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

**TITLE: Re-assessment Report for the continued acceptance of Test Laboratory for Explosion-proof Electric Products of CNOOC Tianjin Chemical Research and Design Institute of Industry Co., Ltd./Supervision & Test Centre of Ex-products of China Petroleum & Chemical Industry (PCEC) an Accepted ExTL within the IECEx Equipment Scheme 02.**

**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 Reassessment Report for the continued acceptance of *Test Laboratory for Explosion-proof Electric Products of CNOOC Tianjin Chemical Research and Design Institute of Industry Co., Ltd./Supervision & Test Centre of Ex-products of China Petroleum & Chemical Industry (PCEC)*, an Accepted ExTL within the IECEx Equipment Scheme 02.

This report is hereby submitted for endorsement during the 2022 ExMC Meeting.

***Chris Agius***

**IECEx Secretariat**

|  |  |
| --- | --- |
| **IECEx Secretariat****Australia Square****Level 33, 264 George Street****Sydney. NSW 2000****Australia** |  **Tel: +61 2 4628 4690** **Fax: +61 2 4625 3480**  **Email: info@iecex.com** |

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 OD 003-2 for the Certified Equipment Scheme

IECEx ExTL assessment report for < PCEC >

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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# Assessment information

## 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 - Additional Testing Facility

## Type of assessment:

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

## Details of body

### Country

People's Republic of China

### Name of body

Test Laboratory for Explosion-proof Electric Products of CNOOC Tianjin Chemical Research and Design Institute of Industry Co., Ltd./Supervision & Test Centre of Ex-products of China Petroleum & Chemical Industry (PCEC).

### Name and title of nominated principal contact

|  |  |  |
| --- | --- | --- |
| Name | Title | E-mail address |
| Yin Hong | Executive director  | Yinhong@pcec.com.cn |

## Assessment information

### Members of the assessment team

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

### Place(s) of assessment

|  |  |
| --- | --- |
| RemoteNo. 85, No. 3 Road Hongqiao DistrictTianjin 300131PRC | 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 |

### Assessment date(s)

From to 31. May to 18 June 2021

## 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.

At the time of the assessment, PCEC application as an ExCB was under voting by the ExMC, with PCEC accepted as an ExCB during September 2021. Therefore the scope of this re-assessment, was limited to PCEC as an ExTL. Future assessments will be aligned with their scope as ExCB and ExTL.

## Scopes

### ExTL scope

The ExTL scope is different to the scope of ExCB. At the time of the assessment, PCEC application as an ExCB was under voting by the ExMC. The ExTL was not, integral with an ExCB at the time of the re-assessment. The scope of the ExTL is included in Annex A.

PCEC (Tianjin) Certification Services Co., Ltd. (PCEC) – was accepted as an accepted ExCB in September 2021 as Integral an ExCB with PCEC ExTL. CQM as an Associated ExCB for PCEC has a larger Scope than PCEC. CQM scope includes the following 29-1, 46, 61241-0 1-1 18 62086-1 62784 which are not in PCEC’s scope.

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

# Common information

## Legal entity of body

PCEC is an organization within CNOOC TRICI. For product testing and certification, it performs independently and is not affected by any administrative interference. There is a declaration signed on 30 June 2018 by the president of CNOOC TRICI ensuring impartiality of PCEC. This declaration under number FB/M-2018 was presented during the assessment. PCEC is operating under the legal entity of CNOOC TRICI. CNOOC TRICI is a registered company covered by certificate 91120000401360939E from the Tianjin City Hong Qiao District Industry and Commercial Administration Bureau. It was first issued on December 8th, 2000. The valid certificate was presented during the assessment. It was last issued on Oct. 29th, 2019 and remains valid until a change is required.

## Financial support

PCEC mainly depends on income from testing. Furthermore, projects are funded from the Government, Tianjin City and in particular the Chinese petrochemical industry. There is also funding from the parent body CNOOC TRICI as development fund for improvement of facilities or for research projects. The income from all the above meet all the expenses for the operation of PCEC.

## History

PCEC is a division of CNOOC Tianjin Research and Design Institute of Chemical Industry (abbr. CNOOC TRICI). CNOOC TRICI was founded in 1958 as a Government owned body. In 2000 it became a state owned enterprise. In 2005 PCEC became an ExTL in the IECEx Scheme. In October 2006, it joined CNOOC. Within CNOOC TRICI, PCEC was established as a Supervision and Testing center of Explosion-proof Quality of Electric Products Ministry of Chemistry to undertake testing of explosion-proof products for explosive atmospheres (gas/ vapor/ mist/ dust) and performance testing of electric products used in environments such as chemical corrosion and sea mist. In 2002, it renewed its name as the Supervision & Test Center of Ex-products of China Chemical & Petroleum Industry.

## Documentation

### Quality manual

The quality system of PCEC consists of four levels:

Level A: FB/M Quality Manual

Level B: FB/P Procedures

Level C: FB/Z Work Instructions

Level D: FB/Q Quality Documents / Forms

Found to meet the requirements of the IECEx.

### Procedures

A comprehensive set of procedures were available and were found to be practical and to meet the IECEx requirements. Procedures can be found in the Level B (FB/P) manual.

### Work instructions

Work instructions can be found in the Level C (FB/Z) manual. Work instructions were used during the assessment and found to meet the requirements of the IECEx.

### Records (including test records where relevant)

Record control is described in procedure FB/P-10-2018 and was found to comply with IECEx OD 207 Guidance on retention of records.

### Document change control

Document change control is described in procedure FB/P-03-2018, which covers electronic and paper based documents. This was reviewed and found to comply with IECEX requirements

## Confidentiality

(For staff, contractors and members of advisory bodies)

Confidentiality is described in procedure FB/P-02-2018. The procedure was reviewed and found to meet the requirements of IECEx. Each employee signs a confidentiality agreement together with the employment contract. Several employment contracts concerning the confidentiality were checked and found to meet the requirements.

## Communication with public and customers (Hard copy and Electronic)

PCEC uses its Homepage (PCEC website is <http://www.pcec.com.cn>) as well as publications for communicating information and pointing to the provided services.

## Recognitions and agreements

LCIE, DNV, NANIO CCVE, TÜV Rheinland, CML and TÜV SÜD have agreements or Declaration of Cooperation with PCEC, mainly related to the ATEX activities.

## Internal audit

Clause 8.8 of the Quality Manual deals with the internal audits. Detail procedure is given with document FB/P-11 -2018. During the assessment, the internal audit plan and records showing the resolution of the open issues were checked and found to meet the requirements of IECEx.

## Management review

Clause 8.9 of the Quality manual deals with management review. Detail procedure is given with document FB/P-12 -2018. The last management review was performed on December 25th, 2020. The minutes of the management meeting was reviewed and found to meet the requirements of the IECEx. The next management meeting will take place in December 2021

## Contracting, subcontracting and witness testing

### Contracting

 Personnel Management is described in procedure FB/P-30-2018.

### Subcontracting

The following tests are, or may be, subcontracted by the body:

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

### Off-site and Witness testing

FB/Z-JG5-003-2016, Using manufacturer/user facilities to conduct witness test for International certification projects work instructions. This includes the requirements for OD 024

It includes the requirements of the IECEx CB to register the site of the testing via the OD 024 On-Line Testing Register.

The test report notes the fact of testing having been carried out outside the normal laboratory premises, when applicable, according to IECEx OD 024.

## Training and competence

There are comprehensive training programs covering the operation in the Ex field contained in FB/P-14-2018 *Procedure for Personnel Training and Assessing*

Details of staff competencies are included in the site assessment report F-004

## Complaints and appeals (including appeals to IECEx)

Complaints and appeals are described in FB/P-06-2018 *Resolution Procedure of Complaints* The procedure was reviewed and found to meet the requirements of the IECEx.

## Impartiality

The Quality Manual and the Quality Policy provide a focus on impartiality by PCEC Tianjin.

For product testing and certification, it performs independently and is not affected by any administrative interference. There is a declaration signed on 30th June 2018 by the president of CNOOC TRICI ensuring impartiality of PCEC.

## Active involvement in development of Decision Sheets

FB/Z-JG5-005-2018 *procedure to comment on draft decision sheets, and raise ExTAG Decision Sheets draft* refers to commenting on IECEx Decision Sheets.

## Special facts to be noted

None other than those identified throughout this report.

## 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
* Information on contracting/subcontracting

## Recommendations

Based on the assessment performed on 18. June 2021, PCEC 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, subject to resolution of the issues found during the assessment.

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

Date: December 2021

#

#  ExTL for IECEx Certified Equipment Scheme

## Assessment references

### 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 17025 General 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.

### 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

## Candidate ExTL persons interviewed

No Candidate ExTL.

## Associated ExCB(s)

China Quality Mark Certification Group Co., Ltd, (CQM), No.33 Zengguang Road, Haidian District, Beijing City, Postal Code:100048, P.R. China.

The contract between CQM and PCEC, is last issued on Dec. 18th, 2019, was reviewed and found to meet the requirements of the IECEx. The contract refers to the CNAS accreditation number L0381.

Since the date of this assessment PCEC (Tianjin) Certification Services Co., Ltd. (PCEC) has since become an accepted ExCB.

## Organisation

### Names, titles and experience of the senior executives

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Yin Hong | Executive director | Engineer, 16 years |

### Name, title and experience of the quality management representative

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Pang Jianjun | Quality Manager | Senior economist, 19 years |

### Other employees in ExTL activity

|  |  |  |
| --- | --- | --- |
| Name | Title/responsibility | Experience in Ex (years) |
| Liu Bing | Senior engineerTechnical manager | 22 years |
| An Penghui | EngineerHead of international business | 15 years |
| Xing Yun | Senior engineer | 16 years |
| Yu Aisheng | Senior engineerHead of type “i" business | 9 years |
| Liu Yanjie | Senior engineerHead of motor and non-eletrical business | 16 years |
| Liu Hao | Engineer | 7 years |
| Gao Lie | Engineer | 8 years |
| Shang Zhikui | Senior engineer | 33 years |
| Guo Zhijia | Senior engineer | 21 years |
| Li Bofeng | Engineer | 7 years |
| Yang Jinnan | Senior engineer | 21 years |
| Meng Xue | Senior engineer | 14 years |
| Song Lidi | Engineer | 13 years |
| Qiao Qin | Engineer | 12 years |
| Zhang Haiou | Vice general engineer | 25 years |
| Zhuang Xiaoyu | Engineer | 9 years |
| Han Yipeng | Engineer | 12 years |
| Guo Jun | Assistant Engineer | 8 years |
| Gu Xiang | Engineer | 11 years |
| Wang Yaguang | Engineer | 8 years |
| Ge Shengzhe | Assistant engineer | 13 years |
| Yang Xi | Engineer | 8 years |
| Yuan Gang | Engineer | 6 years |

## Organizational structure

See ANNEΧ B AND C

## Resources

PCEC has presently 95 employees. 23 employees are active in the IECEx Scheme.

PCEC has a wide range of testing equipment covering the requirements for the scope of standard in the IECEx Scheme.

The total available test area is 4300 m2.

## Test reports issued

Number of test reports (ExTRs) issued under for the preceding two years for each type of protection. For new applications these should be for national or regional schemes and for currently accepted bodies IECEx ExTRs should be shown (test reports for other schemes may also be shown):

|  |  |  |  |
| --- | --- | --- | --- |
| Standard numbers | Type of protection or other identifying information | Number of issued reports (ExTRs) (for last 2 years) | Total |
| 2019 | 2020 |
| IEC 60079-1 | Equipment protection by flameproof enclosures "d" | 9 | 10 | 19 |
| IEC 60079-2 | Equipment protection by pressurized enclosure "p" | 1 | 0 | 1 |
| IEC 60079-5 | Equipment protection by powdered filling "q" | 2 | 0 | 2 |
| IEC 60079-7 | Equipment protection by increased safety "e" | 8 | 7 | 15 |
| IEC 60079-11 | Equipment protection by intrinsic safety "i" | 0 | 1 | 1 |
| IEC 60079-28 | Protection of equipment and transmission systems using optical radiation | 1 | 0 | 1 |

## National accreditation

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

## Calibration

Calibration is described in procedure FB/P-23-2018. Samples were taken on a coulomb meter, multimeter and micrometer carried out. The test devices were validly calibrated.

##  Tests witnessed during the assessment visit

The following tests were witnessed during the assessment:

| Standard and edition | Clause number | Test | Comments |
| --- | --- | --- | --- |
| IEC 60079-0: Edition 7 | 26.17 | Transferred charge test on a sample for IIC | measured coulombs：4.7nC |
| 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：442kPa |
| IEC 60079-2: Edition 6 | 16.5 | Purging and dilution tests for a pressurized enclosure with an internal source of release for IIC | After 30min, the concentration of CO2 and He are 0.20% and 0.10%. |
| IEC 60079-11: Edition 6 | 10.8 | Type tests for diode safety barriers and safety shunts Um = 230 Vac | Zener voltage before the test: 5.64V; pulse current: 25.6A; voltage test voltage after the test, 5.63V |
| IEC 60079-31: Edition 2 | 6.1.2 | Thermal tests for “ta” testing | The max. internal component temperature is 33.8℃ when the ambient temperature is 23.5℃. |

## Participation in IECEx Proficiency Testing Programs

Program: PTB Ex PT Scheme

|  |  |  |
| --- | --- | --- |
| Year(s) of participation | IECEx Proficiency Testing program | General information about results |
| 2011-2012 | Program 1 "Explosion pressure" | Satisfactory |
| 2011-2012 | Program 2 "Spark ignition" | Satisfactory |
| 2013-2014 | Program 3 "Flame Transmission" | Satisfactory |
| 2013-2014 | Program 4 "Temperature Classification" | Satisfactory |
| 2015-2016 | Program 5 "Electrostatic Charge" | Satisfactory |
| 2015-2016 | Program 6 "Intrinsic Safety" | Satisfactory |
| 2017-2018 | Program 7 "Explosion Pressure" | Satisfactory |
| 2017-2018 | Program 8 "Pressurized Enclosure" | Satisfactory |
| 2019-2020 |  Battery Testing | Satisfactory |
| 2019-2020 |  Tests of Enclosures | Satisfactory |

## Comments (including issues found during assessment)

PCEC was well-prepared for the assessment.

There were some issues related to the following:

Missing some information in the TCD:

Missing information in the ExTRs

Missing information to the witness test

Some limitations are missing in reports

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

#   Annexes

1. Scope for IECEx Certified Equipment Scheme
	1. Current standards

| Number  | Title  | Comments |
| --- | --- | --- |
| IEC 60079-0 Edition 7.0 | Explosive atmospheres - Part 0: Equipment - General requirements  | √ |
| IEC 60079-1Edition 7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproofenclosures “d” | √ |
| IEC 60079-2 Edition 6.0 | Explosive atmospheres - Part 2: Equipment protection by pressurizedenclosure “p’ | √ |
| IEC 60079-5Edition 4.0 | Explosive atmospheres - Part 5: Equipment protection by powder filling “q” | √ |
| IEC 60079-6Edition 4.1 | Explosive atmospheres - Part 6: Equipment protection by oil immersion “o” | √ |
| IEC 60079-7Edition 5.1 | Explosive atmospheres - Part 7: Equipment protection by increasedsafety "e" | √ |
| IEC 60079-11Edition 6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” | √ |
| IEC 60079-13Edition 2.0 | Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v" | √ |
| IEC 60079-15Edition 5.0 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | √ |
| IEC 60079-18Edition 4.1 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | √ |
| IEC 60079-25Edition 3.0 | Explosive atmospheres – Part 25: Intrinsically safe electrical systems | √ |
| IEC 60079-26Edition 3.0 | Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga | √ |
| IEC 60079-28Edition 2.0 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  | √ |
| 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 | √ |
| IEC 60079-31Edition 2.0 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | √ |
| 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” | √ |
| 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 | √ |
| 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” | √ |
| 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 |  |

* 1. 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) | √ |
| IEC 61241-0Edition 1.0  | Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements | √ |
| IEC 61241-1 Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosure “tD” | √ |
| IEC 61241-4 Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 4: Protection by pressurization "pD"  | √ |
| IEC 61241-11Edition 1.0 | Electrical apparatus for use in the presence of combustible dust – Part 11: Protection by intrinsic safety 'iD' | √ |
| IEC 61241-18Edition 1.0  | Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation "mD" | √ |
| IEC 62013-1 Edition 2.0 | Caplights for use in mines susceptible to firedamp - Part 1: General requirements - Construction and testing in relation to the risk of explosion |  |
| IEC 62013-2 Edition 2.0 | Caplights for use in mines susceptible to firedamp - Part 2: Performance and other safety-related matters |  |
| IECEx DS2015/001A2015 10 09 | Equipment assemblies |  |

1. Overall Organisation Chart



1. Organisation Chart of ExTL



1. Accreditation Certificate for ISO/IEC 17025

