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

**TITLE: Re-assessment and Scope Extension Report for the continued acceptance of** **China National Quality Supervision & Test Centre for Explosion-proof / Safety Products for Coal Mines (CMExC) an Accepted Ex Testing Laboratory (ExTL) within the IECEx System, Equipment Scheme 02, to include IEC 60079-33 in their scope.**

**Circulation to: Members of the IECEx Management Committee, ExMC**

**INTRODUCTION**

In accordance with the 5 year re-assessment plan for the surveillance and monitoring of bodies within the IECEx System, the following document contains the IECEx Re-assessment and Scope Extension Report for the continued acceptance of China National Quality Supervision & Test Centre for Explosion-proof / Safety Products for Coal Mines (CMExC) an Accepted Ex Testing Laboratory (ExTL) within the IECEx System, Equipment Scheme 02.

During the re-assessment the IECEx Assessment Team took the opportunity to also assess, China National Quality Supervision & Test Centre for Explosion-proof / Safety Products for Coal Mines (CMExC) equipment and competence to undertake testing and certification for the following extension of scope –

|  |  |  |
| --- | --- | --- |
| **Standard** | **Edition** | **Title** |
| IEC 60079-33 | 1.0 | Part 33: Equipment protection by special protection 's' |

***This document is hereby submitted for ExMC approval via correspondence using the IECEx on-line voting system.  ExMC Members are requested to submit their vote via the IECEx On-line*** [***Ballot System***](https://www.iecex.com/ballot) ***by the closing date 2022 04 28***

***Please refer to OD 050 for guidance on the “IECEx On-line voting system.”***

***Chris Agius***

**IECEx Secretariat**

|  |  |
| --- | --- |
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IEC System for certification to standards relating to equipment for use in Explosive Atmospheres (IECEx System)

IECEx Assessment Report Form, F-003

IECEx assessment report form for use by IECEx assessment teams to report assessments conducted according to the relevant IECEx assessment procedures of:

Operational Document IECEx OD003-2 for the Certified Equipment Scheme

IECEx ExTL assessment report for China National Quality Supervision & Test Centre for Explosion-proof / Safety Products for Coal Mines (CMExC)

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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1. **Assessment information**

**1.1 Type of body covered by this assessment:**

|  |  |
| --- | --- |
| ExCB for IECEx Certified Equipment Scheme | [ ]  |
| ExTL for IECEx Certified Equipment Scheme | [x]  |
| ATF for IECEx Certified Equipment Scheme | [ ]  |
| ExCB for IECEx Certified Service Facilities Scheme | [ ]  |
| ExCB for IECEx Conformity Mark Licensing System | [ ]  |
| ExCB for IECEx Certification of Personnel Competency Scheme | [ ]  |

NOTE 1 ExCB - IECEx Certification Body

NOTE 2 ExTL - IECEx Testing Laboratory

 NOTE 3 ATF-AdditionalTesting Facility

**1.2 Type of assessment:**

|  |  |
| --- | --- |
| Pre-assessment for candidate body | [ ]  |
| Initial assessment for candidate body | [ ]  |
| Surveillance  | [ ]  |
| Re-assessment  | [x]  |
| Scope extension | [x]  |

**1.3 Details of body**

**1.3.1 Country**

People's Republic of China

**1.3.2 Name of body**

China National Quality Supervision & Test Centre for Explosion-proof / Safety Products for Coal Mines (CMExC).

**1.3.3 Name and title of nominated principal contact**

|  |  |  |
| --- | --- | --- |
| **Name** | **Title** | **E-mail address** |
| Li Zhongqiang | Chief engineer | lzqsyyh@163.com |

**1.4 Assessment information**

**1.4.1 Members of the assessment team**

|  |  |
| --- | --- |
| **Name**  | **Role**  |
| Herbert Peters | IECEx Lead Assessor |

**1.4.2 Place(s) of assessment**

|  |  |
| --- | --- |
| RemoteNo.11, BinHe Road,ShenfuDemonstration Zone Liaoning,People's Republic of China | Assessment was carried out remotely with off-site review of documents in accordance with OD 060 IECEx Guide for Business Continuity – Management of Extraordinary Circumstances or Events Affecting IECEx Certification Schemes and Activities |

**1.4.3 Assessment date(s)**

20th May 2021 to 26nd July 2021

**1.5 Application information and background information on the assessment**

Due to problems with travelling caused by the COVID-19 a remote assessment was conducted under the provisions of IECEX OD 060, as agreed with the Secretariat.

**1.6 Scopes**

**1.6.1 ExTL scope**

The ExTL scope is different to the scope of ExCB. The ExTL is not integral with an ExCB, the scope of the ExTL is included in Annex A.

CMExC – was accepted as an accepted ExTL in 2005. CQM as an Associated ExCB for CMExC has a larger Scope than CMExC. CQM scope includes the following 29-1, 46, 62784 which are not in CMExC’s scope.

All the Standards in the current CMExC ExTL scope are included in the CQM scope and matches CMExC as an ExCB.

Application for a scope extension was made. The following Standard was covered as part of this assessment.

|  |  |  |
| --- | --- | --- |
| Number  | Title  | Comments |
| IEC 60079-33 Edition 1.0 | Explosive atmospheres – Part 33: Equipment protection by special protection “s” | Scope extension |

**2.**  **Common information**

**2.1 Legal entity of body**

CMExC is an independent enterprise. In 1998 CMExC passed CNAS accreditation for the first time. The legal entity is China Coal Technology Engineering Group (CCTEG) Shenyang Research Institute. The uniform social credit code is 91210400463312350A. The validity is not limited. The document was presented during the assessment and found to meet the requirements of the IECEx.

**2.2 Financial support**

CMExC has its income from testing activities.

**2.3 History**

CMExC is a large comprehensive quality supervision and inspection body on state level and chiefly undertakes inspections/tests of mining equipment. The history of CMExC may trace back to 1950’s. In 1987 CMExC passed the metrology certification and audit of the State Certification and Supervision Administrative Committee, and was authorized as a state level product quality supervision and test body. In 1993CMExC passed the re-assessment of the metrology certification. In 1998 CMExC passed CNAS accreditation for the first time and passed the audit for metrology certification of the State Coal Industry Ministry. In 2003CMExC passed the assessment of coalmine equipment test and inspection, authorized by the State Administration of Work Safety and the State Administration of Coal Mine Safety. In 2005 CMExC passed the initial assessment of IECEx and became one of the explosion-proof laboratories of the P.R. of China of the IECEx System.

**2.4 Documentation**

**2.4.1 Quality manual**

The Quality Manual consists of 4 levels:

Level 1: Quality Manual (FFA10000 series)

Level 2: Procedures (FFA20000 series)

Level 3: Operational Documents (FFA30000 series)

Level 4: Forms (FFA40000 series)

The current version was issued on April 1st, 2019, the latest revised version was on January13rd, 2021.

Procedure FFA23034 Procedure for IECEx control describes the operation of IECEx in Chinese language.

The quality manual, several procedures, operational documents and forms were reviewed during the assessment and found to meet the requirements of the IECEx.

**2.4.2 Procedures**

A comprehensive set of procedures were available and were found to be practical and to meet the IECEx requirements. There are presently 57 procedures. Their numbering begins with FFA2. Several procedures were checked during the assessment and found to meet the requirements of the IECEx.

**2.4.3 Work instructions**

There are presently 222 work instructions for use with IECEx activities to cover IEC standards in the IECEx scope. Their numbering begins with FFA3. Several work instructions were used during the witness testing and found to meet the requirements of the IECEx.

**2.4.4 Records (including test records where relevant)**

There are presently 208 documents concerning records for use with the IECEx scheme. Their numbering begins with FFA4. Some of the documents were checked during the assessment and found to meet the requirements of the IECEx.

**2.4.5 Document change control**

Document change control is described in document FFA23003Procedure for document control and FFA23034 Procedure for IECEx control (IECEx specific). The documents were checked during the assessment and found to meet the requirements of the IECEx.

**2.5 Confidentiality**

(For staff, contractors and members of advisory bodies)

Confidentiality is described in document FFA23001Procedure for confidentiality and protection of ownership. Each employee signs a confidentiality agreement together with the employment contract. The documents were checked during the assessment and found to meet the requirements of the IECEx.

**2.6 Communication with public and customers (Hard copy and Electronic)**

Communication with public and customers is described in document FFA23035Customer service Procedure. The documents were checked during the assessment and found to meet the requirements of the IECEx.

**2.7 Recognitions and agreements**

There are presently no such agreements outside those of the IECEx, e.g. CQM as ExCB.

**2.8 Internal audit**

Internal audit is described in document FFA1-4.14 and procedure FFA23011 for internal audit. These documents were checked during the assessment and found to meet the requirements of the IECEx. The internal audits are conducted once a year. Last internal audit date starts from 2020.8.31 to 2020.10.10. The minutes were reviewed during the assessment. There are 6 non-conformities were identified during the audit and were resolved by 28 October 2020.

**2.9 Management review**

Management review is described in document FFA1-4.15 and procedure FFA23012 for management review. These documents were checked during the assessment and found to meet the requirements of the IECEx. The Management reviews are conducted once a year. Last Management review is on 2021.03.03. The minutes were reviewed during the assessment. The management review included a full evaluation of the management review inputs and 4 improvement outputs for the following year.

**2.10 Contracting, subcontracting and witness testing**

**2.10.1 Contracting**

All IECEx activities are carried out by fulltime personal. There is no this contracting.

**2.10.2 Subcontracting**

The following tests are subcontracted by the body:

|  |  |  |
| --- | --- | --- |
| **Standard** | **Clause**  | **Test** |
| IEC 60079-1 | B.1.3 | Sintered metal elements - Density |
| IEC 60079-1 | B.1.4 | Sintered metal elements - Open porosity and/or fluid permeability |

More details, including bodies to whom tests will be subcontracted, details of accreditation of those bodies and details of how the subcontracted bodies are checked, was reviewed and found to comply with IECEx requirements~~.~~

**2.10.3 Off-site and Witness testing**

Off-site and witness testing is covered in procedure FFA23034Procedure for IECEx control according to OD 024.CMExC will negotiate with its ExCB-CQM if necessary then carry out testing.

**2.11 Training and competence**

There are comprehensive training programs covering the operation in the Ex field contained in FFA23013 Procedure for personnel training. Details of staff competencies are included in the site assessment report. The documents were checked during the assessment and found to meet the requirements of the IECEx.

**2.12 Complaints and appeals (including appeals to IECEx)**

Complaints and appeals are described in procedure FFA23006 Complaint handling procedures. The documents were checked during the assessment and found to meet the requirements of the IECEx.

**2.13 Impartiality**

Impartiality is described in document FFA1-0.6, The documents were checked during the assessment and found to meet the requirements of the IECEx.

For product testing and certification, it performs independently and is not affected by any administrative interference. There is a declaration signed on January 13, 2021, by the president of CMEx Censuring impartiality of CMExC.

**2.14 Active involvement in development of Decision Sheets**

FFA23034 Procedure for IECEx control contains many IECEx related requirements. It contains the requirement about Active involvement in development of Decision Sheets，such as Draft decision sheets are discussed through meeting by the engineers.

**2.15 Special facts to be noted**

None

**2.16 Supporting documentation**

Copies of additional supporting information for this assessment have been provided to the applicant and the IECEx Secretariat. These are included in a site assessment report or provided separately and include:

Details of issues raised and how these have been resolved

Checklist for ISO/IEC 17025

Completed Technical Capability Document (TCD)

Photos of the facilities/tests witnessed are included in the above TCD

Information on competencies (without the superseded standards)

Information on contracting/subcontracting

**2.17 Recommendations**

Based on the assessment performed on 20th May 2021 to 26nd July2021,CMExC is recommended for continued acceptance in the IECEx scheme as:

An ExTL in the IECEx Certified Equipment Scheme

This is according to the scope of the standards listed in this document (including the extension of scope), subject to resolution of the issues found during the assessment.

|  |  |  |
| --- | --- | --- |
| Herbert Peters |  |  |
| IECEx Lead Assessor |  |  |

Date: **2022 03 10**

**3.** **ExTL for IECEx Certified Equipment Scheme**

**3.1 Assessment references**

**3.1.1 General references**

1. IECEx02 IECEx Certified Equipment Scheme covering equipment for use in explosive atmospheres – Rules of Procedure
2. IECEx OD003-2 Assessment, surveillance assessment and re-assessment of ExCBs and ExTLs operating in the IECEx 02, IECEx Certified Equipment Scheme
3. IECEx OD009 Issuing of CoCs, ExTRs and QARs
4. ISO/IEC 17025General requirements for the competence of testing and calibration laboratories
5. IECEx OD 018 Harmonised check list for testing and calibration laboratories ISO/IEC 17025
6. IECEx TCD 60079, ISO 80079 Series and ISO 16852 Technical Capability Document
7. ExTAG decision sheets (DSs)
8. IECEx OD 202 IECEx Certified Equipment Scheme – IECEx Proficiency Testing Program

NOTE The latest editions of the above documents were applied, unless otherwise specified.

**3.1.2 Additional references applied for this assessment**

OD 060 IECEx Guide for Business Continuity – Management of Extraordinary Circumstances or Events Affecting IECEx Certification Schemes and Activities

OD 233 IECEx Certified Equipment Scheme - Assessment of Ex “s" Equipment Ed. 2.0

OD 280 IECEx Certified Equipment Scheme – Guide to Certification of Nonelectrical Equipment and Protective Systems

**3.2 Candidate persons ExTLs Interviewed**

See below

**3.3 Associated ExCB(s)**

Associated ExCB is China Quality Mark Certification Group Co., Ltd (CQM).Its address is No. 33 Zengguang Road, Haidian District, Beijing City 100037, P.R. of China.

CMExC signed contract with CQM about IECEx business. The last contract was signed on September19th, 2019. The contract is valid for three years.

The contract was reviewed during the assessment and found to meet the requirements of the IECEx.

**3.4 Organisation**

**3.4.1 Names, titles and experience of the senior executives**

|  |  |  |
| --- | --- | --- |
| **Name** | **Title** | **Experience (years)** |
| **Liang Yunto** | **Director** | **23** |
| **Liu Chunfu** | **Executive Vice Director** | **35** |
| **Dong Chunhai** | **Vice-Director, Technical director** | **36** |
| **Zhang Hongfu** | **Vice Director, quality direction** | **27** |
| **Ma Yunlong** | **Vice Director** | **15** |

|  |  |  |
| --- | --- | --- |
| **3.4.2 Name, title and experience of the quality management** **representative** | **Title** | **Experience (years)** |
| **Zhang Hongfu** | **Vice Director, quality director** | **27** |
| **3.4.3 Other employees in ExTL activity - Name** | **Title/responsibility** | **Experience in Ex (years)** |
| **Yang Guangyu** | **Director of Flame-proof Department** | **24** |
| **WuBeiping** | **Director of Technology Department** | **20** |
| **Liu Yongming** | **Vice Director of Flame-proof Department** | **16** |
| **Shi Lei** | **Vice Director of Flame-proof Department** | **19** |
| **Li Bing** | **Vice Director of Flame-proof Department** | **13** |
| **Wang Hui** | **Chief Engineer of Flame-proof Department** | **19** |
| **Kang Liying** | **Testing person** | **18** |
| **Ren Nan** | **Testing person** | **18** |
| **Li Zhenxi** | **Testing person** | **12** |
| **Lin Na** | **Testing person** | **19** |
| **Feng Liguo** | **Testing person** | **16** |
| **Wang Zhan** | **Testing person** | **31** |
| **Tu Zhiyu** | **Testing person** | **41** |
| **Wen Luchun** | **Testing person** | **13** |
| **GengYanbo** | **Testing person** | **18** |
| **Zhang Weibin** | **Testing person** | **11** |
| **Ju Zhe** | **Testing person** | **11** |
| **Shi Ruotong** | **Testing person** | **7** |
| **Huang Xuanzhe** | **Testing person** | **7** |
| **Li Tongzhe** | **Testing person** | **9** |
| **Chen Fandong** | **Testing person** | **9** |
| **Liang Bo** | **Testing person** | **5** |
| **Chen Shuopeng** | **Testing person** | **3** |
| **Ma Long** | **Director of Safety Instrument Department** | **9** |
| **Li Zhe** | **Vice Director ofSafety Instrument Department** | **19** |
| **Li Zhongqiang** | **Chief engineer &Vice Director ofSafety Instrument Department** | **14** |
| **Zhang Yan** | **Testing person** | **17** |
| **Liu Yajun** | **Testing person** | **7** |
| **Pan Yanan** | **Testing person** | **16** |
| **Wang Dong** | **Testing person** | **12** |

|  |  |  |
| --- | --- | --- |
| **Ha Xun** | **Testing person** | **35** |
| **Zhang Fang** | **Testing person** | **28** |
| **Liu Zhening** | **Testing person** | **2**  |
| **Guo Changna** | **Testing person** | **8** |
| **Liu Yiping** | **Director of Electrical Equipment Department** | **36** |
| **Liu Xiping** | **Director of Cable Test Department** | **15** |
| **Chen Jun** | **Calibration & Equipment Management Clerk** |  **24** |
| **Zuo Hang** | **File Management Clerk** | **15** |
| **Wang Yukun** | **Testing person** |  **12** |
| **Wang Shuai** | **Testing person** |  **13** |
| **Tong Dejun** | **Testing person** | **18** |
| **Zhang Hongkui** | **Testing person** |  **8** |

**3.5 Organizational structure**

See Annex B and C: Organization Chart.

**3.6 Resources**

CMExC is well resourced with sufficient testing equipment covering the requirements for the scope of standard in the IECEx Scheme.

Subcontracting is used for standard IEC 60079-1, clause B1.3, “Sintered metal elements – Density” and B.1.4 “Sintered metal elements - Open porosity and/or fluid permeability”

**3.7 Test reports issued**

Number of test reports (ExTRs) issued under for the preceding two years for each type of protection. See as following:

|  |  |  |  |
| --- | --- | --- | --- |
| **Standard numbers** | **Type of protection or other identifying information** | **Number of issued reports (ExTRs) (for last 2 years)** | **Total** |
| 2019 | 2020 |
| IEC 60079-0 | Explosive atmospheres - Part 0: Equipment - General requirements | 5(IECEx).1200(GB) | 10(IECEx);1468(GB) | 15(IECEx);2668(GB) |
| IEC 60079-1 | Explosive atmospheres –Part 1: Equipment protection by flameproof enclosures “d” | 4(IECEx).1400(GB) | 10(IECEx);1800(GB) | 14(IECEx);3200(GB) |
| IEC60079-2 | Explosive atmospheres - Part 2: Equipment protection by pressurizedenclosure “p’ | 0 | 1(GB)**0(IECEx)** | 1(GB)0(IECEx) |
| IEC 60079-5 | Explosive atmospheres - Part 5: Equipment protection by powder filling “q” | 0 | 0 | 0 |
| IEC 60079-6 | Explosive atmospheres - Part 6: Equipment protection by oil immersion “o” | 0 | 0 | 0 |
| IEC 60079-7 | Explosive atmospheres - Part 7: Equipment protection by increasedsafety "e" | 3(GB); 0(IECEx) | 4(GB) 0(IECEx) | 7(GB) 0(IECEx) |
| IEC 60079-11 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” | 1(IECEx);995(GB) | 1(IECEx);1125(GB) | 2(IECEx);2120(GB) |
| IEC 60079-13 | Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v" | 0 | 0 | 0 |
| IEC 60079-15 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | 0 | 0 | 0 |
| IEC 60079-18 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | 28(GB) 0(IECEx) | 18(GB) 0(IECEx) | 46(GB) 0(IECEx) |
| IEC 60079-25 | Explosive atmospheres – Part 25: Intrinsically safe electrical systems | 0 | 0 | 0 |
| IEC 60079-26 | Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga | 1(IECEx); | 0 | 1(IECEx) |
| IEC 60079-28 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation | 0 | 0 | 0 |
| IEC 60079-30-1 | Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements | 0 | 0 | 0 |
| IEC 60079-31 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | 0(IECEx)9(GB) | 0(IECEx)17(GB) | 0(IECEx)26(GB) |
| IEC 80079-36 | Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements | 0 | 0 | 0 |
| IEC 80079-37 | Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres – Non electrical type of protection constructional safety ”c” control of ignition source ”b”, liquid immersion ”k” | 0 | 0 | 0 |

**3.8 National accreditation**

The national accreditation certification for ISO/IEC 17025 is shown in Annex D.

CMExC holds accreditation granted by the Chinese National Accreditation Service for Conformity Assessment (CNAS) under number L1335. At the time of the IECEx re-assessment, the certificate showed validity until May 30th, 2024. The accreditation covers all standards in the IECEx scope. Beside the Chinese standards (GBs) all relevant IEC standards are listed in the accreditation schedule as well. See ANNEX D for the certificate.

NOTE The national accreditation is checked annually by the IECEx Secretariat.

**3.9 Calibration**

The procedure for test and calibration is described in Procedure Document FFA 23022 Procedure for measurement traceability. Calibration is handled by an employee dedicated to this activity. The equipment is listed on forms (FFA43054) showing all relevant information. The procedure and the calibration plan were checked during the assessment and found to meet the requirements of the IECEx. Several original calibration certificates were reviewed and found to meet the required of the IECEx.

**3.10 Tests witnessed during the assessment visit**

The following tests were witnessed during the assessment visit:

|  |  |  |  |
| --- | --- | --- | --- |
| Standard and edition | Clause number | Test | Comments |
| IEC 60079-0: Edition 7 | 26.17 | Transferred charge test on a sample for IIC | **The charged standard sample PTFE is measured coulombs: 111.7nC.** |
| IEC 60079-1: Edition 7 | 15.2.2 and 15.2.3.3 | Determination of explosion pressure IIB /: Overpressure test – Second method (dynamic) for IIB | **Measured reference pressure 882kPa.** |
| IEC 60079-2: Edition 6 | 16.5 | Purging and dilution tests for a pressurized enclosure with an internal source of release for IIC | **Purging test：The purging time taken until there is no sample point where there is an oxygen concentration exceeding 2% .****Dilution test：After 30 min，the oxygen concentration was less than 2%.** |
| IEC 60079-11: Edition 6 | 10.8 | Type tests for diode safety barriers and safety shunts Um = 230 Vac | **Zener Voltage before the test: 5.118V, pulse current:31A, voltage after the test:5.124V.** |
| IEC 60079-31: Edition 2 | 6.1.2 | Thermal tests for “ta” testing | **The max. Internal component temperature is 41.5℃ when ambient temperature is 23.0℃** |

**3.11 Participation in IECEx Proficiency Testing Programs**

Program: PTB Ex PT Scheme

|  |  |  |
| --- | --- | --- |
| **Year(s) of participation** | **IECEx Proficiency Testing program** | **General information about results** |
| 2010 | Explosion Pressure | Satisfactory |
| 2010 | Spark Ignition | Satisfactory |
| 2013 | Flame Transmission | Satisfactory |
| 2013 | Temperature Classification | Satisfactory |
| 2015 | Intrinsic Safety | Satisfactory |
| 2017 | Pressurized Enclosure | Satisfactory |
| 2017 | Explosion Pressure | Satisfactory |
| 2019 | Battery Testing | Satisfactory |
| 2019 | Tests of Enclosures | Satisfactory |

**3.12 Comments (including issues found during assessment)**

CMExC was well-prepared for the scope expansion assessment.

There were some issues related to the following:

Missing some information in the TCD:

Missing information in the ExTRs

Different issues to the witness test

Missing experiences to the ignition hazard assessment

Detailed information on this is shown in the site assessment report. All issues have been resolved to the satisfaction of the assessor.

**4. Annexes**

**Annex A - Scope for IECEx Certified Equipment Scheme**

**A.1 Current standards**

| **Number**  | **Title**  | **Comments** |
| --- | --- | --- |
| IEC 60079-0 Edition 7.0 | Explosive atmospheres - Part 0: Equipment - General requirements  | OK |
| IEC 60079-1Edition 7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproofenclosures “d” | OK |
| IEC 60079-2 Edition 6.0 | Explosive atmospheres - Part 2: Equipment protection by pressurizedenclosure “p’ | OK |
| IEC 60079-5Edition 4.0 | Explosive atmospheres - Part 5: Equipment protection by powder filling “q” | OK |
| IEC 60079-6Edition 4.1 | Explosive atmospheres - Part 6: Equipment protection by oil immersion “o” | OK |
| IEC 60079-7Edition 5.1 | Explosive atmospheres - Part 7: Equipment protection by increasedsafety "e" | OK |
| IEC 60079-11Edition 6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” | OK |
| IEC 60079-13Edition 2.0 | Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v" | OK |
| IEC 60079-15Edition 5.0 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | OK |
| IEC 60079-18Edition 4.1 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | OK |
| IEC 60079-25Edition 3.0 | Explosive atmospheres – Part 25: Intrinsically safe electrical systems | OK |
| IEC 60079-26Edition 3.0 | Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga | OK |
| IEC 60079-28Edition 2.0 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  | OK |
| IEC 60079-29-1Edition 2.1 | Explosive atmospheres - Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases | \_ |
| IEC 60079-29-4Edition 1.0 | Explosive Atmospheres – Part 29-4: Gas detectors - Performance requirements of open path detectors for flammable gases | - |
| IEC/IEEE 60079-30-1Edition 1.0 | Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements | OK |
| IEC 60079-31Edition 2.0 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | OK |
| IEC TS 60079-32-1Edition 1.1 | Explosive atmospheres - Part 32-1: Electrostatic hazards, guidance(may be used for testing purposes but not for issuing an IECEx Certificate of Conformity) | - |
| IEC 60079-32-2Edition 1.0 | Explosive atmospheres - Part 32-2: Electrostatics hazards - Tests(may be used for testing purposes but not for issuing an IECEx Certificate of Conformity) | - |
| IEC 60079-33Edition 1.0 | Explosive atmospheres – Part 33: Equipment protection by special protection “s” | Scope extension |
| IEC 60079-35-1Edition 1.0 | Explosive atmospheres – Part 35-1: Caplights for use in mines susceptible to firedamp – General requirements – Construction and testing in relation to the risk of explosion | - |
| IEC 60079-35-2Edition 1.0 | Explosive atmospheres – Part 35-2: Caplights for use in mines susceptible to firedamp – Performance and other safety-related matters | - |
| IS0 80079-36Edition 1.0 | Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements | OK |
| ISO 80079-37Edition 1.0 | Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres – Non electrical type of protection constructional safety ”c” control of ignition source ”b”, liquid immersion ”k” | OK |
| IEC TS 60079-39Edition 1.0 | Explosive atmospheres - Part 39: Intrinsically safe systems with electronically controlled spark duration limitation  | \_ |
| IEC TS 60079-40Edition 1.0 | Explosive atmospheres - Part 40: Requirements for process sealing between flammable process fluids and electrical systems | \_ |
| IEC TS 60079-42Edition 1.0 | Explosive atmospheres - Part 42: Electrical safety devices for the control of potential ignition sources from Ex-Equipment(may be used for testing purposes but not for issuing an IECEx Certificate of Conformity) | \_ |
| IEC TS 60079-46Edition 1.0 | Explosive atmospheres – Part 46 - Equipment assemblies | \_ |
| IEC 62784Edition 1.1 | Vacuum cleaners and dust extractors providing equipment protection level Dc for the collection of combustible dusts - Particular requirements | \_ |
| ISO 16852Edition 2 | Flame arrestors - Performance requirements., test methods and limits for use | - |
| IEC 62086-1 |  Part 1: General and testing requirements - Electrical apparatus for explosive gas atmospheres – Electrical resistance trace heating | OK |

**A.2 Superseded standards**

The following superseded standards may form part of a body’s scope, generally for historical reasons.

| **Number**  | **Title**  | **Comments** |
| --- | --- | --- |
| IEC 60079-27Edition 2.0 | Explosive atmospheres – Part 27: Fieldbus intrinsically safe concept (FISCO) | OK |
| IEC 61241-0Edition 1.0  | Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements | OK |
| IEC 61241-1 Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosure “tD” | OK |
| IEC 61241-4 Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 4: Protection by pressurization "pD"  | OK |
| IEC 61241-11Edition 1.0 | Electrical apparatus for use in the presence of combustible dust – Part 11: Protection by intrinsic safety 'iD' | OK |
| IEC 61241-18Edition 1.0  | Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation "mD" | OK |

**Annex B - Overall Organisation Chart**



******Annex C - Organisation Chart of ExTL**



**Annex D - Accreditation Certificate for ISO/IEC 17025**

