his corporate management's commitment to continuous quality improvement and customer satisfaction. This statement shall be supported by evidence of its implementation. The statement shall be included in the organization's Technology Approval Declaration Document (TADD) (see 7.2);

b) shall maintain and document a QMS (Quality Management System) in accordance with the requirements of IECQ Approved Component Scheme Rules of Procedure and supporting IECQ Operations Documents and make available copies of that documented QMS should the IECQ CB require it for certification purposes;

c) shall ensure the Designated Management Representative (DMR) has the following additional responsibilities to those defined in IECQ 03-1 Annex A:

- The DMR shall be responsible, on behalf of the manufacturer's corporate management, for providing leadership and facilitating progress in all sites covered by the Approved Technical Certification.
- The DMR shall ensure that corporate management policy relevant to the Approved Technical Certification is reviewed and revalidated internally on an annual basis, as a minimum.
- The DMR, as a part of the management structure, shall be a member of the TRB.

d) shall facilitate any arrangement allowing the IECQ CB to conduct assessment at subcontractors involved in the design, manufacturing, testing of the product;

e) shall maintain a company register of the detailed specifications used under their IECQ AC-TC. This register shall be made available to the IECQ CB.

### 6.2 Operational infrastructure

In addition to the organization's Quality Manual, as covered by IECQ 03-1 clause 9.2.3, the TADD shall define their operational infrastructure (if not already contained within the manufacturer's Quality Manual). This infrastructure shall include

#### 6.2.1 Technology Review Board (TRB)

The organization at the Control Site shall establish a declared Technology Review Board (TRB) and a Contractor Manufacturer Board (CMB) or equivalent organizations.

a) a TRB or equivalent organization shall be established to control, stabilise, monitor and improve the certified manufacturing lines;

b) the TRB is responsible for the overall control of the IECQ AC-TC, and for conducting periodic systems reviews;

c) the TRB shall have procedures in place for assessing the current status of the quality and reliability of components;

d) the TRB is responsible for the development of an overall quality plan for IECQ AC-TC and shall consist of representatives of all functions described in that plan such as marketing, sales, design, technology development, manufacture, testing and quality assurance, as applicable;

e) In the case of several companies involved in a single IECQ AC-TC, a CMB or equivalent organization shall be established to control the interface(s) between the companies. The CMB shall consist of at least one representative from each company and be responsible for the overall control of the interface(s).

#### 6.2.2 Technical decision-making

The manufacturer at the Control Site shall declare the procedures by which decisions are made on all matters related to the IECQ AC-TC.

## 7 IECQ Approved Technology Certification, Documentation Requirements

### 7.1 IECQ Approved Component – Technology Certificate for an Organization

#### 7.1.1 IECQ Approved Component – Technology Certificate Content

The IECQ Approved Component – Technology Certificate as registered in the IECQ On-Line Certificate System shall have the listed content as detailed in Subclause 8.1.4 of IECQ 03-1 and the following as a minimum:

a) Clear unambiguous general description for the technology to be covered by the IECQ AC-TC shall be provided in the “Scope of Activity(ies)” field on the certificate;

b) Clear unambiguous detailed abstract of the Scope of Activity(ies) of the IECQ AC-TC, including the product/component or range of products/components parameters, related materials &/or assemblies and type reference(s) including related technologies, materials and style), shall be attached as an “Attached Schedule” to the certificate utilizing the IECQ Templates;

c) Individual components certified under IECQ AC-TC as listed in the register of components referenced in the TADD (see 7.2) shall be listed in the abstract, except those defined in a Customer Detail Specifications (CDS) where the customer does not wish it. The component identity shall include the data reference and revision status as declared in 7.4;

d) Clear unambiguous detailed reference to the relevant TADD and TAS’s against which the organization has demonstrated compliance, including Revision & Date of Revision shall be included in the “Scope of Activities” field.

### 7.2 Technology Approval Declaration Document (TADD)

The organization shall generate a TADD as part of their application for IECQ AC-TC. The TADD shall relate to the entire scope of the proposed certification and be fully maintained during the life of the approval.

The organization shall produce a TADD, which includes the information detailed in the following items.

NOTE It is not intended that the TADD should duplicate existing company documentation. It is therefore permissible for the TADD to make reference to existing documents under each individual clause heading.

a) management responsibility (includes management commitment and operational infrastructure);

b) overall quality plan (includes quality improvement plan and statistical methods of evaluation);

c) description of technology and processes;

d) definitions of the relevant sites and operations;

e) process capability plan;

f) test vehicles;

g) internal audit plan;

h) demonstration plan;

i) management of non-conforming products or activities;

j) new product introduction programme;

k) interrelationship with subcontractors;

l) company definitions and symbols;

m) reference to the register of components covered by IECQ AC-TC.

#### 7.2.1 Purpose of the TADD

An organization seeking IECQ AC-TC shall prepare a declaration document, which is known as a TADD. The purpose of a TADD is to provide a clear description of those parts of the organization's organization (sites, operations and products), which are to be the subject of a Certification. To achieve this, the TADD shall comply with 6.1 a) and the relevant items of 7.2.

### 7.2.2 General requirements

The TADD should be prepared in loose-leaf form, with each section beginning on a new page and with section titles and sequence as given in 7.3.

The TADD shall be given a document identity within the organization's system and shall indicate its issue number and state of amendment.

Draft issues of the TADD shall be given alphabetical issue references until accepted by the IECQ CB. It shall then be raised to Issue 1 at the stage at which the certification is recommended.

Amendments shall not be made in hand-written form. When changes are required, new pages showing the relevant amendment number shall be issued.

The TADD shall be raised in issue number when a change is made. In addition the organization has the option to give an issue status to each page or to each section. Where the scope of technology is extensive and the description is complicated, it is usually advantageous to give each page a discrete issue status.

There shall be a means for recording that amendments have been incorporated and a means for summarizing the nature or purpose of the amendments. This shall be subject to the change note procedures laid down in the organization's Quality Manual. There shall be an index or 'contents list'. This may conveniently show the issue status of each section, or page, as the case may be.

Individual sections may then be written as single volumes, making it easier for technical or editorial amendments and change of issue status. The TADD can be subdivided in a generic TADD covering all common items and task specific TADDs for each main technical process. Irrespective of the format of the TADD, it shall include as its initial element a covering document expressing the management's commitment to quality. This may be supplemented by an introduction to the company and a résumé of the sections of the TADD.

## 7.3 Content of the TADD

### 7.3.1 Introductory pages

**Title page:** document identity and issue, organization's name, address, telephone, e-mail and telefax numbers etc. Authorization by the Designated Management Representative (DMR).

**Distribution list:** this lists the registered holders of copies of the TADD. Copies shall be identified in respect of each recipient.

**Amendment record:** this is the facility for recording the incorporation of amendments authorized by the DMR.

**List of amendments:** this provides an indication of the purpose or nature of each amendment. It may be convenient to combine this function with the amendment record mentioned above.

**Contents list:** this shall give the sections of the TADD in sequence. It may be convenient to combine this function with the issue status of each page (or section).

If there is a need to draw upon documentation contained within the Quality Manual, applicable specifications or any controlled "in-house" documentation, this may be done by making reference to it, or by its inclusion.

### 7.3.2 Main text: The following subjects shall be addressed in the main text of the TADD

#### 7.3.2.1 Management responsibility

a) Management commitment to quality. The TADD shall contain the management's statement on its commitment to quality, continuous quality improvement and customer satisfaction.

b) Management structure

   i) TRB or equivalent organization. The organization, responsibilities and procedures of the TRB shall be declared.

   ii) CMB or equivalent organization. In the case of several companies involved in a single IECQ AC-TC, the organization, responsibilities and procedures of the CMB shall be declared.

c) Additional responsibilities of the DMR. The TADD shall state any responsibilities of the DMR which are in addition to those required by clause 6.1 c). The relationship of the DMR in relation to the management structure (including TRB and CMB) shall be declared.

d) Technical decision making. The TADD shall declare the procedures by which decisions are made on all matters relating to the IECQ AC-TC. Where appropriate, these may be declared during the description of the TRB, the CMB or the responsibilities of the DMR.

#### 7.3.2.2 Overall quality plan

The overall quality plan shall consist of the following activities as a minimum:

**Quality improvement programme**: The organization shall describe in the TADD a Quality Improvement Programme, starting from a defined base that shall indicate the present situation. The programme shall provide for the maintenance of records of comparative quality performance for all technologies covered by the TADD. Measurement of improvement shall be based on the quality indicators that are used to support the certification. The programme shall also contain training elements designed to support the quality improvement programme;

NOTE Quality improvement goals are an essential feature of any improvement plan. The TADD should describe the corporate and operational aims and explain how specific goals are set at operational levels.

**Failure analysis programme**: This programme outlines the procedures that the organization self-imposes to test and analyze failed components to determine each failure category from all stages of manufacturing and the field, and take corrective action based on the findings;

**SPC plan**: The TADD shall describe the SPC and/or other statistically valid methods used by the organization, for example design of experiments, mathematical modelling and correlation;

**Corrective action plan**: This plan shall describe the specific steps followed by the organization to correct any process which is out of control or found to be defective;

**Change control plan**: The plan addressing the process by which an organization handles changes to the technology;

**Test vehicle assessment**: The frequency, testing methods and criteria for evaluation including correlation of test structure and product, are to be determined by the TRB. The organization's test vehicles evaluation plan shall be described in the relevant TAS.

#### 7.3.2.3 Description of technology and processes

The organization shall include in their TADD a description of all technologies, processes and products included in the certification. This shall address basic technologies, process descriptions, critical process steps and/or key parameters, design rules, materials and related facilities etc. The minimum technical requirements for a specific technology are detailed in the relevant TAS.

#### 7.3.2.4 Definitions of relevant sites and operations

The TADD shall identify the location(s) of the control site, manufacturing sites, their organization, responsibilities and the operations being performed. All the major manufacturing stages shall be covered including clear identification of any operations which are subcontracted or carried out by 'Specialist contractors'. Only site(s) and operations that are required for the declared technologies should be included.

#### 7.3.2.5 Process capability plan

The organization shall describe in detail his plan for the verification and demonstration of the capability of all manufacturing processes.

#### 7.3.2.6 Test vehicles

The TADD shall describe the test vehicles, associated tests, software and other tools that are used on a regular basis to demonstrate design and manufacturing process capability.

#### 7.3.2.7 Internal audit programme

The organization shall define his internal audit programme.

#### 7.3.2.8 Demonstration plan

The organization shall describe his plan to demonstrate that all applicable manufacturing routes operate correctly and that the designed and manufactured component fulfils the specification as well as quality and reliability objectives.

#### 7.3.2.9 Management of non-conforming products or activities

NOTE The term “activities” covers administration, systems and manufacturing.

A description shall be given of all procedures to be carried out if non-conforming product or activities are discovered. This shall include failure analysis, corrective actions and records, and shall cover products during manufacture, after final test and customer returns.

#### 7.3.2.10 New product introduction programme

##### 7.3.2.10.1 Documentation

The organization shall document in the TADD their new product introduction programme, when the new product is manufactured under the scope of the TAS. The TADD shall describe the product development cycle including how the product's conformance is verified and how the product is released to production.

##### 7.3.2.10.2 Characterization

The organization shall document in the TADD procedures for the characterization of new products. Characterization shall form part of the new product introduction cycle and shall be designed to identify the critical product parameters and the specified performance.

#### 7.3.2.11 Interrelationship with subcontractors

The TADD shall define the interrelationship requirements for all subcontractor operations.

#### 7.3.2.12 Company definitions and symbols

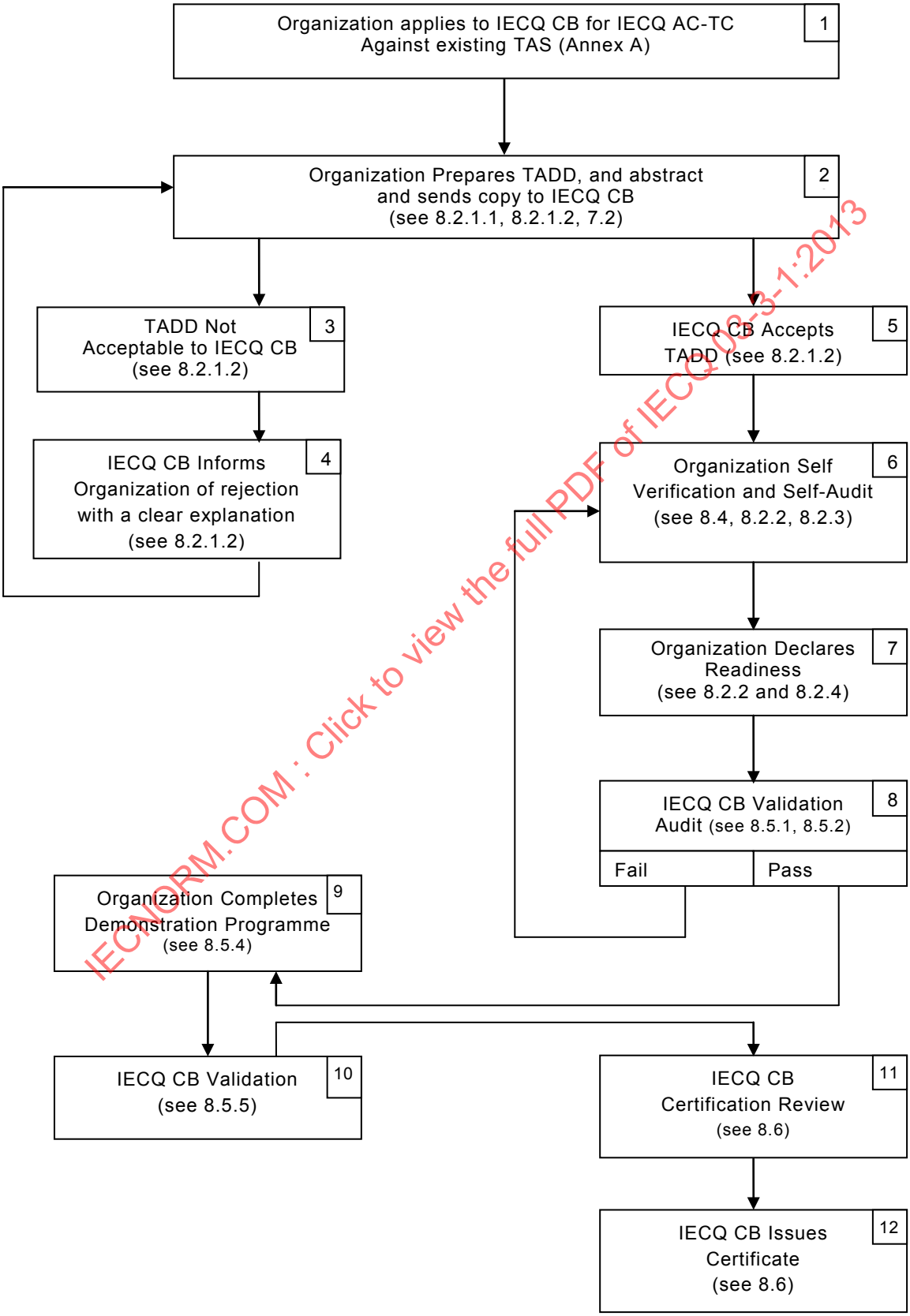
IEC definitions and symbols shall be used whenever possible. However, if the organization uses non-standard definitions and symbols not specified by the IEC, they shall be defined in the TADD.

#### 7.3.2.13 List of components covered by IECQ AC-TC

The TADD shall reference a register listing all components covered by the IECQ AC-TC.

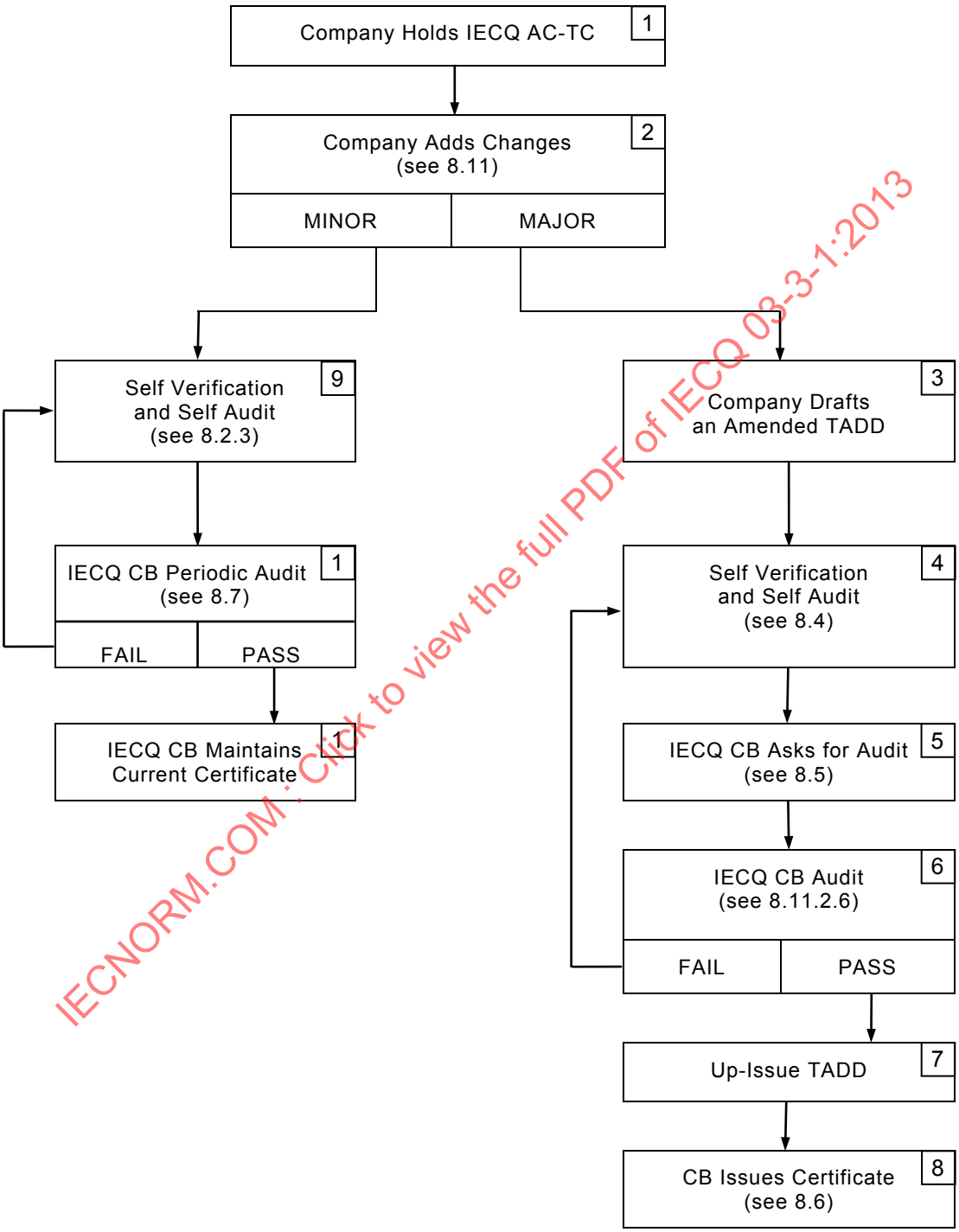
### 7.3.3 Flow Chart

Organization obtains IECQ Approved Component – Technology Certification IECQ AC-TC



### 7.3.4 Flow Chart

Organization Adds Changes to an IECQ Approved Component – Technology Certification IECQ AC-TC



### 7.4 Product documentation – Contractual specifications

The following forms of specification may be used as the basis of contractual arrangements between the organization and their customer. The content of such documents shall be covered by the organization's document control procedures and shall satisfy the appropriate requirements of IECQ 03-3 Annex E:

- detail specifications registered in QC 001004, Specifications List;
- Customer Detail Specifications(CDS) agreed between the customer and the manufacturer;
- Organization’s product data (the organization’s published data (including guidance to customer and/or application notes if required), provided such documents are identified by internal manufacturer’s reference and revision status).

## 8 IECQ Approved Technology Certification procedure

### 8.1 General

IECQ AC-TC assessments of an organization are based on the requirements of ISO 9001 and requirements within this document.

### 8.2 Application

IECQ AC-TC may be applied to cover electronic components, or range of components Products, Related Materials & Assemblies falling within a Technology Range.

#### 8.2.1 Submission of the TADD

**8.2.1.1** The TADD together with the implementation programme shall be submitted to the IECQ CB.

**8.2.1.2** The IECQ CB shall assess the TADD to 7.2, to this clause and the relevant TAS in consultation with the organization and advise the latter of its acceptance or rejection with an explanation in the case of a rejection.

#### 8.2.2 Acquisition of results

Process capability data, acquired prior to or during the implementation of the process capability plan, is used to demonstrate that all processes are under control.

The main results shall be sent to the IECQ CB before any audit is planned to help in its preparation. The manufacturer is not required to wait until the TADD is assessed to start acquisition of data.

#### 8.2.3 Internal audits

The organization shall undertake internal audits against the TADD requirements. The results of these audits, or a summary of them, including corrective actions, shall be put at the disposal of the IECQ CB.

If any non-conformities are found during an internal audit the organization shall analyse the cause and take the necessary corrective action.

#### 8.2.4 Statement of readiness

A statement of readiness in respect of the requirements for IECQ AC-TC as defined in the organization's TADD may be made to the IECQ CB when the organization is satisfied that these requirements have been met and can be demonstrated, as indicated by his own internal audit. That is to say that, the conditions described in these rules of procedure have been met and the organization is satisfied that the quality indicators calculated from the manufacturing data satisfy the required standard as described in the TAS. The organization shall accept the right of the IECQ CB to audit and verify the claims made.

A statement of readiness shall be provided to the IECQ CB using the form provided in Annex B.

### 8.3 IECQ CB Assessment Team for AC-TC Assessment

Subclause 8.3 of IECQ 03-3 applies.

### 8.4 Verification

#### 8.4.1 Verification of process in accordance with the TADD

As part of the verification of the processes, the organization shall provide evidence to the IECQ CB of compliance with the content of the TADD as defined in 7.2.

#### 8.4.2 Process capability verification

The organization shall verify their declared process boundaries in respect of design and manufacturing in accordance with the applicable TAS.

The organization shall demonstrate the process capability for the following aspects:

a) Administration

   The organization shall demonstrate satisfactory management of the administrative tasks relating to the associated manufacturing technologies.

b) Design

   Design verifications shall follow suitability to organization, fitness for use and conformance with customer requirements.

c) Manufacturing

   Manufacturing verification shall follow the production flow and critical process stages, including in-process control, process characterization and evaluation, parametric monitoring and final product testing).

Characterization and evaluation of process performance shall be performed on test vehicles, evaluation components or final products, and shall include reliability aspects.

In-process control, as defined in the TADD, shall be demonstrated.

#### 8.4.3 Control of internal and external interfaces

The organization shall demonstrate that the interfaces between the processes are under control and have been verified.

Listed below are some examples:

– customer requirements to design;
– design to production;
– design to test;
– design to maintenance and customer support;
– supplier to production;
– production to test;
– test to delivery;
– delivery to customer;
– subcontractor to manufacturer.

#### 8.4.4 Demonstration plan

As part of the approval exercise, the organization shall produce components and/or test vehicles that are representative of their normal production and perform tests necessary to demonstrate that final product fulfils specification requirements, including quality and reliability objectives. The requirements for test vehicles, and their associated test methods, shall be described in the relevant TAS.

NOTE The values prescribed in specifications are limit values. When carrying out the specified tests the approved organization shall employ sufficient inset from the specified limits to cover the uncertainty of measurement (see annex C of IECQ 03-1).

### 8.5 Validation

#### 8.5.1 Validation of TADD implementation

The IECQ CB shall audit the organization's implementation of the TADD including in particular the performance of the TRB and CMB where appropriate.

#### 8.5.2 Examination of internal audit data

The IECQ CB auditing team shall examine the data resulting from the organization's internal audit.

#### 8.5.3 Proposal for issue of AC-TC validation

Following confirmation of validation by the IECQ CB, the organization can execute the demonstration testing. The organization may, at his risk, start the demonstration testing before IECQ CB validation.

#### 8.5.4 Execution of the demonstration plan

The organization shall produce components/test vehicles to meet the requirements of the appropriate TAS. They shall be tested in accordance with the demonstration plan described in the TADD.

A formal report shall be submitted to the IECQ CB for validation and countersignature.

#### 8.5.5 Examination of demonstration data

The IECQ CB shall examine the data in respect to the demonstration plan.

### 8.6 Completion (Granting of Certification)

Following a satisfactory assessment, the organization shall propose to the IECQ CB a list of products they intend to release under IECQ AC-TC.

Granting of Certification shall be conducted in accordance with Subclause 9.7 of IECQ 03-1.

The full scope of the AC-TC shall be detailed in the scope of activity on the certificate or if greater than 4 lines of text shall be contained in an Attached Scope of schedule and attached to the certificate.

### 8.7 Surveillance

In addition to the requirements in Subclause 9.8 of IECQ 03-1 the following applies.

Organizations holding IECQ AC-TC require a more severe surveillance visit regime that those organizations which only hold IECQ Approved Component or Process Certification. This reflects the additional liability resultant from holding an IECQ AC-TC.

#### 8.7.1 Normal frequency of surveillance

The normal frequency of surveillance shall be two visits per year.

#### 8.7.2 Reduced frequency of surveillance

At the discretion of the IECQ CB, the frequency of surveillance of the certified organization may be reduced to one visit per year provided that the following conditions apply:

a) the organization has held IECQ AC-TC for a minimum of two years;

b) no product or process-related failure to comply with the IECQ scheme rules has been identified during the previous three surveillance visits, other than product failures permitted by the relevant specification (e.g.: limited failures during maintenance testing are permitted by some Standards);

c) no product or process failures have occurred during a two year period, other than product failures permitted by the relevant specification as detailed above.

#### 8.7.3 Suspension of reduced frequency of surveillance

Organizations subject to reduced frequency of surveillance, which subsequently fail to comply with the conditions of 8.7.2, shall revert to normal frequency of surveillance.

### 8.8 Ensuring conformity

In addition to the requirements in Subclause 9.10 of IECQ 03-1 the following applies.

#### 8.8.1 Organization's documentation

It is the organization’s responsibility to maintain all internal documentation in a state that defines the current operations, processes and products covered. Operational changes that affect the TADD shall be notified to the IECQ CB. Amendments to the TADD that could affect the validity of the certification shall be submitted to the IECQ CB, whose agreement shall be obtained in order for the certification to be maintained.

NOTE The technical content of the TADD shall relate to, but shall not extend beyond, the range of activities covered by the TAS.

### 8.8.2 Manufacturer/IECQ CB periodic review

The organization and the IECQ CB shall review the TADD with particular reference to performance against the quality improvement programme at least every 12 months. Any necessary corrective actions shall be agreed between the organization and the IECQ CB and implemented by the organization.

### 8.8.3 Re-declaration of conformance

Where changes occur in quality data or indices that fall outside the limits declared in the TADD, the organization shall advise the IECQ CB and indicate what corrective action is being taken.

## 8.9 Suspension or Cancellation (withdrawal)

In addition to the requirements in Subclause 9.13 of IECQ 03-1 an IECQ AC-TC Certificate may be suspended or cancelled by the issuing IECQ CB if

a) the production of the components covered by the TAS is terminated or suspended for an abnormally long period outside that stated in the TAS. In the latter case an agreement between the organization and the IECQ CB is required to determine the period which is to be considered abnormally long;

b) these Rules of Procedure are not correctly applied, for example, failure to maintain the TADD to include correct current information pertinent to the certification;

c) persistent non-conformance with the specification;

At the discretion of the IECQ CB, in situations of temporary or minor non-conformity, IECQ AC-TC may be suspended by the IECQ CB instead of being cancelled. A period, not exceeding six months, shall be prescribed in which the organization has to demonstrate that they have remedied the faults previously found.

## 8.10 Reinstatement of IECQ Approved Component – Technology Certificate

Subclause 9.14 of IECQ 03-1 applies except as follows:

## 8.11 Changes

NOTE All changes to the IECQ AC-TC that take the operating parameters beyond the boundary conditions declared in the TADD shall be evaluated by the TRB prior to implementation and update of the TADD as described below.

### 8.11.1 Changes to the overall quality plan

The overall quality plan as defined in the TADD shall be kept up to date and reflect all “major” changes (see 8.11.2.1 and 8.11.2.3) including updating of the overall process flow.

The overall quality plan shall be subject to periodic review by the IECQ CB.

### 8.11.2 Changes to the design/manufacturing information

#### 8.11.2.1 Classification of changes

Capability limits shall be described, qualitatively and quantitatively, during the initial certification audit and the documents describing the elements agreed between the IECQ CB and the organization. Following this initial agreement each descriptive element shall be classified “major” or “minor”.

In order to determine the extent of requalification required by the organization following the introduction of internally agreed amendments/extensions to the design and/or processes, the criticality and significance of the changes shall be assessed by the TRB. The potential effect of the changes on performance, quality, reliability and, where applicable, interchangeability, shall be taken into account and the changes nominated as “major” or “minor”.

Reference to the relevant TAS will provide guidance.

#### 8.11.2.2 Minor changes

Changes classified as minor can be made and fully implemented following approval by the TRB of the supporting documentation and data. A minor change will usually only require a change to the company’s internal documentation and the notification to the IECQ CB shall be made available at the TA periodic review.

Any related new products shall be covered for release by implementing the organization’s declared procedure for new product introduction. The supporting test vehicles and/or product approval data shall be made available to the IECQ CB at the IECQ AC-TC periodic review. No amendments to the IECQ AC-TC Certificate will be made.

#### 8.11.2.3 Major changes

Changes classified as major shall require some declared level of demonstration/re-demonstration that will be decided and assessed by the TRB.

In most instances a major change will necessitate a change to both the organization’s TADD and to the IECQ AC-TC Certificate, and will affect the declared boundaries of the approval.

The proposed changes and requalification plan, etc., in the form of an amended TADD shall be submitted to the IECQ CB, which has the right to request further appraisal of the organization’s changes.

#### 8.11.2.4 IECQ CB review of amended TADD

The IECQ CB shall either advise the organization of its acceptance of the amended TADD or undertake discussion with the organization to establish a resubmission programme.

#### 8.11.2.5 Declaration of readiness to the amended TADD

On declaring readiness in respect of the requirements of the amended TADD the organization should submit the following to the IECQ CB:

a) the changed design/process capability data;

b) the demonstration/re-demonstration results/report;

c) a request that an amended certificate, if applicable, be issued in accordance with the scheme rules;

d) a request that permission be granted for the release of products related to the implementation of the changes described therein (invoking 8.14.2, if applicable).

#### 8.11.2.6 IECQ CB option to audit in respect of the amended TADD.

The IECQ CB shall audit the organization if it is considered necessary.

#### 8.11.2.7 Release of products affected by the amended TADD

If the IECQ CB considers an audit unnecessary for the changes to IECQ AC-TC, or immediately upon the completion of a satisfactory audit, the IECQ CB shall issue a new or amended IECQ AC-TC Certificate, upon receipt by the organization they may release products manufactured within the changed IECQ AC-TC.

### 8.12 Use of Subcontracting

**8.12.1** Any stage of manufacturing may be carried out by organizations holding IECQ Approved Process relevant to the task or, under certain conditions, subcontracted to non-certified organizations (see 8.12.3, 8.12.4 and 8.12.6).

**8.12.2** The TAS may allow all forms of subcontracting, or forbid it on technical grounds. The TAS may, if necessary, include any special requirements, for example for specific successive stages to be performed by the same organization.

**8.12.3** When subcontracting is permitted by the TAS, this may be undertaken provided that the DMR is able to demonstrate to the IECQ CB that the process(es) concerned is (are)

a) performed in a manner which satisfies the appropriate requirements of the relevant Process Assessment Schedule(s) (PAS(s)) in the QC 200000 series, or

b) carried out satisfactorily in accordance with criteria defined, or referred to, in the TADD.

**8.12.4** To verify the satisfactory conduct of subcontracted operations in accordance with 8.12.3a) or b), the organization shall ensure that when quality conformance testing is performed under their control in an IECQ ITL laboratory, it shall be located in an IECQ member country, or exceptionally in accordance with 8.12.7.

**8.12.5** The organization, when applying for IECQ AC-TC, shall state whether stages of the manufacturing process are carried out by one or more organizations holding IECQ Approved Process in accordance with 8.12.1, or are subcontracted in accordance with 8.12.3, and shall identify the stages.

**8.12.6** If subcontractors not approved within the IECQ System are used, the organization shall describe the method of control of all the subcontracted stages or operations.

**8.12.7** Where tests are carried out by testing laboratories not approved within the IECQ System, the IECQ AC-TC certified organization shall produce a document which describes the surveillance arrangements by which they shall ensure that the testing to be carried out shall comply with the specification. Where possible, the nominated testing laboratory shall be accredited to ISO/IEC 17025 by a nationally recognized accreditation body. The document shall define how the nominated testing laboratory

a) ensures that its relevant staff possesses the necessary competence and its relevant test facilities are completely adequate for purpose,

b) proposes to operate the test, and

c) ensures that it has an adequate system for the calibration of its relevant measurement and test equipment and can provide adequate traceability to national standards.

In establishing the degree of surveillance necessary, account shall be taken of any current accreditations and/or registrations held by the nominated testing laboratory.

Prior to permitting testing, the approved manufacturer shall demonstrate to the IECQ CB that their proposed surveillance arrangements comply with the specification.