**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 TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch, as an Additional Testing Facility (ATF) operating under TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch ExTL– PRC in the IECEx System, Equipment Scheme, IECEx 02**

**INTRODUCTION**

This document contains the IECEx Assessment Report for the acceptance of TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch as an IECEx Testing Laboratory (ExTL), 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 2024 03 01***

*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 ATF assessment report for

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

CONTENTS

[1 Assessment information 5](#_Toc156390107)

[1.1 Type of body covered by this assessment: 5](#_Toc156390108)

[1.2 Type of assessment: 5](#_Toc156390109)

[1.3 Details of body 5](#_Toc156390110)

[1.3.1 Country 5](#_Toc156390111)

[1.3.2 Name of body 5](#_Toc156390112)

[1.3.3 Name and title of nominated principal contact 5](#_Toc156390113)

[1.4 Assessment information 5](#_Toc156390114)

[1.4.1 Members of the assessment team 5](#_Toc156390115)

[1.4.2 Place(s) of assessment 6](#_Toc156390116)

[1.4.3 Assessment date(s) 6](#_Toc156390117)

[1.5 Application information and background information on the assessment 6](#_Toc156390118)

[1.6 Scopes 6](#_Toc156390119)

[1.6.1 ATF Scope 6](#_Toc156390120)

[2 Common information 7](#_Toc156390121)

[2.1 Legal entity of body 7](#_Toc156390122)

[2.2 Financial support 7](#_Toc156390123)

[2.3 History 7](#_Toc156390124)

[2.4 Documentation 7](#_Toc156390125)

[2.4.1 Quality manual 7](#_Toc156390126)

[2.4.2 Procedures 8](#_Toc156390127)

[2.4.3 Work instructions 8](#_Toc156390128)

[2.4.4 Records (including test records where relevant) 8](#_Toc156390129)

[2.4.5 Document change control 8](#_Toc156390130)

[2.5 Confidentiality 9](#_Toc156390131)

[2.6 Communication with public and customers (Hard copy and Electronic) 9](#_Toc156390132)

[2.7 Recognitions and agreements 10](#_Toc156390133)

[2.8 Internal audit 10](#_Toc156390134)

[2.9 Management review 10](#_Toc156390135)

[2.10 Contracting, subcontracting and witness testing 10](#_Toc156390136)

[2.10.1 Contracting 10](#_Toc156390137)

[2.10.2 Subcontracting 10](#_Toc156390138)

[2.10.3 Off-site and Witness testing 10](#_Toc156390139)

[2.11 Training and competence 11](#_Toc156390140)

[2.12 Complaints and appeals (including appeals to IECEx) 11](#_Toc156390141)

[2.13 Impartiality 11](#_Toc156390142)

[2.14 Active involvement in development of Decision Sheets 11](#_Toc156390143)

[2.15 Special facts to be noted 12](#_Toc156390144)

[2.16 Supporting documentation 12](#_Toc156390145)

[2.17 Recommendations 12](#_Toc156390146)

[3 ExCB for IECEx Certified Equipment Scheme 13](#_Toc156390147)

[4 ExTL for IECEx Certified Equipment Scheme 13](#_Toc156390148)

[5 ATF for IECEx Certified Equipment Scheme 14](#_Toc156390149)

[5.1 Assessment references 14](#_Toc156390150)

[5.1.1 General references 14](#_Toc156390151)

[5.1.2 Additional references applied for this assessment 14](#_Toc156390152)

[5.2 Candidate ATF persons interviewed 14](#_Toc156390153)

[5.3 Associated ExTL 14](#_Toc156390154)

[5.4 Organisation 14](#_Toc156390155)

[5.4.1 Names, titles and experience of the senior executives 14](#_Toc156390156)

[5.4.2 Name, title and experience of the quality management representative 14](#_Toc156390157)

[5.4.3 Other employees in ATF activity 14](#_Toc156390158)

[5.5 Organizational structure 15](#_Toc156390159)

[5.6 Resources 15](#_Toc156390160)

[5.7 Test reports issued 15](#_Toc156390161)

[5.8 National accreditation 15](#_Toc156390162)

[5.9 Calibration 15](#_Toc156390163)

[5.10 Tests witnessed during the assessment visit 17](#_Toc156390164)

[5.11 Participation in IECEx Proficiency Testing Programs 17](#_Toc156390165)

[5.12 Comments (including issues found during assessment) 17](#_Toc156390166)

[6 ExCB for Certified Service Facilities Scheme 18](#_Toc156390167)

[7 IECEx Conformity Mark Licensing Scheme 18](#_Toc156390168)

[8 ExCB for IECEx Personnel Competence Scheme 18](#_Toc156390169)

[9 Annexes 18](#_Toc156390170)

[Annex A Scope for IECEx Certified Equipment Scheme 19](#_Toc156390171)

[A.1 Current standards 19](#_Toc156390172)

[A.2 Superseded standards 20](#_Toc156390173)

[Annex B Overall Organisation Chart (ExTL and ATF) 21](#_Toc156390174)

[Annex C Organisation Chart of ATF 22](#_Toc156390175)

[Annex D Accreditation Certificate for ISO/IEC 17025 23](#_Toc156390176)

[Annex E Scope of associated ExTL 24](#_Toc156390177)

# Assessment information

## Type of body covered by this assessment:

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

## 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

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch (Operating under the TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch - PRC

### Name and title of nominated principal contact

|  |  |  |
| --- | --- | --- |
| Name | Title | E-mail address |
| Ryan Jiang | Contact Person IECEx ATF | Ryan.jiang@tuvsud.com |
| Kristof De Gersem | ManagerExplosion Protection | Kristof.DeGersem@tuvsud.com |
| Cong Wang | Quality ManagerLaboratory Manager | Cong.wang@tuvsud.com |

## Assessment information

### Members of the assessment team

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

### Place(s) of assessment

|  |  |
| --- | --- |
| TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch | Office Location:5F & 8F East, Communication Building, No.163 Pingyun Road, Huangpu Ave. West, Guangzhou 510656, ChinaTest Location:No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, China |

### Assessment date(s)

19th to 21st Apr. 2023

## Application information and background information on the assessment

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch is assessed as ATF to TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch.

Due to problems with travelling caused by the COVID-19 pandemic, it was decided to do a remote assessment in accordance with OD-060. The platform Microsoft Teams was used with the combined use of shared folder organised by TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch and e-mails. Witness of testing was also performed remotely as requested by IECEx Lead Assessor. The process was found to provide sufficient evidence to be able to make a recommendation.

ATF covered by this Assessment operates at following addresses:

The ATF legal entity and office:

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

5F & 8F East, Communication Building, No.163 Pingyun Road, Huangpu Ave. West, Guangzhou 510656, China

Test location:

No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, China

## Scopes

### ATF Scope

The scope for the ATF is shown in Annex A.

1.6.2 ExTL scope

The scope for the associated ExTL is included in Annex E. All standards requested for the ATF are in the ExTL scope and are at the latest edition in the ExTL scope.

# Common information

## Legal entity of body

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch is the entity of TÜV SÜD Certification and Testing (China) Co. Ltd., 10 Huaxia Road (M), Dongting, VRC-214100 Wuxi, P.R. China.

The legal registration number is 91440101755591013F and is valid until April 22nd 2028. This document was issued on December 1st, 2003.

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

## Financial support

The commercial activities related to Ex testing are self-financed through customer fees.

## History

ExTL: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

ATF: TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

Relationship between ExTL and ATF is documented in the Quality Assurance Agreement between the IECEx ExTL and the IECEx ATF applicant. The Quality Assurance Agreement exists between TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch (3-13, No.151 Heng Tong Road, Shanghai 200070 P.R. China and TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch (5F, Communication Building 163 Pingyun Rd,Huangpu Ave. West 510656 Guangzhou PR China).

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch is an entity of TÜV SÜD Certification and Testing (China) Co. Ltd., 10 Huaxia Road (M), Dongting, VRC-214100 Wuxi, P.R. China and was endorsed by the State Administration for Industry and Commerce of the People’s Republic of China who granted them with the Business Licence for Limited Liability Company Branch (Joint Venture) as business operator under the number 91440101755591013F on December 1st, 2003.

## Documentation

### Quality manual

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch organized its ATF operations under the IECEx to be under full control of the parent IECEx ExTL which has a comprehensive quality manual supported by other procedural documents, which refer to ISO/IEC 17025 and meets the requirements of IECEx. The ATF has a general procedure ITC\_P\_10.14E “Testing, Auditing and Certification in the IECEx Scheme” addressing the procedures to perform testing within the IECEx scheme in their role of the ATF.

Quality documents are controlled by a software tool RoXtra from the parent ExTL. Additional supporting specific instructions are available on a Shared network location – IDP/Ex Protection/QM.

General Quality Management Manual by TÜV SÜD Product Service (TPS) division: TPS\_MAN\_01E.docx

ISO 17025 Quality Manual by TÜV SÜD Certification and Testing (China) Co. Ltd. Guangzhou Branch: GZH\_MAN\_01ECS (ver.12, English version)

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

### Procedures

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch uses a comprehensive range of procedures controlled by their parent ExTL and covering all aspects of testing operations. Where applicable, each procedure related to the ATF has with it an associated work instruction and test sheet for completion by the staff.

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

The ATF has one procedure ITC\_P\_10.14E “Testing, Auditing and Certification in the IECEx Scheme” addressing the procedures to perform testing within the IECEx scheme in their role of ATF to TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch.

### Work instructions

In performing tests as required under the IECEx, ATF strictly follows work instructions created and maintained by their parent Accepted ExTL.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch has a comprehensive range of work instructions covering aspects of the certification and testing operations. A number of such work instructions covering tests were reviewed during witness testing and was found to meet the requirements of the IECEx.

A list of work instructions relevant for the operation of the ATF is contained in the TCD.

### Records (including test records where relevant)

A procedure for control of records and their retention is in place (GCN\_QM\_P\_03E) to comply with relevant accreditation schemes and government requirements. All records are uniquely identified, secured and stored in a way to ensure the reliability of the testing process and to maintain the confidentiality of information. A record retention period has been established, 10 years as a minimum. After it expires, the records are archived. The procedure addresses the retention period for IECEx as well, which was found to be in compliance with IECEx OD-207.

In practice it was advised critical records are stored indefinitely so no destruction process for these records is in place.

The system was found to meet the requirements of the IECEx applicable to ATF.

### Document change control

All documents needed for the operation of the ATF in the IECEx System, Equipment Scheme 02, are managed by the parent ExTL.

Document change control is managed by their parent ExTL and covered in a dedicated procedure TPS\_P\_05.01E, detailing the information as below:

1. Procedure document: TPS\_P\_05.01E Control of quality documents.
2. Document management platform-roXtra: The complete lifecycle of a document (creation, revision, review, release, withdrawal, archival) of documents is done within the electronic workflow of roXtra.
3. QM document types included: Quality Manuals, Procedures, Work Instructions, Forms. In roXtra, P, W, F to define the different types.
4. QM document responsibility is QMR (Quality Management Respective) to control, update and publish in roXtra.
5. Document management procedure:

The system meets the requirements of IECEx.

## Confidentiality

All employees sign confidentiality agreements when they start to work in the ATF.

There is a system of security control at the entrance to the buildings which is controlled by the access card reader. In addition, records stored electronically are protected by access password.

Confidentiality is also ensured through:

* limited access to customer documentation from the moment of submission to certification up to the archiving stage,
* records of documentation created in the testing process (contracts, test reports),
* archiving evidence of conformity assessment and any customer documentation provided during the testing process.

Evidence of agreements were viewed and considered in compliance with the requirements of ISO/IEC 17025 and the IECEx.

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

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch (parent ExTL) provides information to their customers via the internet at <https://www.tuvsud.cn/zh-cn/industries/manufacturing/components-and-equipment/explosion-protection/explosion-protection-equipment-certification>

TÜV SÜD group to which TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch belongs, maintains and publishes information on (among others):

* Terms and Conditions for the use of their services
* Testing, verification, certification, inspection and auditing processes,
* 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,
* TÜV SÜD Code of Ethics including impartiality policy.

Other information is available on request.

## Recognitions and agreements

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch has recognition by CNAS - China National Accreditation Service for Conformity Assessment and is accredited against ISO/IEC 17025 for testing services.

The laboratory is an IEC CBTL recognised test site since 2007. The registration number is TL240 in IECEE. It is under the CB028 TÜV SÜD PSB Pte. Ltd.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch as an IECEx ATF signed the cooperation agreement with TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch as an IECEx ExTL on 2021-12-02.

This inter-company agreement was viewed and considered in compliance with the requirements of the IECEx.

## Internal audit

The detailed internal audit procedure is defined in TPS\_P\_17.01E-Internal Quality Audit.

Internal audits are carried out once a year in consultation and close cooperation with associated ExTL. The last internal audit was carried out on the 8th to 9th of Sep 2022. ISO/IEC 17025 requirements were covered. Two NCs and three observations were found and subsequently successfully closed.

Internal audit plan was viewed and considered in compliance with the requirements of the IECEx. The system was found meeting the requirements of ISO/IEC 17025 and IECEx.

## Management review

Management review is described in the Quality Manual and is conducted annually at both locations (ExTL and ATF).

The report from the management review meeting that took place on 8th Feb. 2023 was reviewed. It also covered the plans for the future operation of the ATF, 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 17025. The output of the ATF management review will be used as input to the ExTL management review upon acceptance as an IECEx ATF.

The report from the last management review was reviewed and found to be in compliance with the requirements of the ISO/IEC 17025 and IECEx.

## Contracting, subcontracting and witness testing

### Contracting

Not applicable for ATF.

### Subcontracting

Not applicable for ATF.

### Off-site and Witness testing

Not applicable for ATF.

## Training and competence

The document GCN\_HR\_P\_05E Training and Development Guideline defines the procedure of training. Technical roles are defined in the procedure ITC\_P\_18.04E - Definition and authorization of technical roles.

All staff employed are selected for qualifications and/or experience relevant to their responsibilities at the ATF. Each member of staff has a full job description, which comprehensively defines their responsibilities, job function, qualification requirements and their position within the organisation.

On a regular basis there is training of people in the ATF on the operations, testing, revised standards and procedures related to IECEx. An example of a comprehensive training session presentation was sighted found to meet the requirements of the IECEx.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch has a qualification process for ensuring competent staff. There is a competency matrix for Ex.

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

Process was found to be satisfactory, meeting the requirements of the IECEx and ISO/IEC 17025.

## Complaints and appeals (including appeals to IECEx)

There is a general process in TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou branch for internal complaints, internal and external audits, and external complaints. This covers the complaints mechanism requirements of the ExTL and ATF.

Appeals (including appeals to IECEx) are not normally relevant to a testing laboratory but if they occur, they would be reported to the supervising ExTL.

The system was found meeting the requirements of ISO/IEC 17025 and IECEx.

## Impartiality

Impartiality and confidentiality are addressed in Quality Manual.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch is an independent, privately owned body that does not design or produce any products that it tests or verifies. Staff are not involved with, or influenced by any customers/stakeholders.

To ensure there are no conflicts of interest, TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch requires all their employees, both internal and external, to report any former and/or present connections with the organizations, the testing of which products they will be assigned to. If there are any such connections, TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch assesses the risk in terms of threats to impartiality, and either resigns from involving this staff into the certification process or proves that there is no conflict of interests.

The company follows procedure ‘Impartiality Risk Management Process in PS Division’ to identify risks to its impartiality on an on-going basis. This includes risks that arise from its activities, or from its relationships, or from the relationships of its personnel.

All staff 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 17025 and IECEx.

## Active involvement in development of Decision Sheets

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou will coordinate all Decision Sheet activity with their supervising ExTL.

## Special facts to be noted

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch ATF Testing Laboratory has the necessary staff and quality system in place for their scope as an ATF. Few issues were identified during the assessment which were noted as potentially influential to the performance of testing and assessment. All issues were revised to the satisfaction of the assessment team and now meet the requirements of the IECEx. Details are contained in Site Assessment 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 (IECEx OD-018)
* Completed Technical Capability Document (TCD)
* Photos of the facilities/tests witnessed are included in the above TCD
* Information on competencies
* Assessors’ notes
* Other

## Recommendations

Based on the assessment performed April 19th to 21st 2023, TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch is recommended for acceptance in the IECEx scheme as:

* An ATF in the IECEx Certification Equipment Scheme operating under the TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch - PRC

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

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

Date: 2024 01 11

# ExCB for IECEx Certified Equipment Scheme

Not relevant for this assessment.

#  ExTL for IECEx Certified Equipment Scheme

Not relevant for this assessment.

# ATF 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. ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories
4. IECEx OD 018 Harmonised check list for testing and calibration laboratories ISO/IEC 17025
5. IECEx TCD 60079, ISO 80079 Series and ISO 16852 Technical Capability Document
6. ExTAG decision sheets (DSs)
7. 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

None.

## Candidate ATF persons interviewed

|  |  |
| --- | --- |
| **Name** | **Position** |
| Ryan Jiang | Contact person – ATF  |
| Kristof De Gersem | Manager - Explosion Protection |
| Wang Cong | Quality Manager  |

## Associated ExTL

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

## Organisation

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

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Kristof De Gersem | Manager, Explosion Protection | 18 |
| Frank Zhu | Technical Manager, Reviewer, Certifier, Trainer | 15 |

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

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Wang, Cong | IDP Quality Manager | 10 |
| Licole Luo | Guangzhou Branch Quality Manger | 19 |

### Other employees in ATF activity

|  |  |  |
| --- | --- | --- |
| **Name** | **Title/responsibility** | **Experience in Ex (years)** |
| Ryan Jiang | Contact Person IECEx ATF | 8 |
| \* |  |  |

\*At the request of the ATF, names have been withheld from this report. Other employees are listed in the competence matrix of the ATF with their names and further details contained in the site assessment report, F-004 Form.

## Organizational structure

Refer Annex B and C.

## Resources

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch ATF has an adequate number of staff for the current level of business. The staff are experienced and have demonstrated required level of competence in evaluation and testing of Ex equipment. The laboratory and office are located in industrial units which provide an adequate environment for the work. The testing equipment is suitable for the range of tests carried out in house.

All testing equipment, where range significantly affects accuracy and the reliability of the test, is calibrated. The equipment is subject to ongoing monitoring for due calibration and control before each use. Standards and reference materials are subject to ongoing checking in accordance with established procedures. Laboratory maintains lists of equipment, which include, among others: name and type of device, identification number, place of use. In addition, each measuring and testing device has a sticker with information about the status of calibration or with information about unfitness for use.

The system was found meeting the requirements of ISO/IEC 17025 and IECEx.

## Test reports issued

Number of test reports issued in the preceding two years for each type of test covered by the standards listed in the Scope. <Table to be initially completed by body being assessed>

|  |  |  |  |
| --- | --- | --- | --- |
| **Standard numbers** | **Type of protection or other identifying information** | **Number of issued reports (for last 2 years)** | **Total** |
| 2022 | 2021 |
| IEC 60079-0  | Explosive atmospheres - Part 0: Equipment - General requirements | 30 | 20 | 50 |
| IEC 60079-7 | Explosive atmospheres - Part 7: Equipment protection by increased safety "e" | 15 | 15 | 30 |
| IEC 60079-15 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | 15 | 15 | 30 |
| IEC 60079-18 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | 5 | 5 | 10 |
| IEC 60079-28 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  | 5 | 5 | 10 |
| IEC 60079-31 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | 15 | 15 | 30 |

## National accreditation

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

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch has national accreditation certificate from CNAS (China National Accreditation Service for Conformity Assessment): Accreditation Registration No. CNAS L3584) to ISO/IEC 17025:2017. A copy of the accreditation certificate is attached at Annex D. Accreditation is valid until 13th of August 2029. Accredited scope fully cover all listed standards in the IECEx ATF Application. Initial assessment covered ISO/IEC 17025 requirement. ATF agreed to be subjected to a one-off surveillance site visit in conjunction with the assessment of their parent ExTL, to meet the requirement of IECEx OD-003-2 clause 2.2.3.

## Calibration

All equipment requiring calibration is calibrated by external accredited calibration service providers. The calibration schedule for equipment is maintained and controlled via the database Tools Managment. Calibration is then organised for all equipment that is about to fall due for calibration.

The status of confirmation of metrological control of a given equipment is recorded in the equipment digital file and confirmed by a green sticker on the equipment. Green sticker means that the equipment is calibrated, checked, good and approved for use. Yellow sticker is used for equipment which is calibrated, but not in the full range. Red sticker is put on the equipment which shall not be used.

All equipment used for witnessed testing was found to be in calibration.

The system for calibration of test equipment is addressed in parent ExTL procedures fully followed by the ATF (both are using the same system - Tools Managment database maintained by TÜV SÜD), which were revieved during the assessment and found to comply with ISO/IEC 17025 and IECEx requirements.

##  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, Ed. 7.0 | 26.4.5 | IP66 test to IEC 60529 | Testing performed competently. |
| IEC 60079-0, Ed. 7.0 | 26.4.2 | Resistance to impact | Testing performed competently. |
| IEC 60079-0, Ed. 7.0 | 26.5.1 | Temperature measurement | Testing performed competently |
| IEC 60079-0, Ed. 7.0 | 26.13 | Surface resistance test | Testing performed competently. |
| IEC 60079-0, Ed. 7.0 | 26.8 & 26.9 | Thermal endurance test | Testing performed competently. |
| IEC 60079-7, Ed.5.1 | 6.10 | Terminal insulating material test | Testing performed competently. |
| IEC 60079-11, Ed.6.0 | 10.6.2 | Fuses requiring encapsulation | Testing performed competently. |
| IEC 60079-15, Ed.5.0 | 11.2.3 | Leakage tests on sealed devices (Method 1) | Testing performed competently. |
| IEC 60079-18, Ed. 4.1 | 8.1.1 & 8.1.2 | Dielectric strength, water absorption test | Testing performed competently. |
| IEC 60079-28, Ed. 2.0 | 5.2.2.2 & 5.2.2.3 | Optical power and irradiance test | Testing performed competently. |
| IEC 60079-31, Ed. 2.0 | 6.1.1.3 | Pressure test for EPL Da | Testing performed competently. |

Witness testing provided evidence of staff competence in performing above testing.

## Participation in IECEx Proficiency Testing Programs

Program: PTB Ex PT Scheme

|  |  |  |
| --- | --- | --- |
| **Year(s) of participation** | **IECEx Proficiency Testing program** | **General information about results** |
| 2021/2022 | Program "Small Component Temperature" (Test Round 2021) | Satisfactory (exact information contained in the Report provided by the Ex PT Scheme provider PTB) |
| 2023/2024 | Program “Connection and Junction Boxes” (Test Round 2023) | Registered for participation on 07th April 2023 |

ATF has a limited scope and the only applicable test round from the PTB PTP which is still available is Program “Connection and Junction Boxes” (Test Round 2023). Laboratory provided evidence they applied for this test round and were waiting for further information and test samples from the PTB at the time of Assessment. During the witness tests listed in clause 5.10 above, resources needed to perform those tests competently were found to be available at ATF.

## Comments (including issues found during assessment)

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch ATF Testing Laboratory has the necessary staff and quality system in place for their scope as an ATF. Few issues were identified during the assessment which were noted as potentially influential to the performance of testing and assessment. All issues were revised to the satisfaction of the assessment team and now meet the requirements of the IECEx. Details are contained in Site Assessment Report.

# 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

See Contents.

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

| Number  | Title  | Comments |
| --- | --- | --- |
| IEC 60079-0, Ed. 7.0 | Explosive atmospheres - Part 0: Equipment - General requirements | Add to the scope of ATF only following clauses:6.317.2.126.4.226.4.326.4.526.5.126.5.226.626.826.926.1026.1126.1226.1326.1426.1626.17A.3.1A.3.2 |
| IEC 60079-7, Ed.5.1 | Explosive atmospheres - Part 7: Equipment protection by increasedsafety "e" | Add to the scope of ATF only following clauses:6.16.2.16.2.46.3.26.46.56.6.26.86.96.10 |
| IEC 60079-11, Ed.6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” | Add to the scope of ATF only following clauses:10.210.310.410.510.610.910.10 |
| IEC 60079-15, Ed.5.0 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | Add to the scope of ATF only following clause:11.2 |
| IEC 60079-18, Ed. 4.1 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | Add to the scope of ATF only following clauses:8.1.18.1.28.2.28.2.3.18.2.3.28.2.48.2.58.2.68.2.8 |
| IEC 60079-28, Ed. 2.0 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation | Add to the scope of ATF only following clauses:5.2.2.3 |
| IEC 60079-31, Ed. 2.0 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | All test clauses to be added to the scope |

* 1. Superseded standards

Superseded standards are not to be added to the Scope of ATF.

1. Overall Organisation Chart (ExTL and ATF)

**IECEx 02 ExCB**

CRT-MUC (GERMANY)

TÜV SÜD Product Service GmbH

Klaus Lorenz

Norbert Thimm

**Senior Product Specialist**

Ulrich Jacobs

**Quality Manager(s)**

Frech Diethelm (DE)

Wang Cong (CN)

**IECEx ExTL TÜV SÜD Shanghai**

Kristof De Gersem

**IECEx ATF TÜV SÜD Guangzhou**

Ryan Jiang

1. Organisation Chart of ATF

**IECEx ATF TÜV SÜD Guangzhou**

Ryan Jiang

Ulrich Jacobs

**Testing Lab Supervisor**

Macro Luo

**Quality Manager**

Licole Luo

**Test Engineers**

See Ex GCN Matrix

1. Accreditation Certificate for ISO/IEC 17025



1. Scope of associated ExTL

| Number  | Title  | Comments |
| --- | --- | --- |
| IEC 60079-0 Edition 7.0 | Explosive atmospheres - Part 0: Equipment - General requirements  | All tests |
| IEC 60079-1Edition 7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproofenclosures “d” | All tests |
| IEC 60079-2 Edition 6.0 | Explosive atmospheres - Part 2: Equipment protection by pressurizedenclosure “p’ | All tests |
| IEC 60079-5Edition 4.0 | Explosive atmospheres - Part 5: Equipment protection by powder filling “q” | All tests |
| IEC 60079-6Edition 4.1 | Explosive atmospheres - Part 6: Equipment protection by oil immersion “o” | All tests |
| IEC 60079-7Edition 5.1 | Explosive atmospheres - Part 7: Equipment protection by increasedsafety "e" | All tests |
| IEC 60079-11Edition 6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” | All tests |
| IEC 60079-13Edition 2.0 | Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v" | All tests |
| IEC 60079-15Edition 5.0 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | All tests |
| IEC 60079-18Edition 4.1 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” | All tests |
| IEC 60079-28Edition 2.0 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  | All tests with the exception of 5.2.4, 5.2.5, 5.3, 5.4 and 6 |
| IEC 60079-31Edition 2.0 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" | All tests |
| 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 | All tests |
| IS0 80079-36Edition 1.0 | Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements | All tests |
| 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” | All tests |
| IEC TS 60079-46Edition 1.0 | Explosive atmospheres – Part 46 - Equipment assemblies | All tests |