



Secretariat

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Ex Management Committee, ExMC

**This document contains the IECEx Assessment Report for the
acceptance of UL International DEMKO A/S as an Accepted Certification
Body (ACB) within the IECEx Scheme.**

The report is hereby submitted to the ExMC for voting.

**Please consider the assessment report and return the completed voting
form to the Secretariat by **2002 03 18**. Your speedy response to the voting
process will be very much appreciated, you will assist in moving the scheme forward**

**You may return your completed voting form (available in Word format)
via fax or E-mail to**

Chris Agius at-

E-mail: chris.agius@gas.com.au

Fax: + 61 2 8206 6032

Voting Form

IECEX Assessment Report for acceptance of the following candidate as an Ex
Accepted Certification Body

UL International DEMKO A/S

- ☐ Yes. I agree with the acceptance of UL International DEMKO A/S as an Ex
Accepted Certification Body
- ☐ No. I do not agree with the acceptance of UL International DEMKO A/S as an
Ex Accepted Certification Body within the IECEX Scheme, for the following
reasons

Signature: _____

Name: _____

Member Body: _____

Date: _____

Please complete and return by **2002 03 18** to:

Mr Chris Agius
Secretary IECEX

Address:
GPO Box 5420
Sydney NSW 2001-04-24
AUSTRALIA

Visiting Address:
286 Sussex Street
Sydney NSW 2000
Australia

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<http://www.iecex.com>

IECEX

IECEX ASSESSMENT REPORT FORM For ACB (Accepted Certification Body)

Type of Assessment :

Initial Assessment for Candidate ACB
Surveillance Assessment for existing ACB



1. OBJECT AND FIELD OF APPLICATION

1.1 Country :

DENMARK

1.2 Name of Candidate ACB

UL INTERNATIONAL DEMKO A/S

1.3 Members Of The Assessment Team

Michel LIVERNAULT (Lead Assessor)
David BALFOUR

1.4 Place And Date Of Assessment

LYSKÅER 8
PO BOX 514
DK - 2730 HERLEV - DENMARK

1.5 Assessment References

Document:

- i) IECEX 02 First Edition
- ii) ExMC/58/CD Draft for IECEX Operational Document OD/003
- iii) ISO/IEC Guide 65 1996
- iv) ACB application documents dated 13 October 2000 in covering letter

1.6 Scope Of Application

(List all Standards within scope of application or acceptance within IECEx)

<i>Product Category</i>	<i>Standard</i>
Electrical apparatus for explosive atmospheres:	
General Requirements	IEC 60079-0
Part1: Construction and verification test of flameproof enclosures of electrical apparatus	IEC 60079-1
Part2: Electrical apparatus, type of protection "p" (Pressurization)	IEC 60079-2
Part 5: Powder filling "q"	IEC 60079-5
Part 6: Oil-immersion "o"	IEC 60079-6
Part7: Increased safety "e"	IEC 60079-7
Part 11: Intrinsic safety "i"	IEC 60079-11
Part 15: Electrical apparatus with type of protection "n" (Non Sparking)	IEC 60079-15
Part 18: Encapsulation "m"	IEC 60079-18

1.7 Candidate ACB Persons Interviewed

<i>Name</i>	<i>Position</i>
JAKOB NITTEGARD	Section Leader Hazardous Locations
STEEN CHRISTENSEN	Electrical Engineer Hazardous Locations
MOGENS CHRISTENSEN	Manager Quality & Accreditation
CLAUS KAAE	Quality Engineer Quality & Accreditation

1.8 Legal Entity Of The Candidate ACB

UL INTERNATIONAL DEMKO A/S is a Danish private company fully owned by Underwriters Laboratory Inc. The registered Company No is 227164 in the Danish National Company register

1.9 Associated Testing Laboratories

<i>Names of Laboratories</i>	<i>Address</i>
N/A	

1.10 Associated Certification Functions

Specialised certification of Ex and Non Ex Electrical Equipment.

1.11 National Marks And Certificates

D Mark (Letter D within a circle) and Demko certificate with Epsilon X mark.

1.12 Financial Support

Private limited company deriving income solely from tests & certification activities.

1.13 History

Annexe 1

1.14 Standards Accepted

IEC Number	Title	Edition	Amdt
<i>Electrical apparatus for explosive gas atmospheres:</i>			
60079-0	Part 0: General requirements	3 rd 1998	-
60079-1	Part1: Construction and verification test of flameproof enclosures of electrical apparatus	3 rd 1990	A1:1993 A2:1998
60079-2	Part2: Electrical apparatus, type of protection "p" (Pressurization)	3 rd 1983	-
60079-5	Part 5: Powder filling "q"	2 nd 1997	-
60079-6	Part 6: Oil immersion "o"	2 nd 1995	-
60079-7	Part 7: Increased safety "e"	2 nd 1990	A1:1991 A2:1993
60079-11	Part 11: Intrinsic safety "i"	3 rd 1991	-
60079-15	Part15: Electrical apparatus with type of protection "n" (Non sparking)	1 st 1987	-
60079-18	Part 18: Encapsulation "m"	1 st 1992	-
<i>Electrical apparatus for use in the presence of combustible dusts:</i>			
61242-1-1	Part1: Electrical apparatus protected by enclosures Specification for apparatus	2 nd 1999	-
<i>Electrical apparatus for the detection and measurement of flammable gases:</i>			
61779-1	Part 1: General requirements and test methods	1 st 1998	-
61779-2	Part 2: Performance requirements for Group I apparatus indicating a volume fraction up to 5% methane in air	1 st 1998	-
61779-3	Part 3: Performance requirements for Group I apparatus indicating a volume fraction up to 100% methane in air	1 st 1998	-
61779-4	Part4: Performance requirements for Group II apparatus indicating up to 100% lower explosive limit	1 st 1998	-
61779-5	Part 5: Performance requirements for Group II apparatus indicating a volume fraction up to 100% gas	1 st 1998	-

1.15 National Differences To IEC Standards

In Denmark EN standards apply and Denmark has no additional differences to these standards. The Danish member body has notified the IECEx Secretary that Denmark should be added to the list of countries mentioned in IECEx Bulletin 01 Section 2 (List of National Standards and national differences from IEC standards)

2 ORGANISATION

2.1 Names, Titles And Experience Of The Senior Executives

Name	Title	Experience
SØREN KRØIGAARD	Managing Director	4 years as Tech Director then Managing Director for 2 yrs to date

2.2 Name, Title And Experience of The Quality Management Representative

Name	Title	Experience
MOGENS CHRISTENSEN	Manager Quality & Accreditation	5 years testing & certification including 2 years quality control

2.3 Name And Title of Nominated Principal Contact

Name	Title	Experience
JAKOB NITTEGAARD	Section Leader	14 years in this role

2.4 Name and Title of Signatories for Certification

Name	Title	Experience
STEEN LUMBY	Certification Manager	8 years

2.5 Other Employees in ACB activityName

Title	Experience	
OLE SOERENSEN	Deputy Cert Manager	Technical
support		
AAGE SCHYTT	Auditor	Auditing

2.6 Organisational Structure

See Organisation chart, Annexe 2

2.7 Administration

2.7.1 Administrative Structure

See Organisation chart, Annexe 2. The administrative structure (core management team) is shown in bold outline.

2.7.2 Terms of Reference of the Governing Board

These are to:

- establish certification policy
- monitor implementation of the policy
- review audit reports
- monitor finances
- define the responsibility of the Certification Manager
- make decisions on complaints and appeals

3 RESOURCES

ACB has all necessary resources for its operation in house, including personnel trained and experienced in Factory inspection/quality audits.

4. COMMITTEES

A DEMKO delegate attends the following committees:

IECEX MC & IECEX TAG
ExNB, the EC's Notified Bodies Committee

All of the committee papers are received from the standards committee of CENELEC TC31 and the sub committees of IEC TC31

5. CERTIFICATION OPERATIONS

5.1 National Approval/Certification Methods

NOTIFIED BODY UNDER 94/9/EC DIRECTIVE
NATIONAL ACCREDITATION BY DANAK

5.2 Certification Policy

Policy is to grant certification of electrical equipment for use in flammable atmospheres based on testing to establish conformity to recognized standards and ensure that production quality is controlled. The service is accessible to all prospective customers.

5.3 Staff Work Instructions

Instructions are embodied in the Quality Handbook (supplement 2) and in supplementary evaluation reports and electronic project control.

5.4 Application for Certification

Procedure for ATEX is fully defined in an operational procedure in the Quality Manual. The procedure for IEC will be analogous.

6. STATISTICS

Certificates issued during the past 2 years for conformity to each of the standards

See list tabled in Annexe 3.

7. DOCUMENTATION

7.1 Document and Change Control

The procedures are comprehensively covered in the Quality Manual.

8. RECORDS

The procedures for creating and maintaining records are well defined in the Quality Manual.

9. CONFIDENTIALITY

The principles and procedures are as stated in the Quality Manual

10. PUBLICATIONS

Quarterly Newsletter featuring new standards, legal developments etc.
Brochures, leaflets & Promotional Literature.
Publicity via Web Site.
List of certificates, issued on request.

11. APPEALS

The appeal procedure is fully detailed in the Quality Manual

12. NATIONAL ACCREDITATION

DANAK ACCREDITATION Reg nr 87011, issued 7th December 2000,
according to DS/EN 45011 (see Annexe 4)

13. RECOGNITION AND AGREEMENTS

TIIS/MOL in Japan
OSHA recognition as National Recognised Testing Laboratory (US)

14. QUALITY MANUAL

Comprehensive manual, now being further updated to be consistent with ISO/IEC 17025.

15. INTERNAL AUDIT AND PERIODIC REVIEW

Procedure and frequency as in Quality Manual

16. COMPLAINTS

Defined in the Quality Manual

17. WITHDRAWAL AND CANCELLATION OF CERTIFICATES

Principles and procedure are defined in the Quality Manual

18. SPECIAL FACTS TO BE NOTED

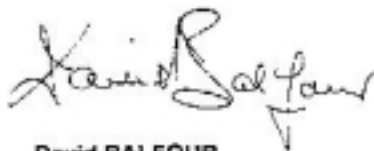
IECEX Secretary notified that DENMARK be added to the list of EC countries covering differences between IEC and EN standards.
Implementation of ISO/IEC 17025 is in process for audit in 2002.

19. RECOMMENDATION

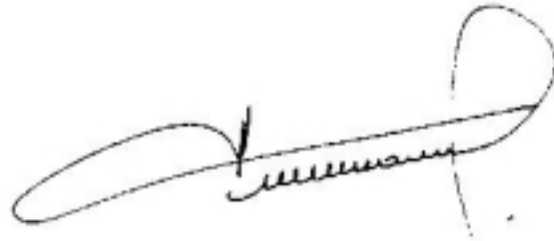
It is recommended that UL INTERNATIONAL DEMKO A/S be accepted as an ACB.

LIST OF ANNEXES

Annexe 1 : History (extract from Quality Manual)
Annexe 2 : Organisational and administrative (in bold) structures
Annexe 3 : number of certificates granted in the past two years for each protection principle
Annexe 4 : DANAK Accreditation.



David BALFOUR



Michel LIVERNAULT
(Lead Assessor)

Annexe 1

DEMKO History Adapted extract from the Quality Manual

DEMKO was founded as a laboratory – at that time called “Prodningssudvalget” (Testing Commission) – under the “Københavns belysningsvæsen” (Copenhagen Lighting Authority).

At the revision of the “Stærkstrømsloven” (Heavy Current Regulations) in 1928, it was decided that all electrical equipment after January 1st 1929 should bear the approval mark – the D-mark – in order to monitor the continuously increasing amount of equipment connected to the electrical power.

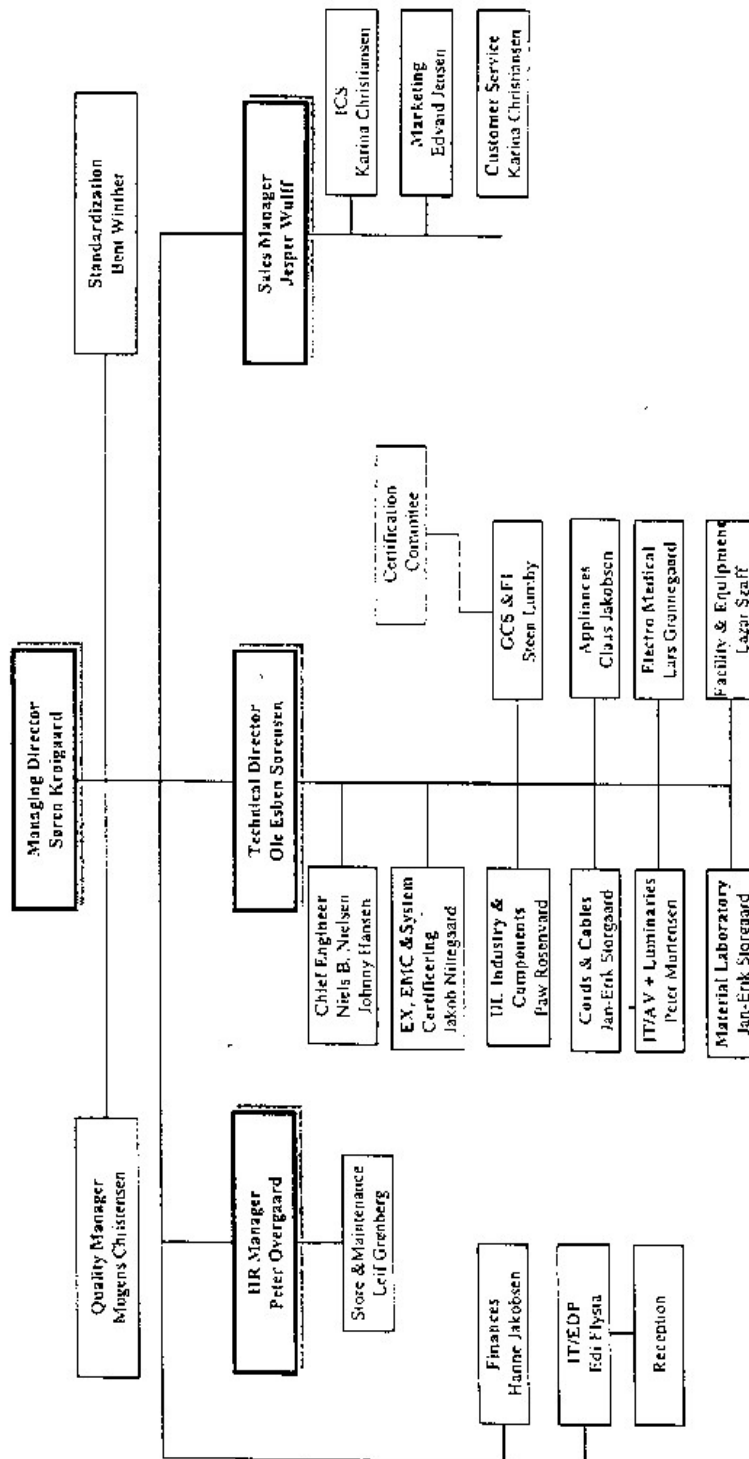
Later on the “Prodningssudvalg” was renamed Danmarks Elektriske Materiel Kontrol (Danish Board for Approval of Electrical Equipment), abbreviated to DEMKO.

In 1964 DEMKO was transferred to be a government agency and at the same time moved to the present premises in Herlev.

By an official document, agreed on by the Danish Folketing (the Danish Parliament) in 1993, it was decided that DEMKO should be privatised. At the end of 1995 this process started, by the decision to sell DEMKO to an organisation that wanted to carry on a Danish Testing and Certification Company.

On July 15th 1996 DEMKO was sold to its present owners, Underwriters Laboratories Inc Northbrook, USA.

Organization Chart for UL International Demko A/S



ExMC/111/DV
2001 12

= Member of CMT and MTM
 = Member of MTN

2001/14/8

Annexe 2

Annexe 3

Number of projects done in 1998 & 1999 for each protection principle

Standard	Projects in 1998	Projects in 1999
EN 50014 / IEC 60079-0 <i>General Requirements</i>	Used in all projects – same number as “Total”	Used in all projects – same number as “Total”
EN 50015 / IEC 60079-6 <i>Oil Immersion</i>	0	3
EN 50016 / IEC 60079-2 <i>Pressurisation</i>	12	13
EN 50017 / IEC 60079-5 <i>Powder Filling</i>	0	0
EN 50018 / IEC 60079-1 <i>Flameproof Enclosure</i>	72	83
EN 50019 / IEC 60079-7 <i>Increased Safety</i>	22	24
EN 50020 / IEC 60079-11 <i>Intrinsic Safety</i>	92	102
EN 50021 / IEC 60079-15 <i>Non-Incendive (Zone 2)</i>	14	13
EN 50028 / IEC 60079-18 <i>Encapsulation</i>	12	13
EN 50039 <i>Intrinsic safe Systems</i>	10	12
In Total	234	265

ExMC/111/DV

2001 12

Akkreditering til certificering af
produkter.

Accreditation to certification of products.

Annexe 4



DANAK

Reg. nr. 7011

Reg. No.

Certificerings-
selskab: DEMKO A/S, Lyskær 8,
Postboks 514, 2730 Herlev
Certification body:

Akkrediterings-
område: Certificering af elektriske og elektroniske produkter, komponenter hertil samt
installationsmateriel, ledninger og kabler for overensstemmelse med krav til
elektrisk sikkerhed anført i relevante standarder og normative dokumenter
specificeret i liste fremsendt til DANAK.

De specifikke certificeringsordninger samt omfang af bedømmelse og
geografisk dækning er anført i bilag 1 til dette akkrediteringsdokument.

*Scope of
Accreditation: Certification of electrical and electronic products, components to these plus wires, cables and
installation accessories for compliance with requirements to electrical safety in relevant
standards and normative documents specified in list forwarded to DANAK.*

*Specific agreements regarding this type of certification plus functions and geographic
locations covered by this accreditation are listed in appendix 1 to this accreditation document.*

Gyldig til den: 1. december 2005

Valid to: December the 1st 2005

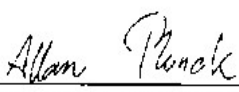
Akkrediteringen er meddelt i medfør af Erhvervsfremme Styrelsens bekendtgørelse om akkreditering af virksomheder til certificering af personer, produkter og systemer samt til inspektion.
The accreditation is granted in pursuance of the Danish Agency for Trade and Industry's Order on Accreditation of Companies to perform Certification of Persons, Products and Systems and to perform Inspection.

Certificerings-selskabet opfylder kriterierne i DS/EN 45011 - Generelle krav til organer, der udfører produktcertificering - samt de til enhver tid fastsatte forskrifter angående dets virksomhed som akkrediteret selskab og de for denne akkreditering særligt fastsatte vilkår, som er meddelt selskabet særskilt.

The certification body complies with DS/EN 45011 - General requirements for Bodies operating product certification systems - as well as regulations concerning the activities as an accredited certification body, and the conditions stipulated particularly for this accreditation, as notified separately to the body.

Udstedt den 7. december 2000 af Dansk Akkreditering, DANAK.
Issued December the 7th 2000 by Danish Accreditation, DANAK.


Karen Jensen, Sektionsleder
Manager of Section


Allan Munck, Ledende assessor
Lead assessor



Certificeringsordningen:

- CCA-aftalen (CENELEC Certification Agreement)
- ENEC-aftalen (European Norms Electrical Certification)
- Keymark-aftalen (European Mark Scheme)
- HAR-aftalen (Cables and Cords complying with HARmonized Specifications)
- NCS-aftalen (Nordic Certification Services)
- DEMKO (Dansk Certificering)

omfattende typegodkendelse, overvågning ved regelmæssig inspektion af produktion og vurdering af kvalitetsstyringssystem for produktion af certificerede produkter samt

- for produkttyper omfattet af ENEC- eller HAR-aftalen tillige vurdering af produkt på grundlag af stikprøveudtagning og krav om kvalitetsstyringssystem efter ISO 9000-serien.

Produkterne skal være produceret i Danmark.

Certification agreements:

- CCA-agreement (CENELEC Certification Agreement)
- ENEC-agreement (European Norms Electrical Certification)
- Keymark-agreement (European Mark Scheme)
- HAR-agreement (Cables and Cords complying with HARmonized Specifications)
- NCS-agreement (Nordic Certification Services)
- DEMKO (Danish Certification).

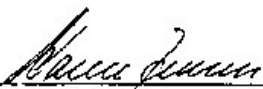
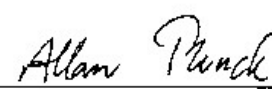
Covering type testing, surveillance by regular inspection of production and assessment of Quality Management System for production of certified products plus

- *for product types included in the ENEC- or HAR agreement evaluation of product based on sample enquiry and requirement of Quality Management System in compliance with the ISO 9000 series.*

The products must be manufactured in Denmark.

Udstedt den 7. december 2000 af Dansk Akkreditering, DANAK.

Issued December the 7th 2000 by Danish Accreditation, DANAK.

 Karen Jensen, Seksjonsleder Manager of Section	 Allan Munck, Ledende assessor Lead assessor
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