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Procedures for the Issuing of an IECEx Unit Verification Certificate

A) DOCUMENT APPROVALS

No	Definition	Action	Created By	Date
1	Document approved	Approval	Nurgül Çınar	28.04.2023

B) REVISION HISTORY

No	Definition	Reason	Approval Date	Release Date
2	Reference has been made to OD 203 by adding article 8.2.	NCR10 in IECEx audit report.	28.04.2023	28.04.2023
1	Related form references have been added in the procedure.	Improvement work.	28.03.2023	28.03.2023
0	Creation of documentation within the scope of IECEx.	First Publication	16.03.2023	16.03.2023

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5. Purpose and Scope

The objective of this document is to create IECEx Unit Verification Certificate based on an ExTR. The IECEx Unit Verification Certificate may be issued for a product with its variety of types, including different processes and electrical connections, different temperature classes, different types of protection, etc.

The IECEx Certified Equipment Scheme provides the means for manufacturers of Ex equipment to obtain The IECEx Unit Verification Certificate that are intended to be accepted in all participating countries as equivalent to their national certification. The IECEx Unit Verification Certificate may also be accepted in other non-participating countries

The final objective of the IECEx Certified Equipment Scheme is worldwide acceptance of one standard, one certificate, and one mark.

According to Table 1 — Building a product certification scheme in ISO/IEC 17067 standard;

Table 1 — Building a product certification scheme

Conformity assessment functions and activities (a) within product certification schemes		Types of product certification schemes (b)							
		1a	1b	2	3	4	5	6	_N_ (c) (d)
I	**Selection**, including planning and preparation activities, specification of requirements, e.g. normative documents, and sampling, as applicable	x	x	x	x	x	x	x	x
II	**Determination of characteristics**, as applicable, by: a) testing b) inspection c) design appraisal d) assessment of services or processes e) other determination activities, e.g. verification	x	x	x	x	x	x	x	x
III	**Review** Examining the evidence of conformity obtained during the determina tion stage to establish whether the specified requirements have been met	x	x	x	x	x	x	x	x
IV	**Decision on certification** Granting, maintaining, extending, reducing, suspending, withdrawing certification	x	x	x	x	x	x	x	x
V	**Attestation, licensing**								
	a) issuing a certificate of conformity or other statement of conformity (attestation)	x	x	x	x	x	x	x	x
	b) granting the right to use certificates or other statements of conform ity	x	x	x	x	x	x	x	
	c) issuing a certificate of conformity for a batch of products	x							
	d) granting the right to use marks of conformity (licensing) is based on surveillance (VI) or certification of a batch.	x	x	x	x	x	x		
VI	**Surveillance**, as applicable (see 5.3.4 to 5.3.8), by:								
	a) testing or inspection of samples from the open market	x	x	x					
	b) testing or inspection of samples from the factory	x	x	x					
	c) assessment of the production, the delivery of the service or the opera tion of the process	x	x	x	x				
	d) management system audits combined with random tests or inspections	x	x						

(a) Where applicable, the activities can be coupled with initial audit and surveillance audit of the applicant's management system (an example is given in ISO/IEC Guide 53) or initial assessment of the production process. The order in which the assessments are performed may vary and will be defined within the scheme.
(b) An often used and well-tried model for a product certification scheme is described in ISO/IEC Guide 28; it is a product certification scheme corresponding to scheme type 5.
(c) A product certification scheme includes at least the activities I, II, III, IV and V a).
(d) The symbol _N_ has been added to show an undefined number of possible other schemes, which can be based on different activities.

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This procedure covers the process shown step by step for the preparation of the relevant ExCoC certificates of Conformity in SZUTEST, in case of no obstacles, errors, or non-conformity related to ExTR and QAR by the manufacturer's quality system, the relevant standards, regulations, and OD documents.

6. Terms and Definition

The following terms and definitions is specified in order to good understanding the procedure.

IECEx: International Electrotechnical Commission Explosive
ISO: International Standard Organization
OD: Operational Document
Ex certification body (ExCB): A body which has been accepted according to these Rules and to issue IECEx CoCs, IECEx QARs and to endorse IECEx test reports Explosive Certification Body
Ex Management Committee (ExMC): The body which administers the operation of the IECEx System and is responsible to the Conformity Assessment Board of the IEC
IECEx certificate of conformity (CoC): Document issued under these Rules that conveys the assurance of the conformity of a product with the specified standard or standards
IECEx test report (ExTR): A document issued by an ExTL that includes a documented record of the obtained test and assessment results for endorsement by an ExCB, associated with the issuing ExTL, demonstrating that the examined product type is in conformity with specified Standards
Ex testing laboratory (ExTL): A testing laboratory which is accepted according to these Rules, and which performs tests and assessments and compiles IECEx test reports for endorsement by the associated ExCB
Applicant: A manufacturer or a person which acts on behalf of the manufacturer and who applies to an IECEx certification body (ExCB) for obtaining, suspending, or cancelling an IECEx certificate of conformity, or for obtaining an IECEx test report or an IECEx quality assessment report
Manufacturer: An organization, situated at a stated location or stated locations, that carries out or controls such stages in the design, manufacture, assessment, handling, and storage of a product that enables it to accept responsibility for continued compliance of the product with the relevant requirements and undertakes all obligations in that connection
NCR: A nonconformance report or NCR is a construction-related document that addresses specification deviation or work that fails to meet quality standards.
IAF: The International Accreditation Forum, Inc. is the world association of Conformity Assessment Accreditation bodies and other bodies interested in conformity assessment in the fields of management systems, products, services, personnel and other similar programs of conformity assessment.

7. Responsibilies

This procedure is operated by the authorized person who is assigned by SZUTEST (ExCBs) according to the PR.EX.01 SZUTEST Personnel Procedure and IECEx Test Laboratories (ExTLs) to ensure a thorough and consistent assessment of applications for either an:

• IECEx Unit Verification Certificate
IECEx OD 017 (Drawing and Documentation Guidance, for use by Manufacturers and ExTLS)
IECEx OD 033 (IECEx Unit Verification Certificates)
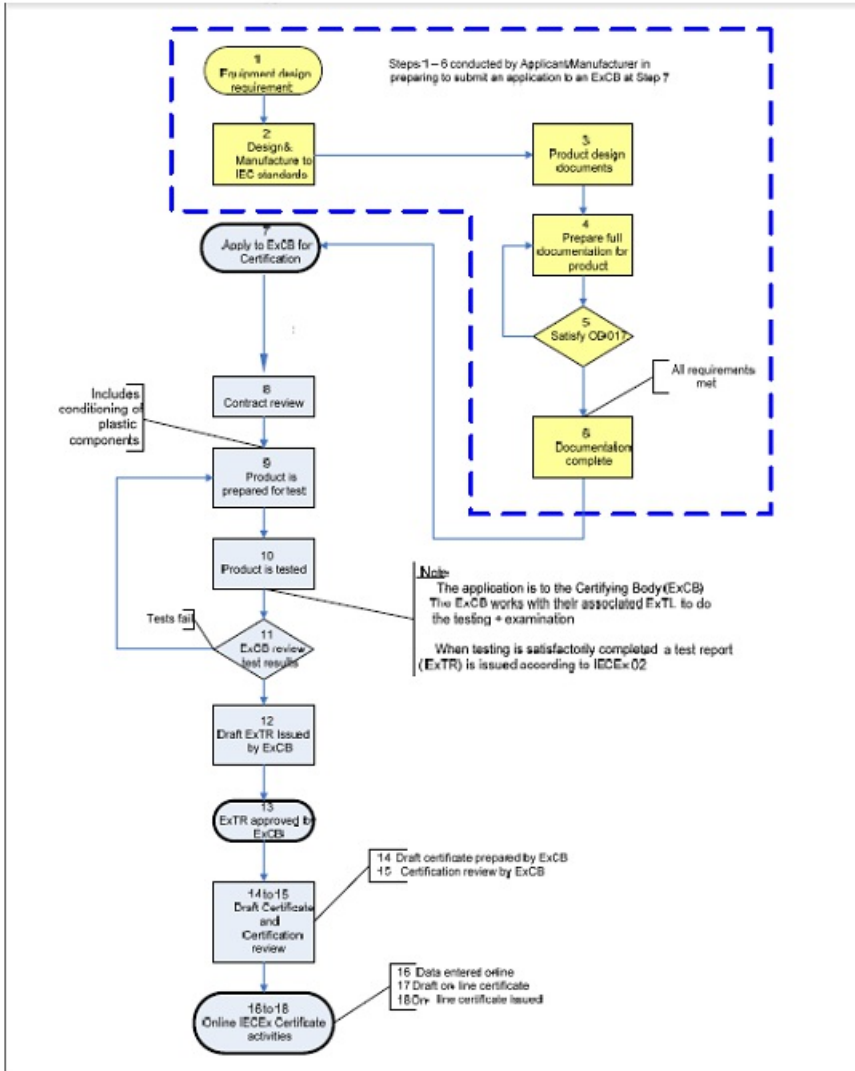**IECEx-02** (Rules of Procedure)
IECEx-OD-011-2 (Stage 2 : Creating IECEx Equipment COC from Website)
IECEx OD 017 (Drawing and Documentation Guidance, for use by Manufacturers and ExTLS)

• IECEx Test Report (ExTR)
IECEx Form F-005 (IECEx Quality Assessment Attendance List)
IECEx-02 (Rules of Procedure)
IECEx OD 009 (Procedure)
IECEx OD 010-1 (Development and posting of blank)
IECEx OD 010-2 (Procedures and guidance)
IECEx-OD-011-1 (Stage 1: General Information Creating IECEx COC From Website)
IECEx-OD-011-2 (Stage 2 : Creating IECEx Equipment COC from Website)
IECEx OD 017 (Drawing and Documentation Guidance, for use by Manufacturers and ExTLS)
IECEx OD 019 (Participation and System Fees)

8. Method
8.1. Method of the Issuing of an IECEx Unit Verification Certificate

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8.1.1. Step 1 – Equipment Design Requirement

Ex Manufacturer receives a contract to design and build a "one-off" or limited quantity/batch, usually for a special purpose or application. Standards for design should be specified in the original contract.

Related Documents : IEC Standards National codes for electrical and mechanical safety
Concluded by : manufacturer

8.1.2. Step 2 – Design and Manufacture to IEC Standards

The design is approved by the Ex Manufacturer. The end user may review and approve the design before applying for IECEx certification

Related Documents : All design documents
Concluded by : manufacturer

8.1.3. Step 3 – Product Design Documents
Product design documents are defined as a "package".

Related Documents : Design
Concluded by : manufacturer

8.1.4. Step 4 – Prepare full documentation for product
Documentation covering the design is prepared. This includes datasheets, drawings and Ex- approval information for any Ex- certified parts used in the product.

Related Documents : Design

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Concluded by : manufacturer

8.1.5. Step 5 – Satisfy OD 017

Ex Manufacturer reviews documents to requirements of IECEx OD 017

Related Documents : OD 017
Concluded by : manufacturer

8.1.6. Step 6 – Documentation Complete

Documentation package has been reviewed by the Applicant as being complete and now prepared for submission with the application to SZUTEST.

Concluded by : manufacturer

8.1.7. Step 7 – Apply SZUTEST for certification

Application is submitted to SZUTEST:
The application must be made to SZUTEST that has been accepted by the IECEx Management Committee to operate under the IECEx Certified Equipment Scheme, according to IECEx 02. Applicant Ex Manufacturers are encouraged to check the completeness of the application using the checklist in Annex A of this OD 033. The SZUTEST shall review the application package as part of their contract review.
Where the Ex Manufacturer is located in a non-IECEx participating country, the SZUTEST shall in conjunction with the ExMC Secretary, arrange for payment to the IECEx account of the surcharge, in accordance with OD 019.
The results of the contract review shall be documented and recorded. OD 033 Annex A can be used as a summary of the documents supplied.

Related Documents : IECEx 02 OD 019 (finance)
Related Forms : FR.EX.01 Application Form

8.1.8. Step 8 – Contract review

Contract review is conducted by the ExCB receiving the application, in accordance with the ExCB's own Quality System and as required by ISO/IEC 17065. Contract review shall include:

- A review to ensure that the application is within the scope of acceptance of the ExCB, eg protection techniques.
- The application package is complete.
- Whether a surcharge applies for applicants or Manufacturers from non IECEx member countries.
- Estimation of time and costs to complete project.
- Determination of any special requirements, eg travel for any assessments or tests to be conducted on site.
- Agreement on method and system of payment by applicant, in accordance with ExCB's own policy and quality system.

SZUTEST shall only proceed where the contract review has been successfully completed.
Where unsuccessful, SZUTEST shall communicate in writing to the applicant with the applicant free to amend their application or select another ExCB.
Change of SZUTEST's may be required if the equipment to be certified is not covered by the SZUTEST scope of operation.

Also, SZUTEST Technical Manager assigns the Product certification Auditor to carry out the certification Project and open the Project in SZUTEST APP System.

Related Documents : SZUTEST's own Certification procedures as included in their Quality System
and ISO/IEC 17065.
Related Forms : FR.EX.02 Contract Form, FR.EX.25 Audit Team Certification Committee Assigning Form

8.1.9. Steps 9- Product is prepared for test

The product (unit) is prepared for testing.

The Product Certification Auditor shall prepare the audit plan and record it to FR.EX.27 Audit Plan. For doing the tests and Issuing ExTR the client will be referred to the suitable SZUTEST Associate technical laboratory.

The SZUTEST and their associated ExTL will prepare a Test Plan as required. Use of a Test Plan ensures that all tests performed are logged, and they have the test acceptance criteria. Often, testing will involve a number of ExTR (test reports) due to the need to cover components, and the overall system.

NOTE: The Test Plan is a controlled document.
Any Plastic components are thermally conditioned before testing, as required by the Standard.
Test samples of critical items are submitted for destructive test.
Some components which are not certified may need testing.

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A Test Plan may not always be required. Testing may follow the headings given in the ExTR (test report form). Where destructive testing is required additional samples or materials, representative of the completed item(s), may be required to prevent destruction to the completed item(s).

Related Documents : Test Plan
Related Forms: FR.EX.27 Audit Plan, FR.EX.08 Appointment of Ex Testing Laboratory Form

8.1.10. Step 10 – Product is tested
The product is tested according to the Test Plan.
Testing is be carried out by the ExTL associated with the SZUTEST.
The Test Plan ensures that all tests are agreed and cover all certification issues. A record of all tests performed is kept in the Test Log.
The tests performed are listed with pass/fail criteria and have provision for comments on the report.

Related Documents : Test Plan Test Log ExTR

8.1.11. Step 11 – SZUTEST review test results
The ExTR shall be prepared by the ExTL, using the standard IECEx ExTR blank templates.
The ExTR is then reviewed by the SZUTEST for endorsement. Where the product fails tests listed in the Test Plan, the Ex Applicant/Manufacturer will be notified so that the product may be modified to pass the test which failed.
For re-tested items, please refer to step 9 in this document. Failed tests which require correction or further action must be re-tested in full, to obtain a "pass" result in the ExTR.

Standard ExTR blank templates are available from the IECEx website.

Related Documents : Test Plan ExTR, IECEx OD 017
Related Forms : FR.EX.05 TEST Report Endorsement for the Report by EXTL, FR.EX.(14-24) IECEx Test Report Checklist,
FR.EX.(45-46) IECEx Test Report Checklist, FR.EX.29 Final Report

8.1.12. Step 12 – Draft ExTR issued by SZUTEST
After the final indipendant review of the Technical Manager, a draft of the ExTR maybe issued to the Applicant/Manufacturer for their review prior to being formally issued. This may assist to check for any errors.

Related Documents : Draft ExTR
Related Form : FR.EX.30 Review and Certification Decision Form

8.1.13. Step 13 – ExTR approved by SZUTEST
Upon review and endorsement by the SZUTEST the ExTR is issued. The SZUTEST endorsing the ExTR shall "Register" the ExTR on the IECEx "On-Line" Certificate of Conformity System.

Guidance given in OD 011 Part 2

Related Documents : Draft ExTR, OD 011
Related Forms : FR.EX.30 Review and Certification Decision Form

8.1.14. Step 14 – Draft Certificate prepared by SZUTEST
The draft IECEx Unit Verification Certificate is prepared and may be issued as a draft to the applicant for a review for any errors.
All test documents, design data and design drawings are filed.
Once satisfied that the test data and the supporting documentation are adequate the Certificate shall be issued, by the SZUTEST with the original sent to the Applicant and a copy retained on the SZUTEST file.
The registration process provides a database of information such as:
• Unique Certificate reference number or identifier.
• Name and address of Manufacturer of equipment covered by Certificate.
• Details of IECEx Unit Verification Certificate such as type of protection.
• Any comments that the SZUTEST feels should be noted.

SZUTEST shall be assigned a unique password to allow entry of the ExTR and certificate details. The data is entered "On-Line". Contact the IECEx Secretariat for any questions or concerns. The SZUTEST MUST maintain security over the passwords provided and notify the Secretariat of any possible breaches of this security, for which new passwords maybe assigned. OD 011 Part 2 provides guidance to SZUTEST's on the registering of issued ExTR and also the compiling and issuing of On-Line Certificates of Conformity under the IECEx Unit Verification Program.

Related Documents : IECEx Unit Verification Certificate

8.1.15. Step 15 –Certification review by SZUTEST
The SZUTESTto whom the application for an IECEx Unit Verification Certificate was made shall conduct a certification review, in accordance with

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their quality management system, ensuring among others that:

- All stages of the certification process have been documented and followed, including those contained in this manual.
- The SZUTEST have a signed commitment by the Applicant to abide by the rules of the IECEx Scheme and SZUTEST's certification conditions.
- The Applicant is aware of his/her obligations under the IECEx scheme.

Contact the IECEx Secretariat for any questions or concerns.

Related Documents : IECEx 02, SZUTEST's own quality management system
Related Form : FR.EX.30 Review and Certification Decision Form

8.1.16. Step 15a – Certification review by SZUTEST, not successful
Where the review undertaken in step 15 is not successful, the SZUTEST management shall refer the matter to SZUTEST staff or Applicant personnel as appropriate.

Contact the IECEx Secretariat for any questions or concerns

Related Documents : PR.EX.01 ExCB Personnel Procedure

8.1.17. Step 16 – Data entered online
IECEx Unit Verification Certificate shall be now be completed, taking account of any adjustments arising from the review in step 15 using the IECEx "On-Line" system via the password protected system.

Contact the IECEx Secretariat for any questions or concerns

Related Documents : Refer IECEx website, OD 011 Part 2

8.1.18. Step 17 – Draft on line certificate
Prior to issue a final draft of the IECEx Unit Verification Certificate is to be reviewed for errors. It may be beneficial to pass a draft copy to the Applicant for them to assist in the final review prior to issuing the certificate.
While the Draft Certificate is created "On-Line" the SZUTEST may create a protected PDF copy and send this to the Applicant,
refer to OD 011 Part 2 for guidance.
Every attempt shall be made to correct errors prior to issuing the certificate.

The Electronic version residing on the IECEx "OnLine" System remains the master version.
Any printing or copying is considered an "uncontrolled" copy.
Contact the IECEx Secretariat for any questions or concerns.

Related Documents : Original application form submitted by the Applicant. OD 011 Part 2

8.1.19. Step 18 – On line certificate issued
Certificate is issued via the IECEx "on-Line" registration system with the Applicant being informed in writing by the SZUTEST, via letter, fax or e-mail.
Also, the projects will be closed on SZUTEST APP System.

Contact the IECEx Secretariat for any questions or concerns.

8.2. Complying with the requirements of the latest edition of OD 203
Complying with the requirements of the latest edition of OD 203 in case of implementation of the projects is required.