**INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC SYSTEM FOR**

**CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN**

**EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

**TITLE: IECEx Assessment Report for the acceptance of China Quality Certification Center (CQC), to become an IECEx Accepted Certification Body (ExCB) in the IECEx System, Equipment Scheme, IECEx 02.**

**INTRODUCTION**

This document contains the IECEx Assessment Report for the acceptance of China Quality Certification Center (CQC), to become an IECEx Accepted Certification Body (ExCB) in the IECEx System, Equipment Scheme, IECEx 02.

***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 2023 03 24***

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

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**Chris Agius**

IECEx Secretary

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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 OD 003-2 for the Certified Equipment Scheme

Operational Document IECEx OD 316-\* for the Certified Service Facility Scheme

Operational Document IECEx OD 422 for the IECEx Conformity Mark Licensing Scheme

Operational Document IECEx OD 501 for the Personnel Competence Scheme

IECEx ExCB assessment report for

China Quality Certification Center (CQC), Beijing, China

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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# Assessment information

## Type of body covered by this assessment:

|  |  |
| --- | --- |
| ExCB for IECEx Certified Equipment Scheme | [x]  |
| ~~ExTL for IECEx Certified Equipment Scheme~~ | [ ]  |
| ~~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 | [x]  |
| ~~Surveillance~~  | [ ]  |
| ~~Re-assessment~~  | [ ]  |
| ~~Scope extension~~ | [ ]  |

##

## Details of body

### Country

People's Republic of China

### Name of body

China Quality Certification Center (CQC)

*NOTE – CQC has signed agreements with 6 ExTLs - CMExC, EETI, CCCMT, CHEM, SQI\_ZM, CCTEG Copies of the Agreements are held by the IECEx Secretariat*

### Name and title of nominated principal contact

|  |  |  |
| --- | --- | --- |
| Name | Title | E-mail address |
| Bian Jing | Technical Director, International Dept. | bianj@cqc.com.cn |

## Assessment information

### Members of the assessment team

|  |  |
| --- | --- |
| Name  | Role  |
| Marino Kelava | IECEx Lead Assessor |

### Place(s) of assessment

|  |  |
| --- | --- |
| China Quality Certification Center (CQC) | Section 9, No.188, Nansihuan (the South Fourth Ring Road) Xilu (West Road), 100070 Beijing, P.R. China |

Due to the COVID-19 pandemic related restrictions, the assessment is remotely carried out by using ZOOM. IECEx OD-060 is applied for this assessment.

### Assessment date(s)

Remote assessment sessions were conducted from 12th to 15th December 2022

## Application information and background information on the assessment

This is an Initial Assessment of Applicant ExCB in the IECEx Scheme 02. CQC are accredited to ISO/IEC 17065. A copy of the accreditation certificate is included in Annex D.

The completed ISO/IEC 17065 checklist (OD-107) is retained by the Secretariat. To this point the Assessment Team were able to conclude compliance with ISO/IEC 17065.

For this assessment, the IECEx Assessment Team was led by Marino Kelava, IECEx Lead Assessor, and while assessing during the COVID-19 pandemic international travel restrictions, a remote assessment in accordance with OD-060 was conducted. The platform ZOOM was used with the combined use of e-mails and zoom interviews.

## Scopes

### ExCB scope for equipment certification scheme

The scope for the ExCB is shown in Annex A.

### ExTL scope

CQC has signed agreements with 6 ExTLs - CMExC, EETI, CCCMT, CHEM, SQI\_ZM, CCTEG*.* These ExTLs cover the full scope of CQC’s application. Cooperation agreements between CQC and each one of the ExTLs were reviewed during the assessment and found to meet the requirements of ISO/IEC 17065 and IECEx.

### ATF Scope

N/A

 ExCB scope for Service Facilities Scheme

N/A

## ExCB scope for Conformity Mark Licensing Scheme

N/A

## ExCB scope for IECEx Personnel Competence Scheme

N/A

# Common information

## Legal entity of body

China Quality Certification Center (CQC) is a state-owned, third-party, not-for-profit certification body set up by the former General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C., and belonging to China Certification & Inspection (Group) Co.,Ltd. (CCIC). CQC joined the IECEE in 1989 and the current scope in the IECEE covers 18 product categories.

Being a public institution, CQC is registered at China Administration for the Registration of Public Institutions with registration No. 121000007178020352.

The document was checked during the assessment and found to meet the requirements of the IECEx.

## Financial support

As a professional, independent and impartial state-owned body, CQC is a self-funding organization relying on the income from its certification services to fund its operating and investment costs. There is no financial support from the government or from any other source.

## History

China Quality Certification Center (CQC) is a state-owned, third-party, not-for-profit certification body set up by the former General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C., and belonging to China Certification & Inspection (Group) Co., Ltd. (CCIC). The product certification service of CQC, including certification of Ex products, is established according to the requirements of ISO/IEC 17065:2012 and accredited by CNAS (Certificate No. CNAS C001-P), a signatory of IAF.

CQC has been operating in another conformity assessment system under the IEC - the IECEE as an NCB since 1990 and has issued over 60,000 CB Certificates to date.

## Documentation

### Quality manual

The Quality System structure is described with the following hierarchy of documents:

* Quality Manual (CQC/CPQM-2014) Revision 10 2022-05-30.
* Quality Procedures (CQC/xx Management yy, CQC/xx Technical yy, CQC/xx Procedure yy, CQC/xx Testing yy and CQC/xx CB yy – number xx shows relation between documents, yy is the identification of specific subdocument in the documentation system)
* Work Instruction
* Records / Forms

All quality documents are available in Chinese language only. Indexes of Quality procedures are translated to English.

Quality Manual with identification number CQC/CPQM-2014 addresses all the major quality requirements with clauses ordered following ISO/IEC 17065. There is IECEx specific procedure CQC/07Ex01-2022 for endorsement of ExTRs and for preparation of IECEx CoCs and QARs. This document is referencing all IECEx ODs applicable to the operation of IECEx ExCB.

CQC/07Process0409-2021 “Product Certification Remote Audit Implementation Guide” provides guidance reflecting the requirements of IECEx OD-060.

The Manual is available in an electronic version on the CQC intranet and is regarded as the valid version for use.

The Quality Manual as well related documents from different levels were reviewed during the assessment and found to meet the requirements of the IECEx.

### Procedures

There are a significant number of detailed procedures dealing with the operation at CQC. All these procedures are referenced in the above Quality Manual. Again, these documents are available on the intranet. Certification within the IECEx Scheme, CQC/07Ex01-2022, Edition 1, is the main procedure used for IECEx.

Procedure most relevant for the operation under IECEx was reviewed during the assessment and found to meet the requirements of the IECEx.

### Work instructions

In addition there are many work instructions available and a range of other documentation such as guides. All those documents are referenced in each related quality procedure and are accessible via a comprehensive menu system on the intranet.

Work instructions related to management of cooperation with ExTL, certificate issuing procedures, handling of appeals and disputes, management of changes (CQC/07CB01, CQC/07CB03, CQC/07CB04) were reviewed during the assessment and found to meet the requirements of the IECEx.

### Records (including test records where relevant)

CQC establishes suitable procedures dealing with quality records. CPQM Product certification quality manual 8.4 and CQC/07 Management 01 “Records control procedure”.

All critical records are retained in electronic version. If originals are received in hard copy, these are scanned and retained on CQC server, while hard copy is also archived. All records related to certification of products are retained indefinitely at CQC according to the relevant procedure.

Example of the project archive for national CCC Ex product certification was reviewed, and found that the records are detailed, and information is sufficient to the satisfaction of the assessment team. The procedure addresses the retention period for IECEx as well, which was found to be in compliance with IECEx OD-207.

### Document change control

Documents are all subject to a change control procedure, CPQM Product certification quality manual 8.3 and CQC/ 08 Management 01 “Documentation management procedure”, which includes regular checks of those being used. Only documents published on the intranet are regarded as controlled for the purpose of staff use. When a document is revised an indication, in the form of revision table, is included at the beginning of each document to show where changes have occurred.

The use of the correct standard is controlled from the beginning of work on new project in Application Review stage and later using current ExTR forms (for new projects) by associated ExTLs that include appropriate edition of the standard to be used. Being the Applicant ExCB in IECEx Scheme 02, CQC is also involved with ExTAG work and so is aware when IEC standards relevant for the IECEx are being changed or new ExTAG DS is published and/or in preparation.

## Confidentiality

(For staff, contractors and members of advisory bodies)

There is a statement in Clause 4.5 of the Quality Manual and in CQC/04 Management 01 “Confidential management procedure” that stipulates all personnel including the internal staff, members of Impartiality Committee, as well as the outside members of Boards and external experts are required to sign the Declaration of confidentiality and impartiality. Personnel are also trained to ensure they follow the confidentiality requirements to protect the integrity and reputation of the business. Examples of the written Declarations from Impartiality Committee members and internal staff were reviewed and found satisfactory.

The system meets the requirements of ISO/IEC 17065 and IECEx.

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

Communication with public and customers is assured by descriptions of procedures and by forms published on the internet site at <https://www.cqc.com.cn/www/chinese/index.shtml> Detailed procedure is described in Clause 7.8 of Quality Manual CPQM with additional information contained in CQC/04 Technical 03 ”Publish and Announcement management procedure”.

CQC maintains and publishes information on:

* certification and auditing processes,
* processes for granting, refusing, maintaining, extending, suspending, renewing, or withdrawing certification or extending or reducing the scope of certification,
* types of management systems and certification programs in which it operates,
* use of the name of the certification body and the certification mark or logo,
* processes for processing requests for information, complaints and appeals,
* service request web application form applicable for product certification as well,
* impartiality policy.

Other information is available on request.

## Recognitions and agreements

CQC is appointed as a certification body to issue CCC Mark, the national compulsory certification scheme in China covering 17 product categories, including Ex equipment and components.

CQC is also recognized as a National Certification Body in the IECEE since 1990.

## Internal audit

The requirements for internal audit are specified in CPQM Product certification quality manual Clause 8.6 and in general procedure CQC/08 management 03 “Internal quality audit procedure”. Auditing is done ~~at least~~ once a year. The plan of internal audit is ~~normally~~ released at the beginning of each year. The latest audit was conducted between March and November 2022. It is done in three stages. In the first stage internal audit focuses on document review (vertical audit). Second stage is done as on-site audit including interviews with personnel. Third stage covers the review of general rules applied in specific area of CQC services (horizontal audit). There is quite a large number of staff trained and accepted for internal auditing. A comprehensive Competence Matrix (copy retained at Secretariat) shows their qualifications, training and areas that they are considered competent to audit.

Scheme 02 is planned for internal audit once CQC is accepted as ExCB. All audit records are retained.

The system meets the requirements of ISO/IEC 17065 and IECEx.

## Management review

The detailed processes on management review are contained in clause 8.5 of Quality Manual CPQM and in CQC/08 Management 02 “Management review procedure”. The management review is specified to be conducted once a year. The latest meeting of management review was held on 2021-12-08 (this year is postponed due to COVID-19 restrictions and is planned for mid-January 2023 latest). Representative from the Ex department attended the meeting. The review covered the operation of Ex Certification Body (CCC Scheme), including internal audits, corrective actions, accreditation audits, customer satisfaction and complaints data. The matters covered by the meeting also addressed the relevant requirements for ISO/IEC 17065.

A documented report on management review was viewed and found satisfactory for the IECEx.

## Contracting, subcontracting and witness testing

### Contracting

CQC use contract Auditors for audits at manufacturing sites (External Auditors for preparation of QAR). Procedures for use of contracting are included in the CPQM clauses 6.1 & 6.2 as well as in CQC/06 management 01 ”Certification personnel management procedure”. CQC assumes full responsibility for their Audits and QARs which includes control over the process.

They have a list of external Auditors. Several signed agreements for subcontracting Auditors were reviewed and found meeting the requirements of ISO/IEC 17065 and IECEx.

### Subcontracting

There is no subcontracting of ExCB activities.

### Off-site and Witness testing

Not relevant for ExCB.

## Training and competence

CQC/06 management 03” Training management procedure” and CQC/06 management 01 ”Certification personnel management procedure” cover training requirements for certification personnel. Training plans are made annually, supplemented on demand and checked by management review. Records are kept of the trainings carried out. This details the staff and the training that they have undertaken, and particularly noted that training was arranged for a new staff, and qualification document was sighted and satisfactory.

Details of staff competencies are included in the site assessment report.

This was found to be satisfactory, meeting the requirements of the IECEx.

## Complaints and appeals (including appeals to IECEx)

Complaints are collected in each department and dealt with in accordance with CPQM Product certification quality manual 5.1 & 5.2 and procedure CQC/07 Management 02” Appeal, complaints and argument settlement procedure. This contains information for customers/applicants that includes the latest appeals process to IEC via IECEx in accordance with CA 01 and IECEx 01-S.

Register of complaints and appeals was sighted (for CCC and other departments since this is initial assessment of applicant ExCB). System was found meeting the requirements of ISO/IEC 17065 and IECEx.

## Impartiality

CQC is an independent body with no activities or interests in the products that are certified. CQC has a public statement on their website to confirm their independence and impartiality.

Based on CPQM Product certification quality manual 5.1 & 5.2 and procedure CQC/05 management 01 “China quality certification center impartiality committee regulation” different measures were discussed to safeguard impartiality. The risk analysis given in document “CQC Fair Interest Threat identification results” shows different threats that were identified. Self-interest, familiarity, external pressure are among the identified threats and measures have been implemented to mitigate the risks. This document also specifies the department responsible for the specific risk and the measures to mitigate it.

The “Code of conduct for auditors and certification staff” was verified. All personnel have to sign Confidentiality and Impartiality statement CQC/06 Management 01.01. Based on this it may be assumed that all personnel are aware of the risks and their responsibility to safeguard the impartiality.

The mechanism for safeguarding impartiality is the Impartiality Committee. Rules are contained in CQC/05 management 01 ”China quality certification center impartiality committee regulation”. Impartiality Committee has representatives from producers, standardization body, consumers, quality management experts, regulators and chamber of commerce (20 members).

All staff, Board Members and the Impartiality Committee have signed regarding impartiality, honesty and confidentiality of their work. During the assessment, the list and several signed documents were checked.

The process meets the requirements for ISO/IEC 17065 and IECEx.

## Active involvement in development of Decision Sheets

CQC developed a system to regularly comment on draft decision sheets, and where appropriate raise their own. This includes dedicated person to regularly receive all proposed and issued Decision Sheets and to inform co-workers and after internal discussion they provide their comments to the IECEx secretariat. Performance of this will be checked at next Surveillance Assessment.

## Special facts to be noted

While operating to a sound quality management system accredited by CNAS against ISO/IEC 17065, CQC accreditation does not currently include all IEC standards from their ExCB application, hence the IECEx Assessment conducted a thorough and complete assessment to the requirements of ISO/IEC 17065 and at the conclusion of this assessment confirms that sufficient evidence was gathered to show ISO/IEC 17065 requirements are met. Details of this assessment and the completed OD-107 checklist are retained at the Secretariat.

Despite COVID-19 related restrictions, the assessment team appreciated the commitment and support of the management and staff of CQC for the IECEx assessment process.

ExCB will be subjected to a one-off surveillance site visit to ensure that all relevant IECEx procedures and rules are being followed, as required by IECEx OD-003-2 clause 2.2.3., when new CNAS Accreditation and Scope will also be checked.

## 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 17065
* Information on competencies
* Information on contracting/subcontracting
* Site Assessment Report (Form F-004) with Assessors’ notes
* Other

## Recommendations

Based on the assessment performed on 12th to 15th October 2022, CQC China is recommended for acceptance in the IECEx scheme as:

* An ExCB in the IECEx Certified Equipment Scheme

This is according to the scope of the standards listed in this document.

|  |
| --- |
| Marino Kelava |
| IECEx Lead Assessor |

Date: January 2023

# ExCB for IECEx Certified Equipment Scheme

## Assessment references

### General references

1. IECEx 02 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. ISO/IEC 80079-34 Explosive atmospheres – Part 34: Application of quality systems for equipment manufacture
4. IECEx OD 009 Issuing of CoCs, ExTRs and QARs
5. IECEx OD 025 Guidelines on the Management of Assessment and Surveillance programs for the assessment of Manufacturer’s Quality Systems in accordance with the IECEx Scheme
6. IECEx OD 026 IECEx Certified Equipment Scheme – Guidelines for the qualification of Lead Auditor and Auditors, in accordance with the IECEx System
7. ISO/IEC 17065 General requirements for bodies operating product certification systems Conformity assessment — Requirements for bodies certifying products, processes and services
8. IECEx OD 107 Harmonised check list for certification bodies ISO/IEC 17065
9. IECEx OD 060 IECEx Guide for Business Continuity – Management of Extraordinary Circumstances or Events Affecting IECEx Certification Schemes and Activities
10. IECEx Technical Capability Document (TCD)
11. ExTAG decision sheets (DSs)

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

### Additional references applied for this assessment

NOTE To be added by assessment team. For example, ODs for non-electrical or Ex s where applicable

## Candidate ExCB persons interviewed

|  |  |
| --- | --- |
| Name | Position |
| BIAN Jing | Technical Director, International Dept. |
| GUO Xuejing | Certification expert |
| GAO Yongle | Certification expert |
| DUAN Xu | Certification expert |
| CAI Xinchao | Certification expert |
| ZHONG Haifei | Auditor, QAR reviewer |
| WANG Guozhong | Auditor |
| HUANG Lingqi | Auditor, QAR reviewer |
| WU Wentong | Auditor |
| YU Hongfeng | Apprentice in certification |
| GAO Shaohong | Auditor, QAR reviewer, Led Auditor |
| ZHANG Jie | Auditor |
| LI Fuwei | Auditor |

## Associated ExTL(s)

CQC has signed agreements with following IECEx ExTLs as their associated testing laboratories for Ex equipment.

1. Testing Laboratory for Explosion-proof and Safety Products of Fushun Branch of China Coal Research Institute / China National Quality Supervision & Test Center for Explosion-proof and Safety Products for Coal Mine’s (CMExC)

No.11 Binhe Road, Fushun Economic

Development Zone, Liaoning Province,

P.R. of China, Postcode: 113122

1. Suzhou Electrical Apparatus Science Research Institute Co., Ltd. (EETI)

No.5 Yuexi Qianzhu Road,
Wuzhong District,
Suzhou, Jiangsu, P. R. of China

1. The State Work Safety Changzhou Inspection and Testing Center for Mine Communication and Monitoring Devices/Coal Industry Changzhou Quality Supervision and Inspection Center for Communication and Monitoring Products (CCCMT)

No. 1 Mushu Road, Zhonglou District, Changzhou City, Jiangsu Province

1. Shanghai Meike Test Technology Co.,Ltd/ Shanghai Electric Explosion Proof Test Center of Coal Industry No·369 Wutang Road Nanqiao Fengxian District Shanghai
2. Shanghai Institute of Quality Inspection and Technical Research-China National Lighting Fitting Quality Supervision Testing Centre (SQI\_ZM)
No.900, Jiang Yue Road, Shanghai City, 201114 China
3. National Quality Supervision and Inspection Centre of Hoisting & Metallurgical & Explosion-Proof Electric Machine (CHEM) 3 Anqing Street Jiamusi, 154005 Heilongjiang Province

All six agreements were reviewed at the assessment and found acceptable for IECEx.

## Associated certification functions

There are 8 product certification departments (PCD) dealing with different kinds of products.

PCD 1, 2, 4，5 and New Energy Certification Department are involved in the IECEE System.

PCD 1 is OFF/SAFE/TRON/BATT/ELVH/MISC/EMC

PCD 2 is HOUS/CONT/E3/CAP/EMC

PCD 4 is CONT/CAP/INST/TOOL/CABL/EMC

PCD 5 is POW/PROT/EMC (no separate EMC standards)

PCD “New Energy” is for LITE/PV/EMC

## National marks and certificates

The CCC Mark is owned by the state and represents China Compulsory Certification. It was introduced in 2002 and covers 17 product categories, among which are Ex equipment/components. CQC provides CCC certification of products.

## Standards accepted

The scope for the ExCB for IECEx Certified Equipment Scheme is shown in Annex A.

## National differences to IEC standards

National differences to IEC standards are those for the Chinese differences listed in the latest version of the IECEx System Bulletin.

## Organisation

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

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Li Guozhen | Vice President  | 35 |

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

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Liu Jiang | Vice President | 28 |

### Name and title of signatories for certification

|  |  |  |
| --- | --- | --- |
| Name | Title | Comments |
| Xie Zhaoxu | President | 25 |

### Other employees in ExCB activity

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience in Ex (years) |
| Guo Xuejing | Senior Engineer, Low Voltage Component Section, PCD5 | 4 |
| Wang Jiazheng | Senior Engineer, Low Voltage Component Section, PCD5 | 10 |
| Wang Chuang | Engineer, Low Voltage Component Section, PCD5 | 10 |
| Gao Yongle | Engineer, Low Voltage Component Section, PCD5 | 1 |
| Wu Lan | Section Head, Motor Section, PCD 4 | 4 |
| Liang Bin | Senior Engineer, Motor Section, PCD4 | 4 |
| Duan Xu | Engineer, Motor Section, PCD 4 | 2 |
| Li Weiquan | Senior Engineer, Luminaire Section, PCD New Energy | 3 |
| Liu Yongqin | Senior Engineer, Luminaire Section, PCD New Energy | 30 |
| Cai Xinchao | Project Engineer, Luminaire Section, PCD New Energy | 3 |

## Organizational structure

See Annex B for overall Org. chart and Annex C for organization of Ex related activities.

CQC has 8 product certification departments (PCD) dealing with different kinds of products. PCD 4，5 and New Energy Certification Department are involved in the Ex equipment certification.

PCD 4 focus on electrical accessories, motors, cable, etc.

PCD 5 focus on low-voltage apparatus

PCD “New Energy” focus on luminaires, PV and wind energy

## Indemnity insurance

CQC established and maintains dedicated risk fund to secure their certification activities on local and global market. Dedicated amount was verified and found appropriate to protect them against liability incurred as a result of errors and omissions in performing their professional certification services.

## Resources

CQC is equipped with all the necessary resources for IECEx certification. There is an extensive range of procedures and guides for support of the operation at CQC. The total size of CQC is 2432 people. 50 members of international expert team, 262 senior engineers, 1340 staff with bachelor and above degrees, more than 7500 full-time and part time inspectors and auditors. 73 of these are listed in the competence matrix for IECEx certification related business.

The organization of work in ExCB was found meeting the requirements of ISO/IEC 17065 and IECEx.

## Committees (such as governing or advisory boards)

CQC has a Steering Committee of Impartiality and Confidentiality supervising the impartiality and confidentiality in certification business and approve such important subjects as scope of certification, budget plan, etc. The Committee of Impartiality and Confidentiality is comprised of representatives from related governmental agencies, manufacturers, suppliers and consumer representatives. They meet annually, the minutes of the last meeting were viewed during the assessment.

The system was found meeting the requirements of ISO/IEC 17065 and the IECEx requirements.

## Certification operations

### National approval/certification methods

CQC issues the CCC Mark, CQC Mark and offers some other voluntary certification schemes.

The CCC Mark is owned by the state and represents China Compulsory Certification. It was introduced in 2002 and covers 17 product categories, among which are Ex equipment/components, e.g. explosion-proof motors, explosion-proof power distribution devices, explosion-proof air conditioners and ventilation equipment, etc.

The CQC Mark is owned by CQC and registered nationally. It covers over 500 kinds of products and is related to aspects such as safety, performance and environmental protection. It covers some explosion-proof electrical products not included in CCC catalogue, such as explosion-proof lamps.

### Certification policy

CQC Quality Policy: To be independent and impartial, standardized and accurate, and of high quality and efficiency. To provide satisfactory services to clients and make all stakeholders have confidence in the product compliance. The system was found meeting the requirements of ISO/IEC 17065 and the IECEx requirements.

### Application for certification

CQC has an application form specific to Ex certification available as on-line form, and it is written in Chinese and English. Application form is available to public on their website.

They also have an open document at website to provide a Guide how to apply for CCC/IECEx certification.

CPQM Product certification quality manual 7.2

CPQM Product certification quality manual 7.3

CQC/07 Procedure 01 “Application acceptance and conformity assessment procedure”

The system was found meeting the requirements of ISO/IEC 17065 and the IECEx requirements.

### Certification decision

Covered in CPQM Product certification quality manual 7.6. The system was found meeting the requirements of ISO/IEC 17065 and the IECEx requirements.

### Suspension and cancellation of certificates

Covered in CPQM Product certification quality manual 7.11 and CQC/07 Procedure 07 ”Product certification certificate suspension, renew, withdraw and cancellation control procedure”

The system was found meeting the requirements of ISO/IEC 17065 and the IECEx requirements.

## Certificates issued

Number of certificates 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 certificates should be shown (certificates for other schemes may also be shown): Number of certificates issued under for the preceding two years for each type of protection (CCC Scheme certificates shown, this is Applicant ExCB):

| Standard numbers | Type of protection or other identifying information | Number of issued certificates (for last 2 years) | Total |
| --- | --- | --- | --- |
| 2020 | 2021 |
| IEC 60079-1 | Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures “d” | 2330 | 627  | 2957 |
| IEC60079-2  | Explosive atmospheres - Part 2: Equipment protection by pressurized enclosures 'p' | 6 | 1 | 7 |
| IEC60079-5  | Explosive atmospheres - Part 5: Equipment protection by powder filling 'q' | 0 | 0 | 0 |
| IEC60079-6  | Explosive atmospheres - Part 6: Equipment protection by oil immersion 'o' | 0 | 0 | 0 |
| IEC 60079-7 | Explosive atmospheres – Part 7: Equipment protection by increased safety ““e”” | 874 | 317 | 1191 |
| IEC 60079-11 | Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i” | 1140 | 273 | 1413 |
| IEC60079-13 | Explosive atmospheres – Part 13: Equipment protection by pressurized room "p" | 9 | 2 | 11 |
| IEC 60079-15 | Explosive atmospheres – Part 15: Equipment protection by type of protection ““n”” | 5 | 14 | 19 |
| IEC 60079-18 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | 27 | 10 | 37 |
| IEC60079-25  | Explosive atmospheres – Part 25: Intrinsically safe electrical systems | 0 | 0 | 0 |
| IEC60079-26  | Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga | 0 | 0 | 0 |
| IEC60079-30-1  | Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements | 0 | 5 | 5 |
| IEC 60079-31 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure ““t”” | 0 | 30 | 30 |
| IEC61241-1  | Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures 'tD' | 964 | 441 | 1405 |
| IEC61241-4  | Electrical apparatus for use in the presence of combustible dust - Part 4: Type of protection 'pD' | 1 | 1 | 2 |
| IEC61241-11  | Electrical apparatus for use in the presence of combustible dust - Part 11: Protection by intrinsic safety 'iD' | 8 | 13 | 21 |
| IEC61241-18  | Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation 'mD' | 2 | 3 | 5 |

NOTE Above include certificates to IEC 60079-0 unless otherwise shown

## National accreditation

The national accreditation certification for ISO/IEC 17065 is shown in Annex D.

## Assessment of manufacturers and issue of QARs

Covered in CQC/07 Technical 04 “Management procedure for factory inspection”. Auditing of Ex manufacturers (including the system for the selection of competent Auditors/Lead Auditors), was reviewed and found to meet the requirements of the IECEx.

## Comments (including issues found during assessment)

CQC has the necessary staff and quality system in place for their scope as an ExCB. Few observations were identified during the assessment. All were revised to the satisfaction of the assessment team and meet the requirements of the IECEx. Details are contained in Site Assessment Report.

#  ExTL for IECEx Certified Equipment Scheme

Not relevant for this assessment.

# ATF for IECEx Certified Equipment Scheme

Not relevant for this assessment.

# ExCB for Certified Service Facilities Scheme

Not relevant for this assessment.

# IECEx Conformity Mark Licensing Scheme

Not relevant for this assessment.

# ExCB for IECEx Personnel Competence Scheme

Not relevant for this assessment.

#  Annexes

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

The following Table lists the Standards within the scope of CQC’s Application

| Number  | Title  | Comments |
| --- | --- | --- |
| IEC 60079-0 Edition 7.0 | Explosive atmospheres - Part 0: Equipment - General requirements  | Add to the scope |
| IEC 60079-1Edition 7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproofenclosures “d” | Add to the scope |
| IEC 60079-2 Edition 6.0 | Explosive atmospheres - Part 2: Equipment protection by pressurizedenclosure “p’ | Add to the scope |
| IEC 60079-5Edition 4.0 | Explosive atmospheres - Part 5: Equipment protection by powder filling “q” | Add to the scope |
| IEC 60079-6Edition 4.1 | Explosive atmospheres - Part 6: Equipment protection by oil immersion “o” | Add to the scope |
| IEC 60079-7Edition 5.1 | Explosive atmospheres - Part 7: Equipment protection by increasedsafety "e" | Add to the scope |
| IEC 60079-11Edition 6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” | Add to the scope |
| IEC 60079-13Edition 2.0 | Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v" | Add to the scope |
| IEC 60079-15Edition 5.0 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | Add to the scope |
| IEC 60079-18Edition 4.1 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | Add to the scope |
| IEC 60079-25Edition 3.0 | Explosive atmospheres – Part 25: Intrinsically safe electrical systems | Add to the scope |
| IEC 60079-26Edition 3.0 | Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga | Add to the scope |
| IEC 60079-28Edition 2.0 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  | Add to the scope |
| IEC/IEEE 60079-30-1Edition 1.0 | Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements | Add to the scope |
| IEC 60079-31Edition 2.0 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | Add to the scope |

* 1. Superseded standards

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

| Number  | Title  | Comments |
| --- | --- | --- |
| IEC 61241-0Edition 1.0  | Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements | Add to the scope |
| IEC 61241-1 Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosure “tD” | Add to the scope |
| IEC 61241-4 Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 4: Protection by pressurization "pD"  | Add to the scope |
| IEC 61241-11Edition 1.0 | Electrical apparatus for use in the presence of combustible dust – Part 11: Protection by intrinsic safety 'iD' | Add to the scope |
| IEC 61241-18Edition 1.0  | Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation "mD" | Add to the scope |

1. Overall Organisation Chart



1. Organisation Chart of ExCB







1. Accreditation Certificate for ISO/IEC 17065

