



INTERNATIONAL ELECTROTECHNICAL COMMISSION SCHEME FOR CERTIFICATION TO  
STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES  
(IECEx SCHEME)

## IECEx OPERATIONAL DOCUMENT

### Draft OD 501 Edition 2

**Title: IECEx Scheme for Certification of Personnel Competencies for  
Explosive Atmospheres –**

**Assessment procedures for IECEx acceptance of Certification Bodies  
(ExCBs) for the purpose of issuing and maintaining IECEx Certificates of  
Personnel Competencies (CoPCs)**

---

### IECEx Operational Document

During the 1<sup>st</sup> meeting of the newly formed IECEx Personnel Certification Committee, ExPCC, held in Paris, June 2012, the Committee considered the need for updating of IECEx 05 Rules and supporting ODs, including this Operational Document OD 501 in light of the Scheme now operating since late 2010.

This draft revision, prepared by ExPCC is submitted for ExMC consideration during the ExMC 2012 Calgary meeting. Changes proposed in this Draft Revision include:

- Reference to OD 505 Assessment Report Form, previous Annex A
- Expansion on the requirement for applicant ExCBs to provide Exam Questions and have these mapped against OD 504 Units of Competence
- Surveillance of ExCBs without accreditation changed from 12 months to 18
- Clarification that site assessment visit of ExCBs is dependent on scope of application and details of assessment/examination facilities and locations.

#### IECEx Secretariat

**Address:**  
IECEx Secretariat  
Standards Australia Building  
286 Sussex Street  
Sydney NSW 2000  
Australia

**Tel: +61 2 8206 6940**  
**Fax: +61 2 8206 6272**  
**Email:**  
[chris.agius@iecex.com](mailto:chris.agius@iecex.com)

## CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION.....	4
INTRODUCTION .....	5
SECTION 1 – INITIAL ASSESSMENT AND RE-ASSESSMENT OF ExCBs .....	6
IECEX Assessment flow chart.....	7
SECTION 2 – ON GOING ASSESSMENT OF ExCBs.....	11
1 Surveillance of ExCBs with Accreditation to ISO/IEC 17024 acceptable by ExMC .....	11
1.1 Scope.....	11
1.2 Procedures .....	11
1.3 Review .....	11
1.4 Re-assessment .....	12
2 Surveillance of ExCBs without Accreditation to ISO/IEC 17024 acceptable by ExMC .....	12
2.1 Scope.....	12
2.2 On-site audit .....	12
2.3 Non-conformances .....	12
2.4 Fifth anniversary .....	12



INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

**IECEx Operational Document 501 –**

**IECEx Scheme for Certification of  
Personnel Competence for Explosive Atmospheres –**

**Assessment procedures for IECEx acceptance of Certification Bodies  
(ExCBs) for the purpose of issuing and maintaining IECEx Certificates  
of Personnel Competence (CoPCs)**

This Operational Document, OD 501 sets out the procedures for the assessment and acceptance of Certification Bodies seeking to become ExCBs for the purpose of operating under the IECEx Certification of Personnel Competence Scheme, IECEx 05.

**Document History**

Date	Summary
September 2009	Original issue (Edition 1.0)
XX 2012	Edition 2 issued

## INTRODUCTION

This document details the assessment procedures established by the IECEX System's Management Committee, ExMC, for the purpose of ensuring a thorough assessment of Candidate ExCBs. The principle aim of these procedures is to instil international confidence in the ExCB's competence and capabilities for performing assessment and maintaining IECEX Certificates of Personnel Competence whom seek IECEX Certification.

The assessment is to cover the competence, experience and familiarity of ExCB personnel and the organisation with the relevant explosive atmosphere standards, quality management systems, IECEX System and associated rules ISO/IEC 17024 and IECEX Operational Documents. The procedures are also aimed at ensuring a consistent approach to assessments by IECEX assessment teams and therefore establishing confidence in the scheme.

This document provides the following sections:

Section 1 – Initial Assessment and Re-Assessment of ExCBs

Section 2 – On going Assessment of ExCBs

NOTE A simple change of scope for an ExCB already accepted in another IECEX Scheme is not seen as viable due to the entirely different requirements used for Certification of Personnel Competence.

The procedures are set out in table form identifying:

- Step number
- Required action
- Responsible person or party
- Desired outcome

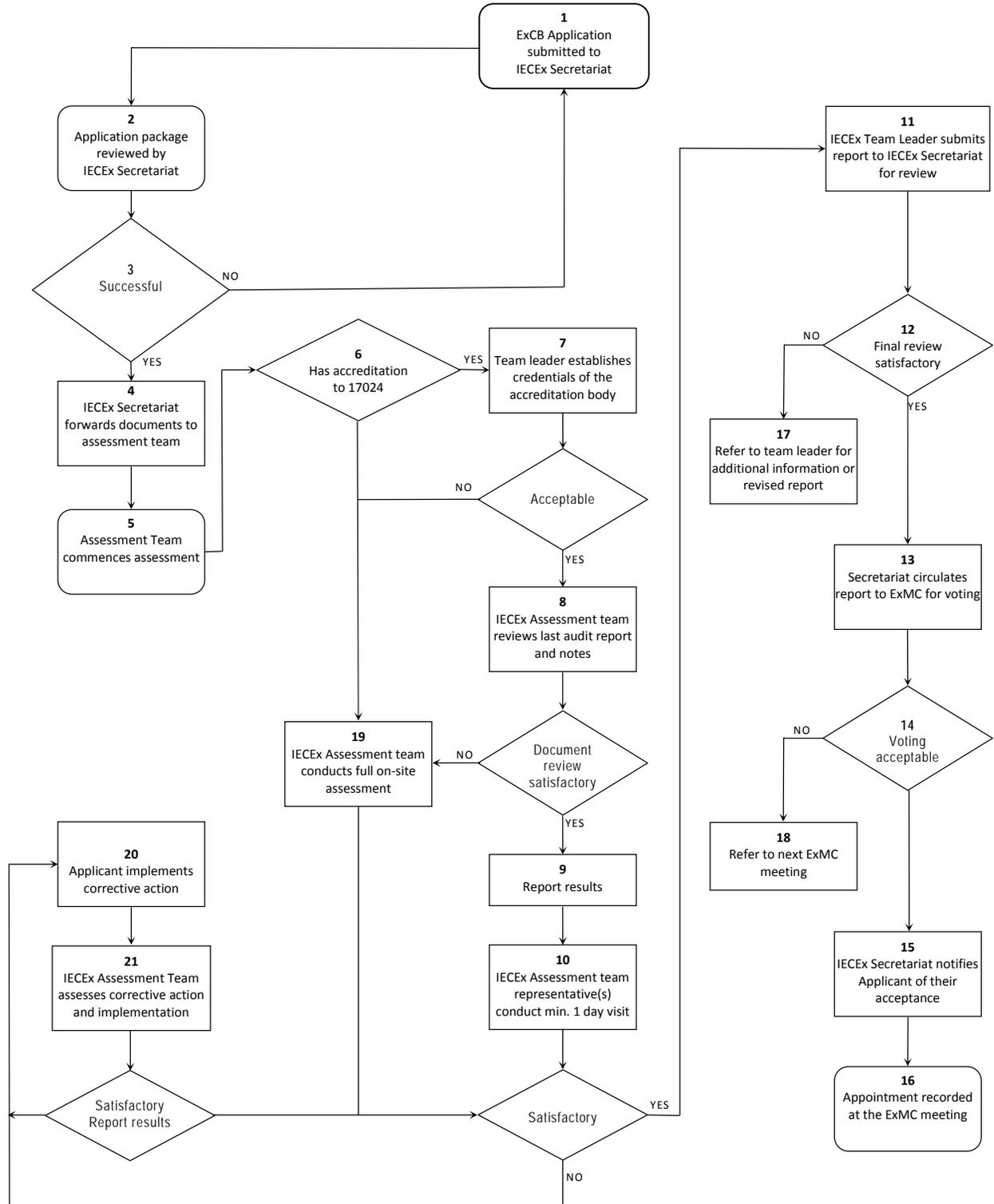
The steps identified in the table correspond to the steps shown in the flowchart.



**Assessment Procedures for IECEx acceptance of Certification Bodies (ExCBs) for the purpose of issuing and maintaining IECEx Certificates of Personnel Competence**

**SECTION 1 – INITIAL ASSESSMENT AND RE-ASSESSMENT OF ExCBs**

This Section is to be applied for the initial assessment of ExCBs prior to their acceptance in the IECEx Certification of Personnel Competence Scheme and re-assessment of existing ExCBs. The term Lead Assessor, as used throughout this document, shall mean the IECEx Assessment Team Leader appointed by the ExMC Secretary and endorsed by ExMC. Steps 1 – 4 are applicable to new applications.



**IECEX Assessment flow chart**  
 (Refer to table for details of each step)



Step	Activity	By whom	Desired outcome
<i>Formal application submitted to ExMC Secretary</i>			
1	Application endorsed by Member Body prior to being received by ExMC Secretary, in accordance with IECEX 05	ExMC Secretary	Candidate ExCB
2	Application assessed for completeness and Assessment Team appointed.	ExMC Secretary	Assessment team proposed by IECEX Secretary
3	ExMC Secretary reviews application documentation for completeness. ExMC Secretary may request further information from the Candidate. ExMC Secretary to report findings to Candidate ExCB	ExMC Secretary	
4	ExMC Secretary forwards Application package to Members of the appointed Assessment Team	ExMC Secretary	All relevant information available for team to commence their assessment
<i>Documentation review stage</i>			
5	<p>IECEX Assessment Team commences assessment. Team Leader, in conjunction with team members reviews application documentation to satisfy steps 6 to 8. Team Leader may request additional information from the Candidate ExCB.</p> <p>The documentation will include the sample assessment knowledge test for each Unit included in the scope of application. Include details of questions that are required to be assessed by assessment team. Details of artifacts for the practical assessments need to also be included.</p> <p>“Suitable questions for use in the assessment of knowledge for each clause of the “Critical Aspects of evidence” specified for each unit of competency shall be assessed for suitability and sufficiency.</p> <p>Suitable artefacts for use in the practical demonstration of competency for each clause of work performance shall be assessed</p> <p>End of specific amendments relating to inclusion of requirements from question bank sub-committee</p> <p>These assessment methods will be structured to avoid short term memory responses.</p> <p>It is not desirable that a candidate is assessed immediately following training.</p>	Team Leader to Manage	<p>Team Leader notifies Candidate of successful review of documentation and then prepares to arrange site visit.</p> <p>Assessment knowledge questions accepted and passed to the Question Bank WG</p>
6	Team Leader, in conjunction with team members determines whether the applicant ExCB has Accreditation to ISO/IEC 17024	Team Leader or his designate	Formal notification of accreditation, with a copy being submitted by the applicant

Step	Activity	By whom	Desired outcome
7	<p>Assessment of the accreditation and credentials of the accreditation body. For example determining:</p> <ul style="list-style-type: none"> <li>*Whether the body has Mutual Recognition Agreements with other accreditation bodies</li> <li>*Whether the body has National Government recognition</li> <li>*What Standards or Guides are used</li> </ul> <p>IECEX Assessment Team Leader may obtain information directly from accreditation body or Candidate ExCB and circulate to other IECEX Assessment team members for review via correspondence.</p> <p>NOTE ExCB should obtain all necessary information from accreditation body for presentation to IECEX Assessment Team Leader.</p> <p>The assessment of the documentation shall establish that the CB has the competence related to the particular aspects of hazardous area competence they will be issuing. This will include any facilities provided for demonstration of craft skills"</p> <p>Note:" This may need to provide CV's of particular people used in competence assessment activities.</p>	Team Leader	<ul style="list-style-type: none"> <li>*Verification of MRAs</li> <li>*Notification of Government recognition</li> <li>*Use of : IECEX 01, Basic Rules of the IECEX System. ISO/IEC Guide 2, Standardization and related activities - General vocabulary. ISO/IEC 17000 Conformity Assessment – Vocabulary and general principles ISO/IEC 17024 Conformity Assessment – General requirements for bodies operating certification of persons</li> <li>*Frequency of surveillance audits.</li> </ul>
8	<p>Review of past audit reports, issued by the accreditation body, by Assessment Team to establish compliance with the requirements of IECEX 05, and Documents, ISO/IEC Guide 2, ISO/IEC 17000 and ISO/IEC 17024 relevant.</p>	Assessment Team managed by Team Leader	<p>Acceptance by IECEX Assessment Team of information and audit reports as evidence of compliance to the requirements of IECEX 05, ISO/IEC Guide 2 and ISO/IEC 17024</p>
9	<p>Notification of results of step 6-8 to Candidate ExCB</p>	Team Leader	<p>Letter, Fax or e-mail to Candidate ExCB. Copy to ExMC Secretary</p>



Step	Activity	By whom	Desired outcome
<i>On-site visit</i>			
10	A minimum of one representative of the IECEX Assessment Team visits Candidate to conduct a minimum 1 day site visit for each ExCB application. This visit is to verify implementation of certification or auditing procedures. The actual duration of the site visit is dependent on the scope of application and details of assessment and examination facilities.	At least 1 person from IECEX Assessment Team Usually Team Leader	Visit notes to be included in assessment file. Team Leader in consultation with his Team shall decide if more than 1 man day visit is necessary.
11	Results of site visit determined with a final report for submission to the ExMC Secretary prepared in the format as outlined in OD505. Final report to be reviewed by all members of the assessment team	Team Leader	Team Leader to commence arrange for a final assessment report compiling a Report
12	Final IECEX Assessment Team Report Reviewed by ExMC Secretary.	ExMC Secretary	Review by ExMC Secretary to ensure completeness of information and ready for circulation to ExMC for voting.
13	ExMC Secretary prepares Report for voting and submits to ExMC Members for formal voting, via correspondence or at the next ExMC meeting.	ExMC Secretary	ExMC Document issued for voting, with a copy submitted to Candidate ExCB
<i>Final approval of ExCB by ExMC</i>			
14	Assessment of report considered by ExMC members with members returning the completed voting form to the ExMC Secretary as soon as possible and by due date	ExMC Members	Majority acceptance vote approves application (re IECEX 01)
15	If voting is acceptable then ExMC Secretary notifies applicant of their acceptance	ExMC Secretary	ExMC Letter to accepted ExCB
16	Appointment recorded at next ExMC meeting	ExMC Secretary to arrange	Recorded in Minutes
17	Where review in step 12 is unsatisfactory, ExMC Secretary refers the matter to the IECEX Assessment Team Leader seeking additional information or revised report	ExMC Secretary	An acceptable report for circulation to ExMC
18	Where a positive vote, in accordance with IECEX 01 is not achieved the application is then referred to the next ExMC meeting for discussion	ExMC Secretary to arrange	Findings recorded in the minutes
19	If at the conclusion of the "Document Review Stage", the Assessment Team are not satisfied with the information presented, the Team Leader shall inform the Candidate ExCB and ExMC Secretary of the Assessment team's views. In order for the assessment to proceed, the IECEX Assessment Team may be required to conduct a full on site assessment in accordance with IECEX 05 and Technical Guidance Documents, ISO/IEC Guide 2, ISO/IEC 17000 and ISO/IEC 17024 as applicable.	Team Leader to manage	Assessment report by Team Leader
20	Where non-conformances are identified during the assessment process the Candidate ExCB implements corrective action if they wish to proceed with their application	Candidate ExCB	Implementation of corrective actions
21	Assessment team assesses corrective action. This may be performed by either the full team or a partial team or even one member of the team	Team Leader to manage	Report on assessment of corrective actions
22	Decision by Assessment team	Team Leader	Details including in Assessment Report

## SECTION 2 – ON GOING ASSESSMENT OF ExCBs

This Section applies to ExCBs that have been accepted into the IECEX Certification of Personnel Competence Scheme for the scope of issuing of IECEX Certificates of Personnel Competence (CoPC) to provide cross-industry competence needed for work associated with equipment for hazardous areas. The purpose of on-going assessments is to satisfy the International Ex community that ExCBs maintain their facilities relating to assessing demonstration of craft skills and capabilities that enabled their entry into the Scheme.

### **1 Surveillance of ExCBs with Accreditation to ISO/IEC 17024 acceptable by ExMC**

#### **1.1 Scope**

This section covers ExCBs that maintain Accreditation to ISO/IEC 17024 found to be acceptable by the original IECEX Assessment Team, and by way of ExMC voting on the initial assessment report, the ExMC. The procedures detailed below are general and ALL ExCBs are reminded of their obligations to notify the IECEX Secretariat of any changes within their organisation that may impact on their ability to deliver IECEX Certification Services in accordance with IECEX Rules and Operational Documents and in the spirit of a timely and professional service delivery.

#### **1.2 Procedures**

The IECEX Secretariat shall, on at least an annual basis confirm the accreditation status and scope of all ExCBs holding accreditation to ISO/IEC 17024 that are not subject to 18 month IECEX surveillance assessments.

This may require the IECEX Secretariat seeking confirmation from accreditation bodies and ExCBs along with a call for audit reports issued by accreditation bodies and internal audit reports of the ExCB in order to gain evidence of compliance with ISO/IEC 17024 and IECEX requirements.

In addition to the above, ExCBs shall advise the IECEX Secretary of any changes in their organisation affecting the ExCB's operation in the IECEX CoPC Scheme such as the organisation of the ExCB, its staff, facilities, quality system, operating procedures, accreditation status.

#### **1.3 Review**

The ExMC Secretary shall review the information to ensure:

- ExCB Sites covered by accreditation aligns with the site previously approved by ExMC;
- All Clauses of ISO/IEC 17000 and ISO/IEC 17024, as applicable, have been covered;
- Ensure that IECEX requirements are met
- Any Non-Conformances are identified;

Where major Non-Conformances have been identified the ExMC Secretary may consult with the IECEX Chairman and Officers to decide on such action to be taken and report at the next ExMC meeting. Where the ExCB does not agree with the course of action, the matter may be referred to the IECEX Board of Appeals, if requested by the ExCB. During the period of referral to the Board of Appeal, the IECEX Chairman in consultation with the other IECEX Officers shall decide on the status of the ExCB in question. In extreme circumstances the status of temporary suspension may be considered. The IECEX Chairman shall report at the next ExMC meeting of actions taken.

The IECEX Secretary will retain a copy of records, for a minimum of 10 years, for record keeping purposes.



#### **1.4 Re-assessment**

On the 5th anniversary of the acceptance of the ExCB, or re-assessment of an ExCB, a re-assessment in accordance with the assessment procedure detailed in Section 1 shall be performed by an IECEx Assessment Team appointed by the IECEx Secretary.

## **2 Surveillance of ExCBs without Accreditation to ISO/IEC 17024 acceptable by ExMC**

### **2.1 Scope**

This section covers ExCBs that do not have Accreditation to ISO/IEC 17024 but who have been accepted in to the IECEx System by way of a full on-site assessment, by the IECEx Assessment Team.

### **2.2 On-site audit**

The IECEx Secretariat shall arrange for an 18 month on-site audit. The assessor shall be appointed by the IECEx Secretary whom may consult with the IECEx Assessment Team Leader responsible for the original assessment. The ExCB shall agree to bear the costs associated with this on-site audit.

The appointed assessor shall carry out an assessment for compliance with ISO/IEC 17000 & ISO/IEC 17024 and IECEx CoPC Scheme Rules. The Team Leader will then issue a report.

The report shall be forwarded to the IECEx Secretary who shall review it for completeness and any non-conformances. Where non-conformances have not been identified the report shall be retained, for a minimum of 10 years, for record keeping purposes, by the IECEx Secretary.

### **2.3 Non-conformances**

Where Non-Conformances have been identified the report shall be referred to the IECEx Secretary who shall consult with the IECEx Officers on non-conformances that remain outstanding, whom shall propose appropriate action to be taken and report at the next ExMC meeting. Where the ExCB does not agree with the course of action, proposed, the matter may be referred to the ExMC or IECEx Board of Appeal. During the period of referral to ExMC, the IECEx Chairman in consultation with the other IECEx Officers shall decide on the status of the ExCB in question. In extreme circumstances the status of temporary suspension may be considered. The IECEx Chairman shall report at the next ExMC meeting of actions taken .

### **2.4 Fifth anniversary**

On the 5th anniversary of the acceptance of the ExCB, or re-assessment of an ExCB, a reassessment in accordance with the assessment procedure detailed in Section 1 shall be performed by an IECEx assessment team appointed by the IECEx Secretary.