

## Secretariat

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### INTERNATIONAL ELECTROTECHNICAL COMMISSION

### IEC SCHEME FOR CERTIFICATION TO STANDARDS FOR SAFETY OF ELECTRICAL EQUIPMENT FOR EXPLOSIVE ATMOSPHERES (IECEX SCHEME)

Ex Management Committee, ExMC

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## Introduction

The IECEX Assessment Team has conducted a full and complete assessment on TÜV-Nord in accordance with the IECEX Scheme Rules.

In line with the recommendations of the IECEX Assessment Team, the Secretariat hereby submits the TÜV-Nord voting form for consideration and return by ExMC Members.



# IECEX ASSESSMENT REPORT

## (ACCEPTED CERTIFICATION BODY-ACB)

### 1. OBJECT AND FIELD OF APPLICATION

#### 1.1 **Country:**

Germany

#### 1.2 **Name of Candidate ACB**

Certification body of TÜV-Nord  
(Technischer Überwachungs-Verein)  
Hannover/Sachsen-Anhalt e.V.  
Am TÜV 1  
30519 Hannover

#### 1.3 **Members Of The Assessment Team**

\*Janos Hanko, BKI, Hungary  
\*John Bossert, Hazloc Inc., Canada  
Trond Sollie, NEMKO, Norway (Lead Assessor)

\*Site visit performed by two Assessors only due to Accreditation status of applicant ACB.

#### 1.4 **Place And Date Of Assessment**

Hannover, December 6 and 7, 1999

#### 1.5 **Assessment References**

Documents:

- i) IECEx 04 First Edition 1995-03
- ii) ExCC/05/INF - 1999
- iii) EN 45011 and ISO/IEC Guide 65 1996 (Superseding ISO/IEC Guide 40)
- iv) TÜV Nord Application documents dated 31.03.1999

#### 1.6 **Scope Of Application**

Product Category	Standard
General Requirements	IEC 79-0
Pressurized Enclosures	IEC 79-2
Sand-Filled Apparatus	IEC 79-5
Oil-Emersed Apparatus	IEC 79-6
Increased Safety	IEC 79-7
Intrinsic Safety	IEC 79-11
Type "n" Protection	IEC 79-15
Type "m" Protection (encapsulation)	IEC 79-18

**Note: Group I equipment and Increased Safety motors are excluded**

## **1.7 Candidate ACB Persons Interviewed**

<b>Position</b>	<b>Name</b>
Head of Certification body for products	H. Stürwold

## **1.8 Legal Entity Of The Candidate ACB**

The certification body is an independent entity within the TÜV-Nord Group, a not-for-profit company

## **1.9 Associated Testing Laboratories**

<b>Name of Laboratory</b>	<b>Address</b>
TÜV Nord Anlagentechnik GmbH	Same as ACB applicant

The associated TL is a part of the same organisation as the ACB

## **1.10 Associated Certification Functions**

Certification of quality systems, elevators, pressure vessels and machinery.

## **1.11 National Marks And Certificates**

Certificates and permission to use the "TÜV CERT" mark.

## **1.12 Financial Support**

The ACB is fully financed by fees for certification

## **1.13 History**

TÜV-Nord has a history back to 1873 as a conformity assessment body in different fields. The certification service for of electrical equipment in explosive atmospheres was established in 1991

## **1.14 Standards Accepted**

German Standards based on CENELEC Standards and the IEC Standards listed in 1.6

## **1.15 National Differences To IEC Standards**

Only the common European differences between CENELEC Standards and the IEC Standards listed in 1.6 are used.

# **2. ORGANISATION**

## **2.1 Names, Titles And Experience Of The Senior Executives**

<b>Name</b>	<b>Title</b>	<b>Experience</b>
H. Stürwold	Head of Certification body	Electrical Engineer - 1973 With TÜV since 1980

## 2.2 *Name, Title And Experience Of The Quality Management Representative*

Name	Title	Experience
Dr. Schnittendorf	Quality manager	Electrical engineer 1989, PhD-1995 With TÜV since 1995 Lead Auditor since 1996(DSQ

## 2.3 *Name And Title Of Nominated Principal Contact*

Name	Title	Comments
H. Stürwold	Head of certification body	

## 2.4 *Name and Title of Signatory for Certification*

Name	Title	Comments
H. Stürwold	Head of certification body	
O. Rosin	Technical manager	

## 2.5 *Other employees in the ACB activity*

Name	Title	Responsibility
H. Richter	Assessor	ISO 9001 Assessments
A. Meyer	Assessor	ISO 9001 Assessments

(As the ACB and TL are part of the same organisation, for technical competence in the applicable product areas, see the corresponding TL assessment report).

## 2.6 *Organisational Structure*

See attached organization charts (Annex 1)

## 2.7 *Administration*

### 2.7.1 Administrative Structure

See 2.6 above / Annex 1

### 2.7.2 Terms Of Reference Of The Governing Board

The Social Minister of Lower Saxony appoints the Governing Board, which is responsible for both finances and technical direction in compliance with the accreditation Criteria.

## 3. **RESOURCES**

All necessary resources for the certification activity are available in-house. Regarding testing, however, some specific tests are sub-contracted to PTB and IBEXU.

#### 4. COMMITTEES

The technical staff serve on relevant Standards Committees of DIN.

#### 5. CERTIFICATION OPERATIONS

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

Certification Activity	Competence Level of person/organisation performing work	Applicable Standard/Docs
Factory certification audit	DQS qualification	ISO 9001
Product Testing	Electrical Engineers	IEC Standards
Surveillance audit	DQS qualification	ISO 9001
Product surveillance	Electrical Engineers	IEC Standards

##### 5.2 *Certification Policy*

The testing and evaluation are performed by the TÜV Nord Anlagentechnik GmbH and the certificates are issued by TÜV-Nord certification body.

##### 5.3 *Staff Work Instructions*

There are clear instructions pertaining to the duties and responsibilities of the staff.

##### 5.4 *Application for Certification*

Documents for the guidance of applicants are available.

#### 6. STATISTICS

Intrinsic Safety "i"	110
Increases Safety "e"	15
Oil Immersed Safety "e"	0
Powder Filled "q"	2
Encapsulated "m"	10
Type "n"	24
Pressurized "p"	24

#### 7. DOCUMENTATION

##### 7.1 *Document- and Change Control*

Appropriate procedures for document- and change control is in place and is under the responsibility of H. Stürwold

#### 8. RECORDS

Records relevant to the certification activities are carefully maintained, according to documented procedures.

#### 9. CONFIDENTIALITY

All records of certification and information supplied by the client is kept strictly confidential according to documented procedures.

## **10. PUBLICATIONS**

A list of certified products is published annually and a newsletter is issued every three months.

## **11. APPEALS**

Appeals are initially handled by the Head of Electrical Explosion Protection. If not satisfactorily resolved, the appeal is brought to the "TÜV CERT Präsidium" (governing board).

## **12. RECOGNITION AND AGREEMENTS**

The candidate ACB is accredited by the German accreditation body ZLS to both EN 45011 and EN 45012 as well as nominated as a European Notified Body to the Directive 94/9/EEC. ZLS is affiliated with the DAR accreditation board in Germany, which in turn is associated with European EA and international IAF.

Also, the quality system of the TÜV-Nord Group is certified to ISO 9001:1994 by Lloyds Register QA.

See attached copies of the certificates. (Annex 2)

## **13. QUALITY MANUAL**

The content of the Quality Manual is found relevant to the operations concerned.

## **14. INTERNAL AUDIT AND PERIODIC REVIEW**

According to documented procedure, a complete internal audit is conducted every year.

## **15. COMPLAINTS**

A complaints procedure is available.

## **16. WITHDRAWALS AND CANCELLATION OF CERTIFICATES**

There is a documented procedure for withdrawal of certification for cause.

## **18. SPECIAL FACTS TO BE NOTED**

None regarding the certification activity. Regarding testing, however, see the separate TL report.

## **19. RECOMMENDATION**

Based on the findings from the prior documentation review and from the site visit, the assessment team recommends full acceptance of the candidate body as an IECEx ACB for the product standards listed under 1.6 of this report.

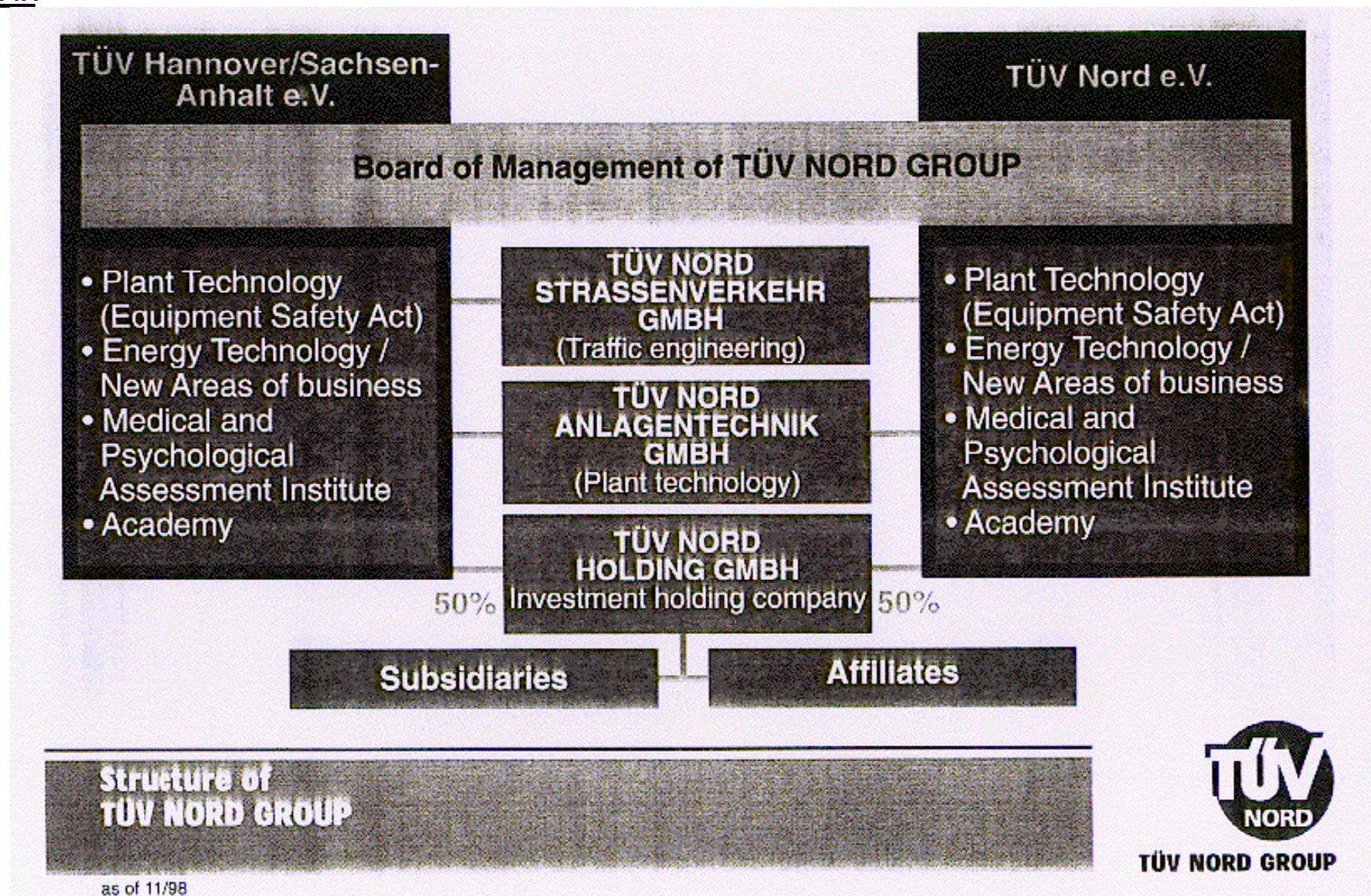
  
Janos Hanko

  
John Bossert

  
Trond Sollie  
(Lead Assessor)

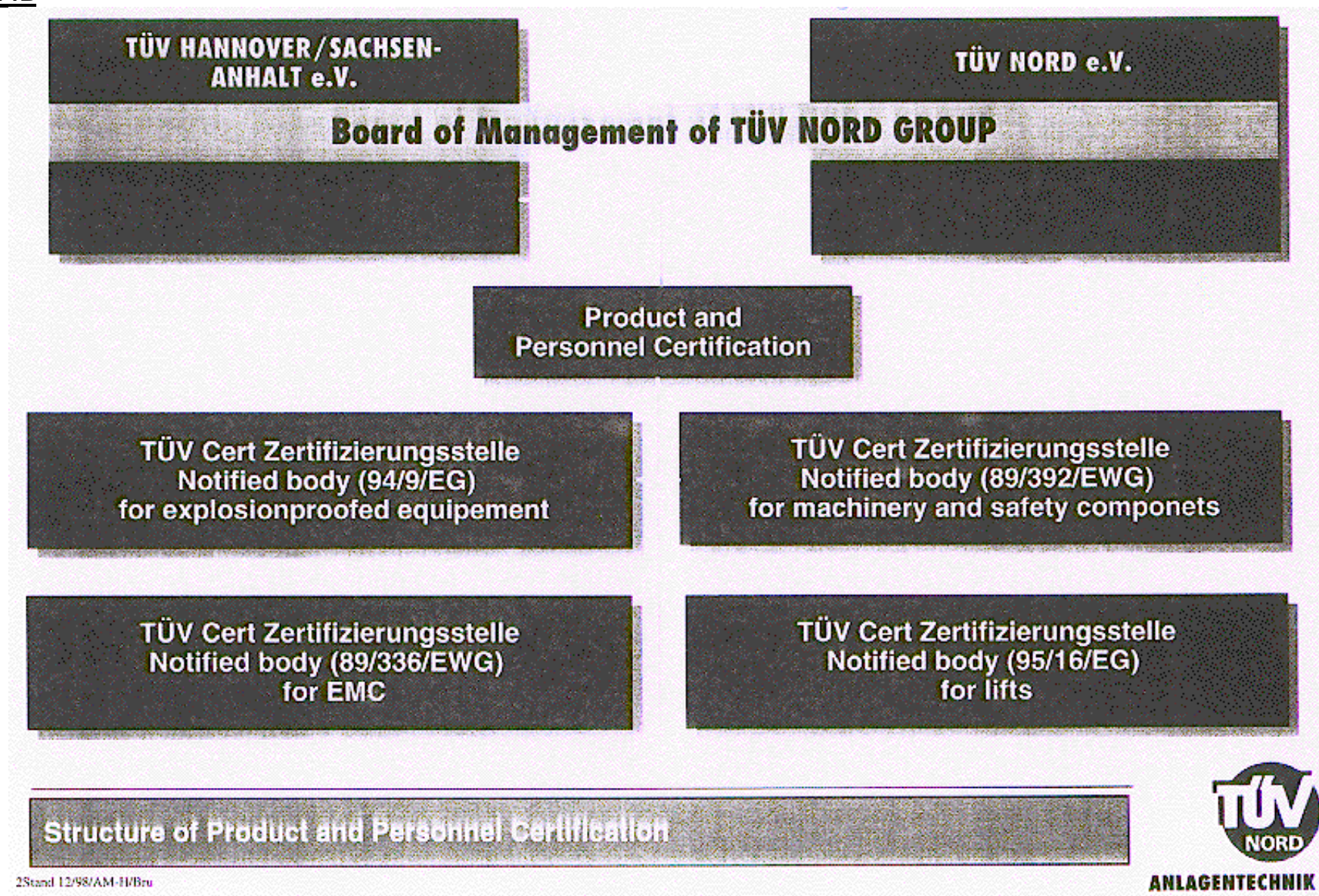


Annex 1A



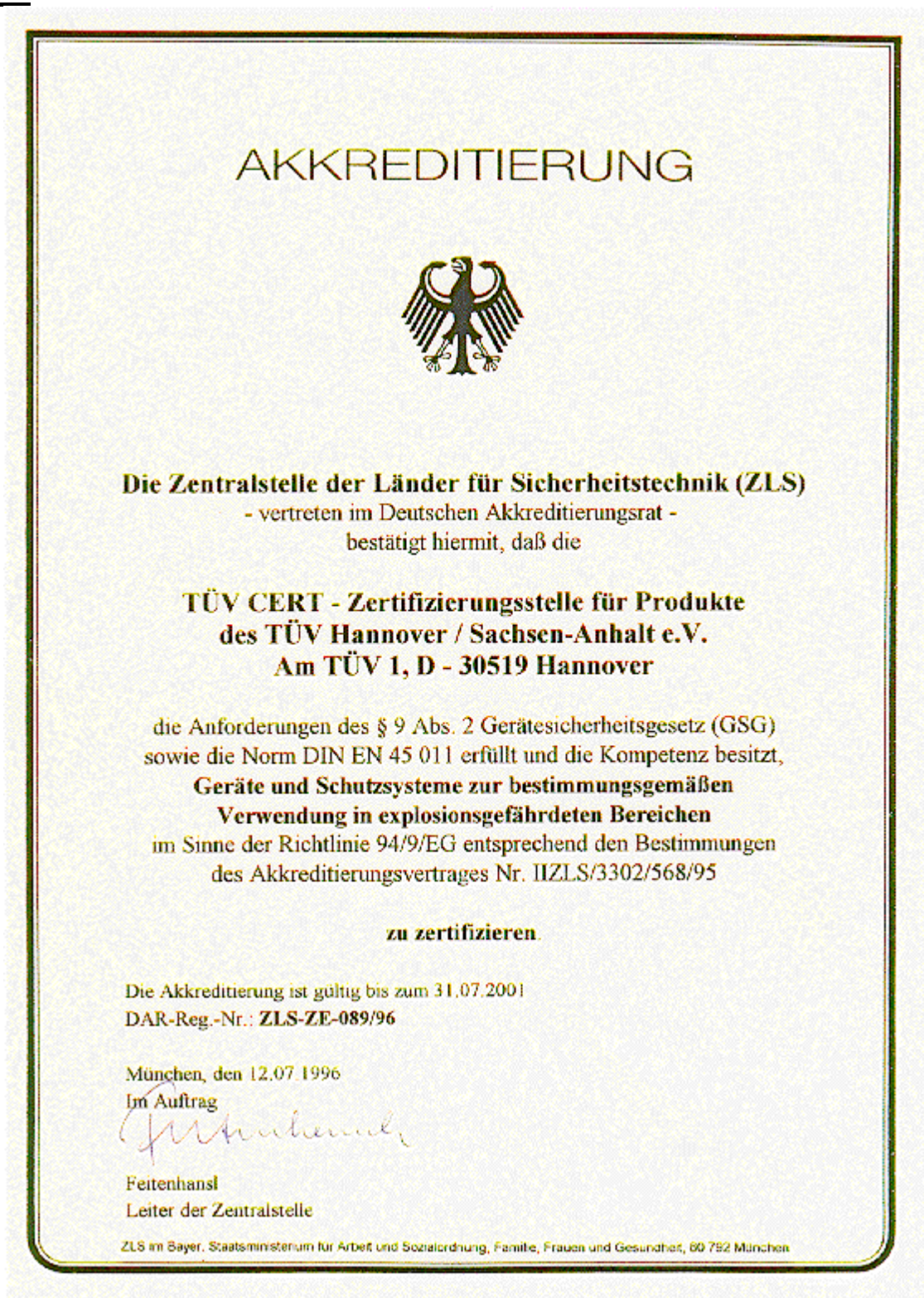


**Annex 1B**



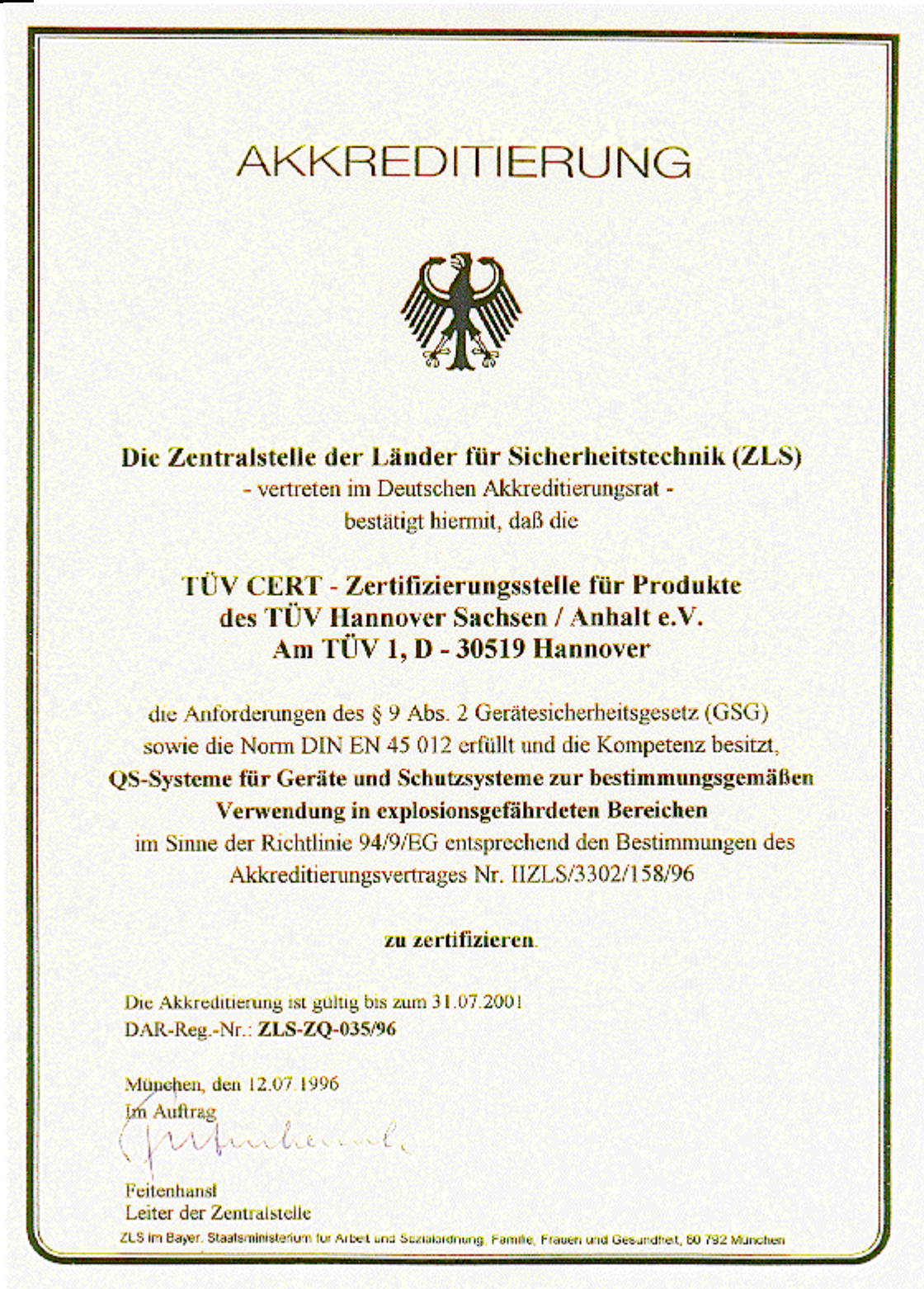


**Annex 2A**





**Annex 2B**





**Annex 2C**





## CERTIFICATE OF APPROVAL

*This is to certify that the Quality Management System of:*

**TÜV NORD GRUPPE  
TÜV Hannover/Sachsen-Anhalt e.V.  
Hannover, Germany**

*has been approved by Lloyd's Register Quality Assurance Limited  
to the following Quality Management System Standards:*

**DIN EN ISO 9001:1994**

*The Quality Management System is applicable to:*

**Tests and assessments for  
steam boiler, pressure vessels and tank plants; electrical engineering,  
machinery and mining; product testing and materials technology;  
energy and systems technology; environmental protection;  
management systems consulting as well as design  
of these and new services.**

**Approval  
Certificate No: 203620/A**

<b>Original Approval:</b>	<b>4<sup>th</sup> November 1996</b>
<b>Current Certificate:</b>	<b>30<sup>th</sup> November 1998</b>
<b>Certificate Expiry:</b>	<b>31<sup>st</sup> October 1999</b>

**M. Schneider**  
**on behalf of LRQA**

