

### **IECEX OD 316-5**

Edition 1.24 2023<del>17-</del>10

# IECEX OPERATIONAL DOCUMENT

IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEx System)

IECEx Certified Service Facilities Scheme –
Part 5: Repair, overhaul and reclamation of Ex equipment

Assessment procedures for IECEx acceptance of Candidate Certification Bodies (ExCBs) for the purpose of issuing IECEx Certificates to Ex Service Facilities involved in the repair, overhaul and reclamation of Ex equipment





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IEC Central Office Tel.: +41 22 919 02 11 3, rue de Varembé Fax: +41 22 919 03 00

CH-1211 Geneva 20 info@iec.ch Switzerland www.iec.ch

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Assessment procedures for IECEx acceptance of Candidate Certification Bodies (ExCBs) for the purpose of issuing IECEx Certificates to Ex Service Facilities involved in the repair, overhaul and reclamation of Ex equipment

INTERNATIONAL **ELECTROTECHNICAL** COMMISSION

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#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

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IECEx Certified Service Facilities Scheme –
Part 5: Repair, overhaul and reclamation of Ex equipment

Assessment procedures for IECEx acceptance of Candidate Certification Bodies (ExCBs) for the purpose of issuing IECEx Certificates to Ex Service Facilities involved in the repair, overhaul and reclamation of Ex equipment

#### **FOREWORD**

This IECEx Operational Document <u>IECEx</u> OD 316-5 Assessment Procedures for the Acceptance of Applicant ExCBs seeking to participate in the IECEx Certified Service Facilities Scheme – Part 5: Repair, overhaul and reclamation of Ex equipment ("IECEx 03-5 Scheme") defines the requirement for assessment for acceptance –to issue IECEx Certificates to Service Facilities involved in the repair, overhaul and reclamation of Ex equipment.

A listing of currently approved ExCBs is maintained on the IECEx website: www.iecex.com.

#### **Document History**

Date	Summary
2013-03	This original issue Edition 1.0 of OD 316-5 supersedes OD 016 Version 1 in part and represents the application of a new numbering system.
2017-10	Edition 1.1  This edition was prepared to clarify the process of application and acceptance for applicant ExCBs that are already accepted as ExCBs in the IECEx Certified Equipment Scheme and to align with IECEx 03-5 provisions and requirements. This was approved via Decision 2017/58
2023-MM	Edition 1.2 published as recommended by ExSFC WG5, endorsed by the ExSFC and approved by the ExMC via Decision 2023/34

#### Address:

IECEx Secretariat Level 33, Australia Square 264 George Street Sydney NSW 2000 Australia

#### **Contact Details:**

Tel: +61 2 4628 4690 Fax: +61 2 4627 5285 Email: info@iecex.com http://www.iecex.com

#### INTRODUCTION

This Operational Document details the assessment procedures established by the IECEx Scheme'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 auditing of Ex Service Facilities involved in the repair, overhaul and reclamation of Ex equipment and who seek IECEx Certification.

International confidence is established by evaluating the competence of a certifying body. The assessment is to cover the competence, experience and familiarity of ExCB personnel and the organization with the relevant explosion protected standards, quality management systems, IECEx Scheme and associated rules and ISO/IEC 17065 and IECEx Technical Capability Guidance-Documents (TCGDs.

The procedures are also aimed at ensuring a consistent approach to assessments by IECEx assessment teams.

This Operational Document provides the following three Sections:

- Section 1 Initial assessment and re-assessment of ExCBs
- Section 2 On going surveillance of ExCBs
- Section 3 Assessment of existing ExCBs seeking to extend their scope of acceptance to cover the IECEx Certified Service Facilities Scheme for repair, overhaul and reclamation of Ex equipment

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.

The preparation of this document has been done so with the aim of alignment with various ISO/IEC International Standards and Guides, including but not limited to the following:

ISO/IEC 17000, Conformity assessment - Vocabulary and general principles

ISO/IEC 17011, Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies

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

ISO/IEC 17065, Conformity assessment – Requirements for bodies certifying products, processes and services

ISO 19011, Guidelines for auditing management systems

ISO Guide 27, Guidelines for corrective action to be taken by a certification body in the event of misuse of its mark of conformity

ISO Guide 28, Conformity assessment – Guidance on a third-party certification system for products

ISO Guide 53, Conformity assessment – Guidance on the use of an organization's quality management system in product certification

# Assessment procedures for IECEx acceptance of Candidate Certification Bodies (ExCBs) for the purpose of issuing IECEx Certificates to Ex Service Facilities involved in the repair, overhaul and reclamation of Ex equipment

#### SECTION 1 - INITIAL ASSESSMENT AND RE-ASSESSMENT OF EXCBSS

This Section is to be applied for the initial assessment of ExCBs prior to their acceptance in the IECEx 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 IECEx Secretariat and endorsed by ExMC.

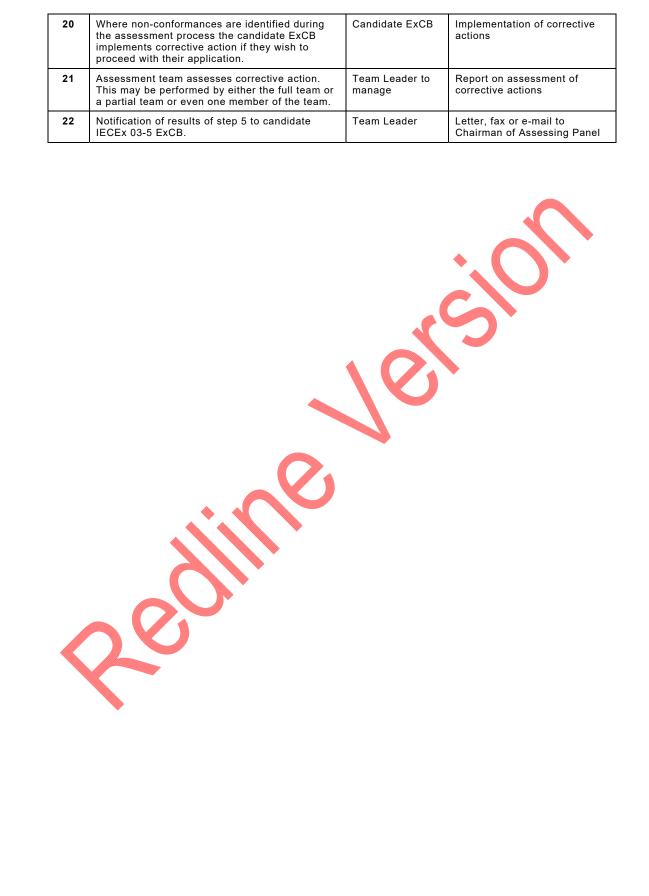
This Section does not apply to ExCBs already accepted in the IECEx Certified Equipment Scheme, Refer to Section 3.

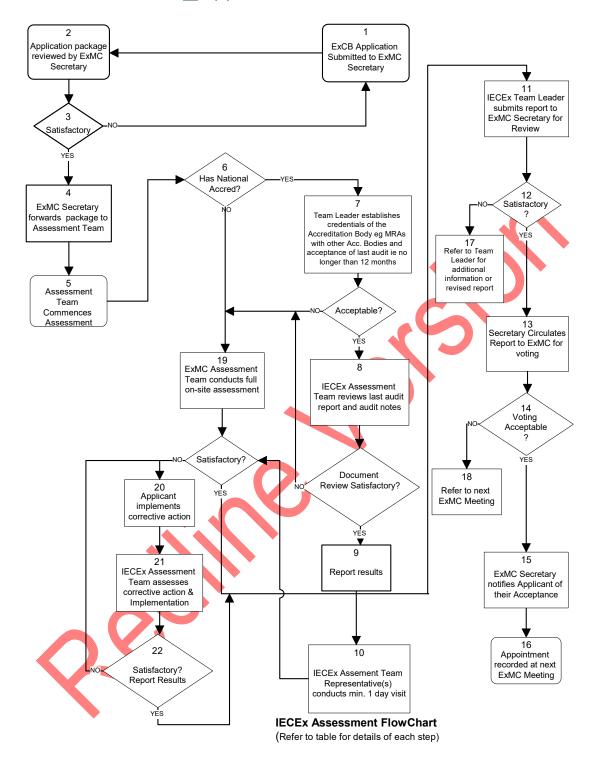
The ExCB shall use application forms that include a statement by which the applicant declares any previous or existing applications made to other ExCBs.

Step	Activity	By Whom	Desired Outcome		
Formal Application Submitted to IECEx Secretariat					
1	Application received by IECEx Secretariat, in accordance with IECEx 03-5. The application shall include details of the proposed ExCB assessors to undertake IECEx 03-5 audits.	IECEx Secretariat	Candidate ExCB		
2	Application assessed for completeness. Appointed Assessment Team accepted by ExMC.	IECEx Secretariat	Assessment team proposed by IECEx Secretary and accepted by ExMC		
3	IECEx Secretariat reviews application documentation for completeness. The IECEx Secretariat may request further information from the candidate. ExMC Secretary to report findings to candidate ExCB.	IECEx Secretariat			
4	IECEx Secretariat forwards Application package to Members of the appointed Assessment Team.	IECEx Secretariat	All relevant information available for team to commence their assessment		
Docum	entation Review Stage				
5	IECEx Assessment Team commences assessment. Team Leader, in conjunction with team members reviews application documentation to satisfy steps 6 to 8.  The ExCB shall provide a filled-out TCGD 60079-19.  Team Leader may request additional information from the Candidate ExCB.	Team Leader to manage	Team Leader notifies candidate of successful review of documentation and then prepares to arrange site visit		
6	Team Leader, in conjunction with team members determines whether the applicant ExCB has Independent Accreditation.	Team Leader or their delegate	Formal notification of accreditation, with a copy being submitted by the applicant		
7	Assessment of the accreditation and credentials of the accreditation body. For example, determining:  - Whether the body has Mutual Recognition Agreements with other bodies  - Whether the body has National Government recognition  - What Standards or Guides are used  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.  NOTE EXCB should obtain all necessary information from accreditation body for presentation to IECEX Assessment Team Leader.	Team Leader	<ul> <li>Verification of MRAs</li> <li>Notification of Government recognition</li> <li>Use of ISO/IEC 17065</li> <li>Frequency of surveillance audits</li> </ul>		
8	Review of past audit reports, issued by the accreditation body, by Assessment Team to establish compliance with the requirements of IECEx 03-5, and Documents, ISO/IEC 17021 and ISO/IEC 17065 as relevant.	Assessment Team managed by Team Leader	Acceptance by IECEx Assessment Team of information and audit reports as evidence of compliance to the requirements of IECEx 03- 5 and ISO/IEC 17065		
9	Notification of results of step 6 to8 to candidate IECEx 03-5 ExCB.	Team Leader	Letter, fax or e-mail to Candidate ExCB. Copy to IECEx Secretariat		

On-site	e Visit		
10	A minimum of one representative of the IECEx Assessment Team visits candidate to conduct a site visit for each ExCB application. This visit is to verify the applicant ExCBs ability to comply with IECEx 03-5 requirements.  The Assessment shall include a review of the ExCB's system for allocating auditors as competent to undertake IECEx Service Facility Assessments.	At least one person from IECEX Assessment Team (usually Team Leader)	Visit notes to be included in assessment file  Team Leader in consultation with his Team shall determine the duration of the visit
	The assessment of competence of the for ExCB's auditors shall detail each auditor's knowledge and experience qualifying them as competent to - assess service facilities conducting overhaul, and repair and reclamation to the requirements of IEC 60079-19, IECEX OD 313-5, OD 314-5 and OD315-5. This shall also detail their additional competence to assess service facilities compliance with IEC 60034-23 where the Ex Equipment being overhauled and repaired is an electric motor		
11	Results of site visit determined with a final report for submission to the IECEx Secretariat prepared in the format as outlined in Annex A.  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 IECEx Secretariat.	IECEx Secretariat	Review by IECEx Secretariat to ensure completeness of information and ready for circulation to ExMC for voting
13	IECEx Secretariat prepares Report for voting and submits to ExMC Members for formal voting, via correspondence or at the next ExMC meeting.	IECEx Secretariat	ExMC Document issued for voting, with a copy submitted to candidate ExCB
Final A	Approval of ExCB by ExMC		
14	Assessment of report considered by ExMC members with members returning the completed voting form to the IECEx Secretariat as soon as possible and by due date.	ExMC Members	Majority acceptance vote (approval ≥ 67 %) approves application (refer IEC CAEx 01 and IECEx 01-S)
15	If voting is acceptable then IECEx Secretariat notifies applicant of their acceptance.	IECEx Secretariat	ExMC letter to accepted ExCB
16	Appointment recorded at next ExMC meeting.	IECEx Secretariat to arrange	Recorded in the minutes
17	Where review in step 12 is unsatisfactory, IECEx Secretariat refers the matter to the IECEx Assessment Team Leader seeking additional information or revised report.	IECEx Secretariat	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.	IECEx Secretariat to arrange	Findings recorded in the minutes
19	If at the conclusion of the "Document Review Stage", the Assessment Team is not satisfied with the information presented, the Team Leader shall inform the candidate ExCB and IECEx Secretariat of the Assessment team's views.  In order for the assessment to proceed, the	Team Leader to manage	Assessment report by Team Leader
	IECEx Assessment Team may be required to conduct a full on site assessment in accordance with IECEx 03-5 and Technical Guidance Documents (TCGD 60079-14), ISO/IEC 17065 and ISO/IEC 17021, as applicable.		

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	Notification of results of step 5 to candidate IECEx 03-5 ExCB.	Team Leader	Letter, fax or e-mail to Chairman of Assessing Panel





#### SECTION 2 – ON GOING SURVEILLANCE OF EXCBs

This Section applies to ExCBs that have already been accepted into the IECEx Certified Service Facility Scheme for the scope of issuing IECEx Certification to Ex Service Facilities involved in the repair, overhaul or reclamation of Ex equipment.

The purpose of on-going assessments is to satisfy the International Ex community that ExCBs maintain their facilities and capabilities that enabled their entry into the Scheme.

### 2.1 Surveillance of ExCBs with National Accreditation acceptable by either accepted by or acceptable to ExMC

#### 2.1.1 Scope

This section covers ExCBs that maintain National Accreditation found to be acceptable by the original IECEx Assessment Team, and by way of ExMC voting on the initial assessment report, the ExMC.

Acceptable National Accreditation according to this Clause means accreditation to ISO/IEC 17065 or ISO/IEC 17024 for Ex Product Certification or Ex Personnel Competence Certification by an accreditation body that is a member of the International Accreditation Forum (IAF). No limitations to Ex types of protection can apply.

The procedures detailed below are general and ALL ExCBs are reminded of their obligations to notify the IECEx Secretariat of any changes within their organization 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.

#### 2.1.2 Procedures

Each year, prior to the anniversary date of acceptance into the IECEx Scheme, ExCBs shall submit to the IECEx Secretariat a report containing the following information:

a) Any changes in the organization

Description of changes in the organization of the ExCB, its staff (in particular, its auditors), facilities, quality system, operating procedures, or other similar changes, that relate to the ExCB's operation under IECEx 03-5.

#### AND

b) Annual audit report

Copy of a National Accreditation Body's audit report issued during the preceding 12 months. This report should show:

- Site that was audited by the accreditation body
- Date and duration of the audit
- Audit scope
- ISO/IEC Guides, Standards and IECEx Technical Guidance Documents (TGD) used during the audit
- Observation notes
- Details of any non-conformances raised
- · Copy of any audit report summary

c) Report by the ExCB based on its own internal audit(s) carried out during the preceding 12 months. A standardised report format should be used for this purpose. Once every two years, the report, prepared by the ExCB shall be endorsed by the National Accreditation Body.

Item a) is mandatory and either of b) or c).

#### 2.1.3 Review

The IECEx Secretariat shall review the information to ensure:

- Site assessed aligns with the site previously approved by ExMC
- All Clauses of ISO/IEC 17065, as applicable, have been covered
- Ensure that Technical Guidance Documents have been used (where available)
- Ensure that all auditors have the required competence and have been peer assessed
- · Any Non-conformances are identified

Where major Non-conformances have been identified the IECEx Secretariat in consultation with the IECEx <u>Executive officers</u> Assessor Panel Chairman shall propose appropriate action to be taken, with the IECEx Executive to decide on such action and report at the next ExMC meeting.

Where the ExCB does not agree with the course of action, the matter may be referred for appeal in accordance with IECEx Basic Rules.

During the period of referral to the Board of Appeal, the ExMC Chairman in consultation with the other IECEx Executive shall decide on the status of the ExCB in question.

In extreme circumstances the status of temporary suspension may be considered. The ExMC shall<del>is to</del> decide on the final action to be taken.

The IECEx Secretariat will retain a copy of the report, for a minimum of 10 years, for record keeping purposes.

#### 2.1.4 Re-assessment

On or before the fifth anniversary of the acceptance of the ExCB or of the last 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 ExMC.

#### 2.2 Surveillance of ExCBs without National Accreditation acceptable by ExMC

#### 2.2.1 Scope

This section covers ExCBs that do not have national accreditation but who have been accepted in to the IECEx Scheme by way of a full on-site assessment, by the IECEx Assessment Team.

#### 2.2.2 On-site audit

The IECEx Secretariat shall arrange to have one member of the original IECEx assessment team conduct an annual on-site audit. The assessor shall be appointed by the IECEx Assessment Team Leader responsible for the original assessment.

The ExCB shall agree to bear the costs associated with this on-site audit prior to the site visit on the basis of an estimate prepared and submitted to the ExCB by the Team Leader.

The appointed assessor shall carry out an assessment for compliance with ISO/IEC 17065 and IECEx Scheme Rules. The Team Leader will then issue a report.

These reports shall be forwarded to the IECEx Secretariat who shall review them for completeness and any non-conformances.

#### 2.2.3 Non-conformances

Where non-conformances have been identified the reports shall be referred to IECEx Secretariat who shall consult with IECEx Executive who 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 appealed according to IECEx Basic Rules.

During the period of referral to ExMC, the ExMC Chairman in consultation with the IECEx Executive shall decide on the status of the ExCB in question. In extreme circumstances the status of temporary suspension may be considered. The ExMC will then decide on the final action to be taken.

#### 2.2.4 Fifth anniversary

On or before the fifth anniversary of the original acceptance or of the last 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 ExMC on recommendation from the IECEx Secretariat.

# SECTION 3 – ASSESSMENT OF EXISTING IECEX EQUIPMENT SCHEME EXCBS SEEKING TO EXTEND THEIR ACCEPTANCE TO COVER THE IECEX CERTIFIED SERVICE FACILITIES SCHEME FOR REPAIR, OVERHAUL AND RECLAMATION OF EX EQUIPMENT

#### 3.1 Scope

This Section covers the situation where an ExCB already accepted in the IECEx Certified Equipment Scheme wishes to extend their acceptance to include the ability to assess and issue IECEx Certification to Ex Service Facilities involved in the repair, overhaul or reclamation of Ex equipment.

#### 3.1.1 Assessment procedures within scope

ExCBs seeking acceptance to issue IECEx Service Facility Certification, <u>WITHIN</u> the Ex Types of Protection and existing field of their current scope of acceptance as an <u>ExCB</u> in the IECEx Certified Equipment Scheme shall be subjected to the following assessment procedures.

#### 3.1.2 Internal procedures

In general, a site assessment visit is not required when an ExCB already accepted in the IECEx Certified Equipment Scheme wishes to be accepted for issuing IECEx Certification for Service Facilities, within their current scope of IECEx Certified Equipment Scheme acceptance if the ExCBs submits suitable copies of their internal procedures for dealing with applications for Ex Service Facilities and for the maintenance of certification of Ex Service Facilities (refer to IECEx 03-5 Annex A and ExMC/417\*/Q for guidance) to the IECEx Secretariat. The IECEx Executive Secretary will assess or arrange to have the procedures reviewed for compliance with IECEx Operational Document OD 313-5. The candidate IECEx 03-5 ExCB application and internal procedures shall include details of the ExCB's process for appointing ExCB auditors assessors that are competent (according to Annex B to this Operational Document) to conduct IECEx 03-5 audits of applicant service facilities seeking certification.

The ExCB shall use application forms that include a statement by which the applicant declares any previous or existing applications made to other ExCBs. If after the IECEx Executive Secretary's review and report to the IECEx Executive (refer 3.1.4 following), the IECEx Executive Secretary or the IECEx Executive feel that a site assessment visit is necessary, this shall be arranged by the IECEx Secretariat.

#### 3.1.3 Cost estimate

The ExCB shall be provided with a cost estimate for the documentation review and must agree with the cost prior to the review proceeding.

#### 3.1.4 Report

Following the documentation review the IECEx Executive Secretary shall prepare a report for consideration by the IECEx Executive. Where any one IECEx Executive member disagrees with the extension of acceptance for the ExCB this shall be documented and consultation conducted with the ExCB in an effort to resolve the concerns raised.

Upon finalising the application, the ExCB's acceptance into the IECEx 03-5 Scheme shall be published and reported to the IECEx Management Committee. Alternatively, the IECEx Chairman may elect to refer the matter to a vote by ExMC via correspondence or at a meeting.

#### 3.2 Assessment procedures outside scope

ExCBs already accepted as ExCB in the IECEx Certified Equipment Scheme that are seeking appointment for issuing IECEx Repair Certification, OUTSIDE the Types of Protection and existing field of their current scope of acceptance as ExCB in the IECEx Certified Equipment Scheme, shall be assessed according to the procedures of Section 1 of this Operational Document.

#### Annex A

## IECEX ASSESSMENT REPORT FORM for IECEX 03-5 EXCB (IECEX Certification Body – Certified Service Facilities Program) – Repair, overhaul and reclamation of Ex equipment

#### Type of Assessment:

- Initial Assessment for Candidate IECEx 03-5 ExCB
- Surveillance Assessment for existing ExCB

OBJ	IECT AND FIELD OF APPLICATION
Со	untry
Na	me of candidate IECEx 03-5 ExCB
Me	embers of the assessment team
Pla	ace and date of assessment
Δς	sessment references
	cument (current editions):
i)	IECEx 03-5
,	IECEx Operational Document OD-316-5
	IECEx Operational Documents OD 3013-5 and IECEx, OD 314-5
	ISO/IEC 17065
v)	ISO/IEC 17021
,	ExCB application supporting documents
	IEC 60079-19
	) TC <mark>G</mark> D 60079-19

#### A.1.6 Scope of application

Indicate whether this is an extension of scope for an already accepted ExCB (include details of existing acceptance)

A.1.7	Candidate ExCB persons interviewed	
	Name	Position
A.1.8	Legal entity of the candidate ExCB	10
A.1.9	Associated certification functions	
A.1.10	National marks and certificates	
A.1.10	National marks and certificates	
A.1.11	Financial support	
A.1.12	History	
A.1.13	Standards accepted	

4.1.14	National differe	nces to IEC Standards		
<b>4.2</b> (	ORGANIZATION	•		
4.2	ORGANIZATION			
<b>A.2.1</b>	Names, titles ar	nd experience of the senio	or executives	
	Name	Title	Experience	
				<b>)</b>
A.2.2	Name, title and	experience of the quality	management representative	ı
	Name	Title	Experience	
A.2.3		of nominated principal co		
	Name	Title	Comments	
A.2.4	Name and title	of signatories for certifica	tion	
	Name	Title	Comments	
	,			
A.2.5	Name and title	of IECEx 03-5 assessors		
	Name	Title	Responsibility	
	. tailio	1100	Responsibility	
	•••••			

		ExCB activity	<u>_</u>
	Name	Title	Responsibility
7	Organizational struc	ture	
	organizational otrao	taro	
	•••••		
3	Administration		
0.4	A dual minimum tive at use	4	
5.1	Administrative struc	ture	
3.2	Terms of reference of	of the governing boa	rd
		•••••••••••••••••••••••••••••••••••••••	
R	ESOURCES		
_	OMMITTEES		
C	CIMIMILLIEES		

A.5	CERTIFICATION OPERATIONS
A.5.1	National approval/certification methods
A.5.2	Certification policy
A.5.3	Staff Work instructions
A.5.4	Application for certification
A.J.4	Application for certification
A.6	STATISTICS
	Detail experience in assessment and certification of Ex related Service Facilities
	involved in the repair, overhaul and reclamation of Ex equipment under this application
	during the past 2 years:
Ì	
<b>A</b> .7	DOCUMENTATION
<b>A.8</b>	RECORDS

#### **Annex B**

#### **ExCB Auditor Competence – minimum requirements**

#### **B.1** Introduction

This Annex sets out the minimum requirements that ExCBs must include within their process and associated quality management procedures for the selection, appointment and initial and ongoing qualification of auditors used by the ExCB to conduct audits of Repair, Overhaul and Reclamation facilities under the IECEx Certified Service Facility Scheme for compliance with IEC 60079-19 and IECEx Rules and Operational Documents. These requirements apply to ExCBs whether they use their own staff (employed ExCB Auditors) for audits or employ contract auditors to conduct this work for and under the direction of the ExCB.

Compliance with this Annex will also be assessed and verified as part of the initial assessment and re-assessment of ExCBs participating in the IECEx 03-5 Scheme.

#### B.2 Minimum requirements of ExCB auditors

As a minimum ExCB's auditors shall possess the following competence to be employed by an ExCB as auditors to operate within the IECEx 03-5 Repair, Overhaul and Reclamation Scheme

#### **B.2.1** Knowledge and Understanding

ExCB's auditors shall possess all of the following:

- a) a demonstrated understanding of the requirements all issues of the IEC 60079-19 Standard (which may have been validly applied at the time of the repair, overhaul or reclamation activity), the IEC 60079 & ISO 80079 series of standards, and where electric machines are repaired IEC 60034-23 standard,
- b) a demonstrated understanding of repair, overhaul and reclamation processes and explosion protection techniques within the scope of IEC 60079-19.
- c) a demonstrated understanding of the IECEx 03-5 Rules and all IECEx Operational Documents (ODs) associated with the IECEx 03-5 Repair and Overhaul Scheme.
- d) a demonstrated understanding of the Product Certification schemes applicable to Certified Equipment, for example, the IECEx 02 Certified Equipment Scheme because the audit of the repair, overhaul or reclamation facility will involve assessment of the facility's approach to decision making when planning repair, overhaul or reclamation activities in accordance with IEC 60079-19.
- e) Demonstrated understanding of Specific Condition of Use "X" suffix to the Certificate identification number as used in Ex Equipment Certification, control of hold and check for specific conditions impacting repair before any work

#### B.2.2 Competence

ExCB's auditors shall be competent in the auditing of quality Management systems in accordance with IECEX OD 314-5 requirements.

NOTE: The following are examples of elements that may be considered successful completion of formal training in auditing skills experience in the development and running of technically based quality management systems technical qualifications in an engineering discipline

#### B.3 Process for qualifying ExCB auditors

The ExCB shall have a documented process for:

- a) detailing the requirements for Criteria satisfying B.2.1 and B.2.2 above, auditors to be assigned as ExCB auditors for the IECEx 03-5 Repair, Overhaul and Reclamation Scheme
- b) the Assessment of auditors for compliance with a)
- c) appropriate ongoing maintenance and verification of the competence of ExCB auditors as required by this Operational Document.

The ExCB's qualification process for the selection, appointment and initial qualification of auditors shall include provision for the satisfactory witnessing of newly appointed ExCB auditors conducting an IECEx 03-5 audit by an experienced ExCB IECEx 03-5 auditor, prior to newly qualified ExCB auditors being permitted to independently perform IECEx 03-5 audits.

#### B.4 Evidence of understanding repair, overhaul and reclamation processes

While ExCB's auditors assigned to conduct audits of Ex Repair and Overhaul Workshops according to the IECEx 03-5 Scheme will have varying degrees of competence they are required to have an awareness and understanding of all of the following:

- Use of vertical auditing techniques, specific job report, drill down to details, verify processes
- Assessment of Responsible Person (RP) technical competence, RP's control of repair process and authority
- Specific Condition of Use "X" suffix to the certificate number, control of hold and check for specific conditions impacting repair before any work
- For Ex"d" equipment, evidence of systematic use of Annex C of IEC 60079-19
- How Type of Protection Standard Edition, year of publication, is determined before inspection, repair or testing
- Initial inspection suitability, Type of Protection requirement parameters used, identification of instruments used, traceability to calibration to International or National standards, and competence of persons,
- Measuring instrument must be on site and used. In particular for Ex "d" equipment where flamepaths are measured, only a micrometer or equivalent precision measuring device that is under current calibration control shall be used for the direct measurement of flamepaths
- Alternative measures to locked rotor testing when omitted. Testing on user's site is not an acceptable alternative measure
- No-load running test, electrical tests and bearing temperature checks
- Inspection during final assembly, recorded in User Report
- Approval of job records and User Report by RP before repair label fitted and release to customer
- Method of shipping and protection