Secretariat

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

Ex Management Committee, ExMC

TITLE: IECEx Assessment Report for acceptance of as an IECEx Certification Body (ExCB)

INTRODUCTION

This document contains the IECEx Assessment Report for the acceptance of *TÜV Rheinland Industrie Service GmbH* - as an IECEx Certification Body (ExCB) within the IECEx Scheme.

Please consider this report, which is hereby issued for approval during the ExMC meeting to be held in Shanghai in September 2006.

Any comment relating to this report should be forwarded to the Secretariat prior to the meeting

Chris Agius
IECEx Secretariat

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Secretariat

IECEx ASSESSMENT REPORT FOR TÜV Rheinland Industrie Service GmbH, Cologne, Germany IECEx Certification Body

Type of Assessment:

Initial Assessment for Candidate ExCB [X]

1. OBJECT AND FIELD OF APPLICATION

1.1 ***Country:***

Germany

1.2 ***Name of Candidate ExCB***

TÜV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

1.3 ***Members of the Assessment Team***

Heinz S. Berger, Team Leader
Vijay Kumar Varma, Expert Assessor
William Dunn, Expert Assessor

1.4 ***Place and Date of Assessment***

51105 Cologne, Am Grauen Stein

16th – 18th May, 2006

1.5 ***Assessment References***

iii) IECEx 02 Second Edition 2003-06
iv) IECEx Operational Document OD/003
v) IECEx Operational Document OD 005V2
vi) IECEx Operational Document OD/009
vii) IECEx Document ExMC/161/CD (QAR)
viii) ISO/IEC Guide 65:1996
ix) IECEx Document OD 17
x) ExCB application documents dated February 23, 2006

1.6 *Scope of Application*

Number	Title
60079-0	Electrical apparatus for explosive gas atmospheres Part 0: General requirements
60079-1	Electrical apparatus for explosive gas atmospheres Part 1: Construction and verification test of flameproof enclosures of electrical apparatus
60079-2	Electrical apparatus for explosive gas atmospheres Part 2: Electrical apparatus, type of protection 'p' (Pressurization)
60079-5	Electrical apparatus for explosive gas atmospheres Part 5: Powder filling "q"
60079-6	Electrical apparatus for explosive gas atmospheres Part 6: Oil-immersion 'o'
60079-7	Electrical apparatus for explosive gas atmospheres Part 7: Increased safety 'e'
60079-11	Electrical apparatus for explosive gas atmospheres Part 11: Intrinsic safety 'i'
60079-15	Electrical apparatus for explosive gas atmospheres Part 15: Electrical apparatus with type of protection 'n' (Non-Sparking)
60079-18	Electrical apparatus for explosive gas atmospheres Part 18: Encapsulation 'm'
60079-25	Electrical apparatus for explosive gas atmospheres Part 25: Intrinsically safe systems
60079-26	Electrical apparatus for explosive gas atmospheres Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus
60079-27	Electrical apparatus for explosive gas atmospheres Part 27: Fieldbus intrinsically safe concept (FISCO)
60079-28	Electrical apparatus for explosive gas atmospheres Part 28: Protection of equipment and transmission systems using optical radiation
61241-0	Electrical apparatus for use in the presence of combustible dust Part 0: General requirements
61241-1	Electrical apparatus for use in the presence of combustible dust Part 1: Electrical apparatus protected by enclosures
61241-4 (61241-2)	Electrical apparatus for use in the presence of combustible dust Part 4: Type of protection 'pD'
61241-11	Electrical apparatus for use in the presence of combustible dust Part11: Intrinsically safe apparatus “iD”
61241-18	Electrical apparatus for use in the presence of combustible dust Part 18: Protection by encapsulation 'mD'

1.7 *Candidate ExCB Persons Interviewed*

Name	Position
Klaus Wettingfeld	Head of Product Certification
Heinz Farke	Deputy Head of Product Certification

1.8 *Legal Entity of the Candidate ExCB*

TÜV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

1.9 *Associated Testing Laboratories*

TÜV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

1.10 *Associated Certification Functions*

TÜV Rheinland Industrie Service GmbH is a NB according to the ATEX directive 94/9/EC. The NB is CE 0035. Furthermore, the NB is active as a national surveillance body according to directive 1999/92/EC (Ex installation requirements).

1.11 *National Marks and Certificates*

No National Marks and Certificates are issued.

1.12 *Financial Support*

TÜV Rheinland Industrie Service GmbH is a 100% private owned company and is self founded relaying to revenues based on certificate fees, license fees and testing activities.

1.13 *History*

1872	Industrialists set up DÜV on their own initiative to safeguard their production facilities
1904	Automobile inspections and driving tests
1926	First laboratory for testing materials
1969	Product testing and certifications
1970	First subsidiary outside Germany
1970	TÜV Academy trains qualified personnel
1991	System certifications to international standards
2000	Security and quality in local and global data and communication networks
2003	Fusion with TÜV Pfalz e. V. to TÜV Rheinland Berlin Brandenburg Pfalz e. V. Ultimately becoming the TÜV Rheinland Group

1.14 *Standards Accepted*

See clause 1.6 of this report

1.15 ***National Differences to IEC Standards***

National differences to IEC standards are listed in the latest version of the IECEx Scheme Bulletin.

2. ORGANISATION

2.1 ***Names, Titles and Experience of the Senior Executives***

Name	Title	Experience
Werner Meyer	Dipl. Ing. Head of Business Field Electrical Engineering and Building Technology	
Klaus Wettingfeld	Dipl. Ing. Head of Product Certification	25 years
Andreas Maschke	Dipl. Ing. Head of System Certification	15 years
Heinz Farke	Dipl. Ing. Deputy Head of Product Cert.	10 years

2.2 ***Name, Title and Experience of the Quality Management Representative***

Name	Title	Experience
Burkhard Daske	Dipl. Ing.	14 years

2.3 ***Name and Title of Nominated Principal Contact***

Name	Title	Comments
Heinz Farke	Dipl. Ing. Deputy Head of Product Certification	heinz.farke@de.tuv.com

2.4 ***Name and Title of Signatories for Certification***

Name	Title	Comments
Klaus Wettingfeld	Dipl. Ing., Head of Product Certification	
Heinz Farke	Dipl. Ing. Deputy Head of Product Certification	

2.5 ***Other Employees in ExCB activity***

Name	Title	Responsibility
None		

2.6 ***Organizational Structure***

See organization charts of the TÜV Rheinland Group (Annex 1) and the Business Unit Ex of Industrie Service GmbH (Annex 2).

2.7 ***Administration***

2.7.1 Administrative Structure

The certification department is supported by one full time person in the secretariat.

2.7.2 Terms of Reference of the Governing Board

The Governing Board is described in QM Declaration 32, clause 3. The position of the Board within the organization is showed in Annex 2 to this report.

2.7.3 Indemnity Insurance

TÜV Industrie Service GmbH holds indemnity insurance from GERLING Insurance Company. The certificate was presented during the assessment. The coverage is given until the end of 2006 with the possibility for renewal for another year.

3. RESOURCES

The certification Body comprises an Ex department consisting of 9 persons involved in various Ex Certification activities, including factory audits, refer to item 18 below.

4. COMMITTEES

See clause 2.7.2 (Advisory Board).

5. CERTIFICATION OPERATIONS

5.1 ***National Approval/Certification Methods***

TÜV Rheinland Industrie Service GmbH is a Notified Body (NB) according to the ATEX directive 94/9/EC. The NB number is CE 0035. Furthermore, the NB is active as a national surveillance body according to directive 1999/92/EC (Ex installation requirements).

5.2 ***Certification Policy***

The certification policy is described in document “Regulation of Test Approval and Certification”, Rev. 3, issue 06/2006 and includes IECEx rules.

5.3 ***Staff Work Instructions***

Staff work instructions are described in procedure QMA310301-A1, Rev. 5.

5.4 ***Application for Certification***

Application information is provided with document “Contract_Product -EU-IECEx-2006-05-EN.

6. STATISTICS

6.1 **Certificates Issued**

Number of certificates issued under the ATEX directive in the preceding four years for each type of protection:

TÜV Rheinland Industrie Service GmbH issued in the past years certificates following the ATEX regulation.

Standards	Title	Number of issued certificates				
		2002 /2003	2004	2005	2006	Σ
60079-0 / EN 50014	Electrical apparatus for explosive gas atmospheres Part 0: General requirements					**Part 0 included in numbers below**
60079-1 / EN 50018	Electrical apparatus for explosive gas atmospheres Part 1: Flameproof enclosures 'd'	5	4	5		**14**
60079-2 / EN 50016	Electrical apparatus for explosive gas atmospheres Part 2: Pressurized enclosures 'p'	7	1	8		**16**
60079-5	Electrical apparatus for explosive gas atmospheres Part 5: Powder filling "q"	-	-	-	-	**-**
60079-6 / EN 50015	Electrical apparatus for explosive gas atmospheres Part 6: Oil-immersion 'o'		1			**1**
60079-7 / EN 50019	Electrical apparatus for explosive gas atmospheres Part 7: Increased safety 'e'	1	6	4	3	**14**
60079-11 / EN 50020	Electrical apparatus for explosive gas atmospheres Part 11: Intrinsic safety 'i'	7	7	10	2	**26**
60079-15/ EN 50021	Electrical apparatus for explosive gas atmospheres Part 15: Type of protection 'n' (Non-Sparking)	5	3	5	1	**14**
60079-18/ EN 50028	Electrical apparatus for explosive gas atmospheres Part 18: Encapsulation 'm'	3	1	2		**6**
60079-25	Electrical apparatus for explosive gas atmospheres Part 25: Intrinsically safe systems	-	-	-	-	**-**
60079-26/ EN 50284	Electrical apparatus for explosive gas atmospheres Part 26: Construction, test and marking of Group II Category 1 G electrical apparatus		2	2		**4**
60079-27	Electrical apparatus for explosive gas atmospheres Part 27: Fieldbus intrinsically safe concept (FISCO) and Fieldbus non-incentive concept (FNICO)	-	-	-	-	**-**
60079-28	Electrical apparatus for explosive gas atmospheres Part 28: Protection of equipment and transmission systems using optical radiation			2		**2**
61241-0	Electrical apparatus for use in the presence of combustible dust Part 0: General requirements					**Part 0 included in numbers below**
61241-1/ EN 61241-1/EN50281-1-1	Electrical apparatus for use in the presence of combustible dust Part 1: Protection by enclosures "tD"	2	2	1	2	**7**
61241-4	Electrical apparatus for use in the presence of combustible dust Part 4: type of protection 'pD'	-	-	-	-	**-**

61241-11	Electrical apparatus for use in the presence of combustible dust Part 11: Intrinsically safe apparatus "iD"			3	1	**4**
61241-18	Electrical apparatus for use in the presence of combustible dust Part 18: Protection by encapsulation "mD"	-	-	-	-	**-**

7. DOCUMENTATION

7.1 *Document and Change Control*

The document and change control is described in TÜV Rheinland Group QM part 2, clause 3.2.1.

8. RECORDS

Presently the Certification Body uses a list showing all Ex certificates issued. All relevant information is given. In addition, the certificates are listed in the Internet under www.tuv.com .

9. CONFIDENTIALITY

The confidentiality issue is described in the QMIS (TÜV Rheinland Industrie Service GmbH Management Handbook), chapter 1, clause 1.10 and in QM declaration QM 32. This is in addition to the employment contract carrying the confidentiality clause.

10. PUBLICATIONS

Ex activities are presented in the Internet www.de.tuv.com and with brochures.

11. APPEALS

See clause 2.7.2 (Advisory Board).

The Internal procedures provide for appeals to the Governing Board but also to the IECEx Management Committee in case of being unsatisfied.

12. NATIONAL ACCREDITATION

TÜV Rheinland Industrie Service GmbH holds an accreditation by ZLS to EN45011 (ISO/IEC Guide 65) for product certification and to the ATEX directive 94/9/EC. The certificate was presented during the assessment. See Annex 3 for the certificate. The Notified Body number is CE 0035. The certificate is valid until December 31st, 2006. The reaccreditation is planned for 2006.

TÜV Rheinland Industrie Service GmbH holds an accreditation ZLS to EN 45012 (ISO/IEC Guide 62) for system certification for the ATEX directive 94/9/EC. The certificate was presented during the assessment. See Annex 4 for the certificate. The certificate is valid until December 31st, 2006. The reaccreditation is planned for 2006.

Because of a name change, the above mentioned accreditation certificates are issued on the old name but this will be changed in the reaccreditation process.

13. RECOGNITION AND AGREEMENTS

There is presently no such agreement.

14. QUALITY MANUAL

The first level QM is for TÜV Rheinland Group consisting of six parts. The second level QM is for the Business Unit Industrie Service GmbH. This QM covers eight business fields. Business Unit 1.3 covers the certification activities in the Ex field.

15. INTERNAL AUDIT AND PERIODIC MANAGEMENT REVIEW

Internal audits and the management review are described in clause 6.2 of the QMM IS Chapter 6 (QMM IS = Quality Management Manual for Industrie Service).

The internal audit plan for 2005 and 2006 was presented as well as the internal audit report for the certification body including accepted corrective actions.

The last management review meeting (concerning 2005) was held on February 1st, 2006. The next meeting will take place in early 2007.

16. COMPLAINTS

The complaints procedure is described in procedure Qmv 2.004.

17. WITHDRAWAL AND CANCELLATION OF CERTIFICATES

The withdrawal and cancellation procedure is described in the test and certification regulations following IECEx rules.

18. SPECIAL FACTS TO BE NOTED

TÜV Rheinland Industrie Service GmbH operates a certification procedure using “Technical Certifiers”. The Technical Certifier is an expert having competence in one or more functions within the conformity assessment process. The functions are: testing, verification of test reports and certification. The QARs are created in an independent department but within the same legal entity.

Personnel involved in IECEx activities are listed on a competence matrix (scope of standards against personnel and their functions). Evidence was given during the assessment that no infringement of independency occurs.

Subcontracting, use of other labs and use of other locations within TÜV Rheinland Industrie Service GmbH

TÜV Rheinland Industrie Service GmbH operates its own laboratory in Cologne and, depending on the standards/clauses to be tested, at other locations (OTLs).

One of the own laboratory is located in Halle (Saale), Germany, where UV tests will be performed. Two subcontracted laboratories are used in the IECEx Scheme operation:

EXAM in Bochum (an IECEx approved laboratory within the scope of subcontracting) and TÜV Rheinland Product Safety GmbH, located in Cologne.

Furthermore, two external laboratories are used in order to perform specific tests within IECEx operation. These are Schorch Elektrische Maschinen & Antriebe GmbH, Mönchengladbach, Germany and Mitutoyo Messgeräte GmbH, Neuss, Germany. In the case of Schorch and Mitutoyo test personnel from the main laboratory in Cologne will perform the tests (use of laboratories only). In order not to infringe the confidentiality rules, all test samples and all documentation brought to Schorch or Mitutoyo will be made anonymous by using an individual project code number on test samples and documents.

All tests performed outside their own laboratory are shown in a document mentioning standard, clause(s), responsible test lab, description of test(s) and the relevant work instruction. In the case of subcontracting, contracts between TÜV Rheinland Industrie Service GmbH and EXAM as well as TÜV Rheinland Product Safety GmbH are existent. For the case where laboratories are used by TÜV Rheinland Industrie Service GmbH (Mitutoyo in Neuss and Schorch in Mönchengladbach) user contracts exist.
During the assessment, a member of the IECEx assessment team checked the activities related to IECEx operation at the location of Schorch in Mönchengladbach.

For the external laboratories used for IECEx operation the calibration situation was checked and found to be acceptable.

Concerning EXAM, Bochum, as subcontracted laboratory the scope of EXAM was checked against the tests foreseen for subcontracting and was found to be acceptable. However, the test clauses in IEC 61079-28 (Protection of equipment and transmission systems using optical radiation) does only concern Ex tests related to ignition. Hence, EXAM can be accepted for ignition testing according to IEC 61079-28.

Quality Assessment Reports (QARs)

TÜV Rheinland Industrie Service GmbH is operating an independent department for manufacturer audits concerning Ex.

During the assessment, the following “QARs” (ATEX) were checked:

ZN: 01 220 020195 (manufacturer located in Germany): With this QAR the protection type “i” is covered
ZN: 01 220 032190 (manufacturer located in Germany): With this QAR the protection types “d” and “m” covered
ZN: 01 220 036028 (manufacturer located in Germany): With this QAR the protection types “d”, “e”, “i” and “m” are covered
ZN: 01 220 020772 (manufacturer located in Germany): With this QAR the protection types “e” is covered
ZN: 01 220 042212 (manufacturer located in Germany): With this QAR the protection type “e” is covered

The above mentioned project files were checked and found OK. The preparation, the performance and the reporting of the audits is excellent.

The CV’s of all 6 Auditors were checked for their Ex training and experience and found to meet IECEx requirements, e.g. ExMC/161/CD.

Training

A general training plan QMV 2.071 was presented. For the Ex area a special training plan exists. Participation is mandatory for all personnel active in the Ex field.

19. COMMENTS

During the assessment, the audit team made observations leading to actions items. All the actions items were resolved by the applicant within short, satisfying the assessment team towards the recommendation for acceptance.

20. RECOMMENDATION

Based on the initial assessment performed between May 16th and 17th, 2006, and all the open items resolved, the assessment team recommends acceptance of TÜV Rheinland Industrie Service GmbH as an IECEx Certification Body for the scope listed in clause 1.14 of this report.

Heinz S. Berger Team Leader	William E. Dunn Expert Assessor	Vijay K. Varma Expert Assessor

30th June 2006

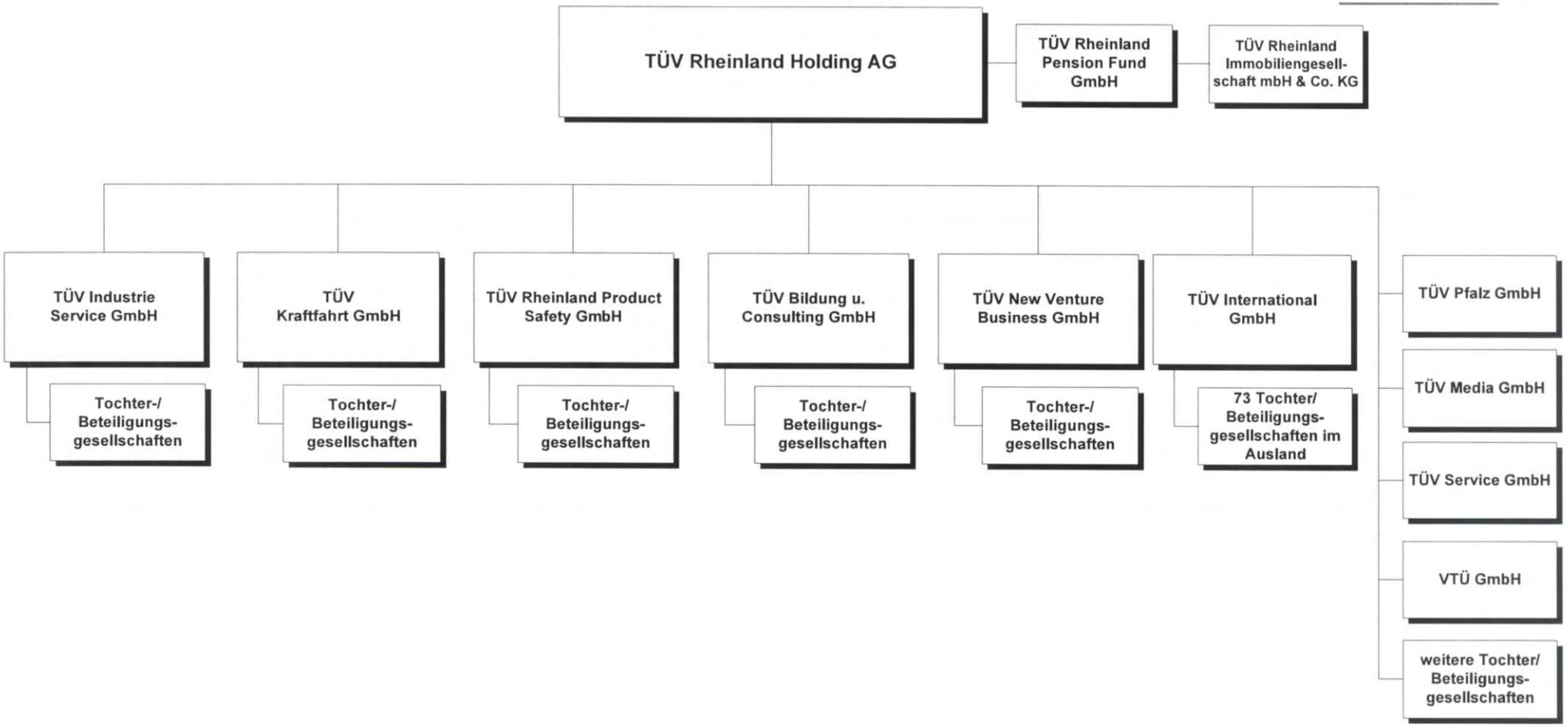
List of Annexes:

Annex 1: Overall Organization Chart of TÜV Rheinland Group
Annex 2: Organization Chart of TÜV Rheinland Industrie Service GmbH
Annex 3: Accreditation Certificate for Product Certification
Annex 4: Accreditation Certificate for System Certification

ANNEX 1

Organisationsplan

TÜV Rheinland Group



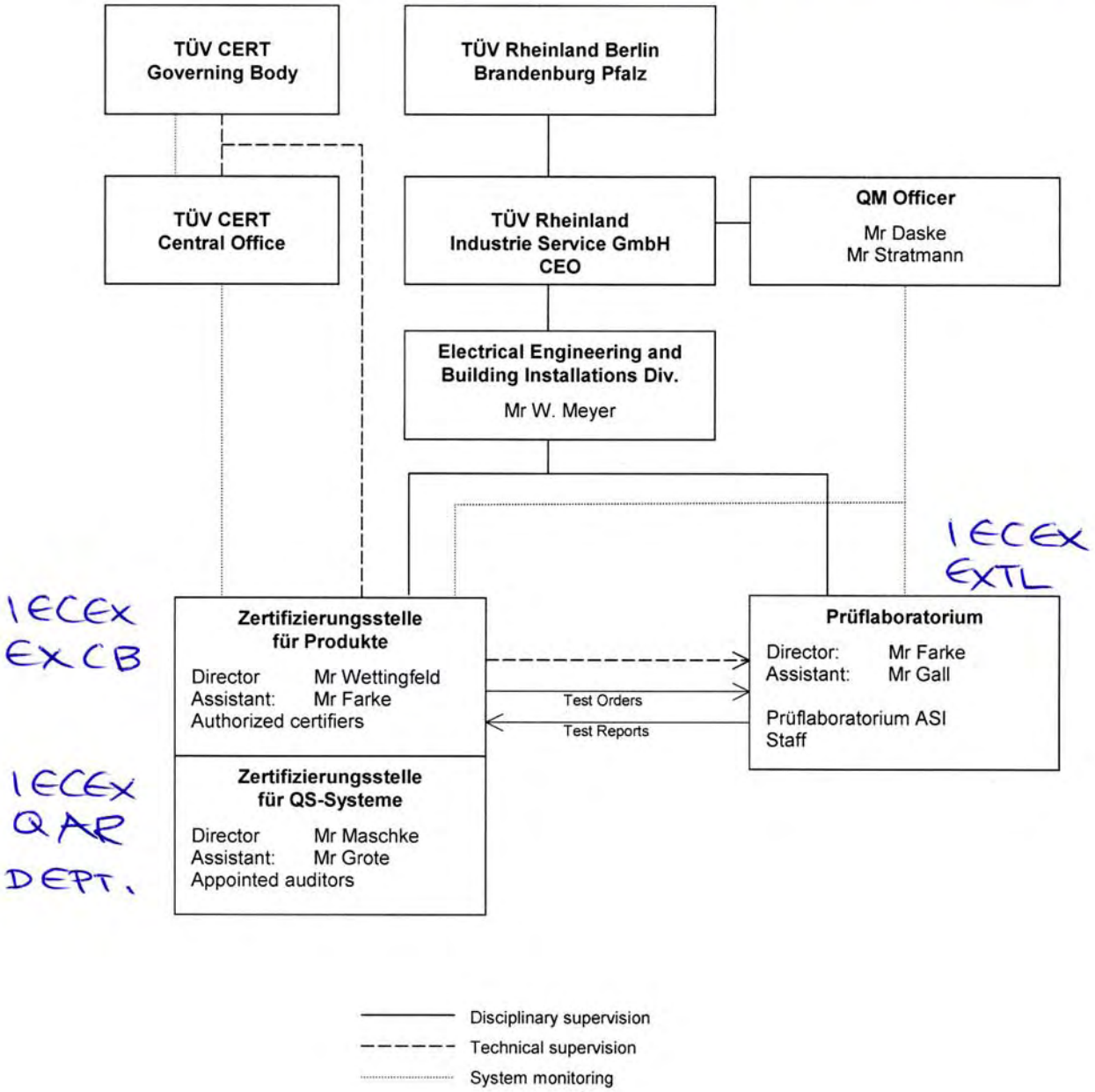
EXCB ANNEX 2

CERTIFICATION

Organisation chart of TÜV CERT-Zertifizierungsstellen für Produkte und QS-Systeme nach Richtlinie 94/9/EG für Ex-Schutz

Issue 03/2006

QS-SYSTEMS & ATEX REGULATION



AKKREDITIERUNG

Die Zentralstelle der Länder für Sicherheitstechnik (ZLS)
– vertreten im Deutschen Akkreditierungsrat –
bestätigt hiermit, dass die

TÜV Anlagentechnik GmbH Unternehmensgruppe
TÜV Rheinland/Berlin-Brandenburg
Am Grauen Stein, 51105 Köln

die Anforderungen des § 9 Abs. 2 Gerätesicherheitsgesetz (GSG)
und der Norm DIN EN 45 011 erfüllt sowie die Kompetenz besitzt,
Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen
im Geltungsbereich der EG-Richtlinie 94/9/EG entsprechend den
Bestimmungen des Akkreditierungsbescheides Nr. 5.ZLS/5.ZLS/3926-1/101/02
zu zertifizieren.

Die Akkreditierung ist gültig vom **01.01.2002** bis zum **31.12.2006**.
DAR-Reg.-Nr.: **ZLS-ZE-311/02**

München, den 24. Januar 2002

Feitenhansl
Leiter der ZLS

AKKREDITIERUNG

Die Zentralstelle der Länder für Sicherheitstechnik (ZLS)
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TÜV Anlagentechnik GmbH Unternehmensgruppe
TÜV Rheinland/Berlin-Brandenburg
Am Grauen Stein, 51105 Köln

die Anforderungen des § 9 Abs. 2 Gerätesicherheitsgesetz (GSG)
und der Norm DIN EN 45 012 erfüllt sowie die Kompetenz besitzt,
Qualitätssicherungssysteme für Geräte zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen
im Sinne der EG-Richtlinie 94/9/EG entsprechend den Bestimmungen des
Akkreditierungsbescheides Nr. 5.ZLS/5.ZLS/3926-1/102/02
zu zertifizieren.

Die Akkreditierung ist gültig vom **01.01.2002** bis zum **31.12.2006**.
DAR-Reg.-Nr.: **ZLS-ZQ-167/02**

München, den 24. Januar 2002

Feitenhansl
Leiter der ZLS