

IECEX

Secretariat

IECEX

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Ex Management Committee, ExMC

Please find following the IECEX Assessment Report for the acceptance of NEMKO as an IECEX Test Laboratory.

While assessment of NEMKO as an IECEX test laboratory was completed in 1999, the Assessment Team's report was held awaiting completion of the ACB's assessment (refer ExMC/89/DV).

Following final review by the assessment team this report is hereby submitted to the ExMC for voting.

Please consider the assessment report and return the completed voting form to the Secretariat by **2001 08 24**.

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

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

Fax: + 61 2 8206 6032

Voting Form

IECEX Assessment Report for acceptance of the following candidate as an Ex Test Laboratory

NEMKO AS (Ex-Equipment Section)

☐ Yes. I agree with the acceptance of NEMKO as a an Ex Test Laboratory in the IECEX Scheme

☐ No. I do not agree with the acceptance of NEMKO as an Ex Test Laboratory in the IECEX Scheme for the following reasons

Signature:_____

Name:_____

Member Body:_____

Date:_____

Please complete and return by **2001 08 24** to:

Mr Chris Agius
Secretary IECEX
Fax: +61 2 8206 6

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

Visiting Address:
286 Sussex Street
Sydney NSW 2000
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IECE_x ASSESSMENT REPORT

(TEST LABORATORY-TL)

1. OBJECT AND FIELD OF APPLICATION

1.1 *Country:*

Norway

1.2 *Candidate TL Assessed*

Nemko AS (Ex-Equipment Section)

1.3 *Members Of The Assessment Team*

D. M. Pearson (Lead Assessor)

J. A. Bossert

A. CZYZ

Site Visit performed by Lead Assessor only due to Accreditation status of applicant

1.4 *Place And Date Of Assessment*

Oslo

15 March 1999

1.5 *Assessment References*

Documents

- i) IEC 04 First Edition 1995 - 03
- ii) ExCC/27/Inf November 1997
- iii) ISO/IEC Guide 25 1990
- iv) IEC Technical Guidance Documents for Ex d, Ex e and Ex i.

1.6 *Scope Of Application*

Product Category

Standard

General Requirements

IEC 60079-0

Flameproof Enclosures

IEC 60079-1

Pressurised Enclosures

IEC 60079-2

Increased Safety

IEC 60079-7

Intrinsic Safety

IEC 60079-11

Encapsulation

IEC 60079-18

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1.7 Candidate TL Persons Interviewed

Name	Position/Title
Rolf Hoel	Head of Section for Ex-Equipment
Trond Sollie	Assistant Director of Nemko AS
Arne Willy Hortman	Senior Engineer in Section for Ex-Equipment

1.8 Legal Entity Of The Candidate TL

See Articles of Association for Nemko AS and Byelaws for NEMKO Foundation at Annex A of the ACB Report.

1.9 Associated ACB's

The Test Laboratory is an integral part of Nemko AS Ex-Equipment Section which provides certification services.

1.10 Financial Support

The Ex-Equipment Section of Nemko AS is a not-for profit section whose financial objective is to recover the full economic cost of its operation from customers. The Ex-equipment Section has its own budget and its own compliment of staff.

1.11 History

NEMKO was founded in 1933 as a Government Body, in 1991 NEMKO became an Independent Foundation and in 1996 became a Limited Company (AS) part of the Foundation.

The Ex-Equipment Section started work in the "Ex-field" in the late sixties and issued its first certificates (5) in 1978.

Nemko AS Oslo currently has approximately 150 staff, 7 of which form the Ex-Equipment Section.

1.12 Relevant Standards

A list of standards that Nemko is accredited to test to are contained at Annex A.

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2. ORGANISATION

2.1 Names and Titles of Senior Managers

<u>Name</u>	<u>Title</u>	<u>Experience</u>
Rolf Hoel	Head of Section for Ex-Equipment	1969-1985 testing of electrical equipment at NEMKO, 1985-1988 testing of electrical equipment for use in hazardous areas, 1988 to date head of laboratory for testing electrical equipment for use in hazardous areas.
Trond Sollie	Assistant Director of Nemko AS	1972-1987 Det-Norske-Veritas, certification and inspection with marine, offshore and general industry. 1987 to date part of Nemko's management (currently, delegate and assessor in IECEx Scheme).

2.2 Name, Title And experience Of The Quality Management Representative

Ole Reitan	Quality Manager	35 years in testing/certification at NEMKO, 15 years as quality manager
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2.3 Name And Title Of Nominated Principal Contact

Rolf Hoel	Head of Section for Ex-Equipment
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2.4 Personnel

Name	Ex d	Ex e	Ex i	Ex p	Ex m
Arne Willy Hortman	Y +	Y +	Y +	Y +	Y +
Rolf Hoel	+	+	+	+	+
Rolf Norman Nilsen		Y		Y	
Geir Midmoen	Y +	Y +	Y	Y +	Y
*Tore Irjall					

* Under training, mainly in Ex P

+ = Verifies Y = Conducts tests

Training and qualifications (Curriculum Vitae's) are at Annex D of the ACB Report.

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2.5 Organisational Structure

Organisation is appropriately structured and satisfies requirements of ISO/IEC Guide 25. A copy of the organisational structure is shown at Annex E of the ACB Report.

3. RESOURCES

It is evident from discussions with staff, complimented by training records, and a tour of the laboratory premises that the test laboratory of Nemko AS is adequately resourced.

If sub contractors are used they must have accreditation for the tests performed, if not then the report issued by the Ex-Equipment Section of Nemko AS will not bear the Accreditation Logo of the Norwegian Metrology and Accreditation Service.

4. TEST METHODS

4.1 Procedures

Test methods and operating procedures are adequately documented and relevant to standards used.

5. TEST REPORTS AND RECORDS

5.1 Test Reports Issued Over Past 2 Years

Type Protection	EN Standard	Test Reports Issued
Flameproof Enclosures	EN 50 018	50
Pressurised Enclosures	EN 50 016	20
Increased Safety	EN 50 019	20
Intrinsic Safety	EN 50 020	50
Encapsulation	EN 50028	20
Intrinsic Safety Systems	EN 50 039	5

5.2 Test Records

Test record sheets are contained in folders which are identified by unique number and are located in a filing system for the period stipulated by the policy.

6. CALIBRATION

Test equipment examined during the assessment was within calibration with traceability to national standards. Equipment was labelled with identification and calibration status by the accredited in-house Laboratory.

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7. DOCUMENTATION

7.1 *Quality Manual*

The quality manual is structured to the business of Nemko AS and provides appropriate policy for the guidance of staff at all levels.

7.2 *Document Change Control*

Documents reviewed gave positive evidence of an established system of document control.

8. CONFIDENTIALITY

Nemko AS operate a “commercial in confidence” policy and this was evident during the assessment.

9. NATIONAL ACCREDITATION

Accreditation is performed by the Norwegian Metrology and Accreditation Service but does not include the latest issues of the EN standards, a request has been made for the latest issues to be on their scope of accreditation.

10. RECOGNITION AND AGREEMENTS

The Ex-Equipment Section Testing Laboratory of Nemko AS is a European Notified Body in this area, and also has agreements with FMRC in the USA, KISCO in South Korea, and CQST in P.R of China for mutual acceptance of test reports.

11. COMMENTS

The testing activities are carried out in well organised, well equipped and well kept facilities. Test equipment utilised for Ex work was assessed as suitable for the tests carried out.

The quality system employed by the laboratory is well structured with appropriate record keeping, it was noted that the last internal audit had not witnessed testing as required by the quality manual (4.5 of part 4).

The Ex-Equipment Section Testing Laboratory of Nemko AS has accreditation for the EN standards. Based on their present accreditation, personnel and test methods, it is considered that no major problems should be encountered in extending their accredited scope to include the IEC standards IEC 60079-0, IEC 60079-1, IEC 60079-2, IEC 60079-7 , IEC 60079-11 and IEC 60079-18.

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12. RECOMMENDATION

The visiting assessor recommends full acceptance of the Ex-Equipment Section Testing Laboratory of Nemko AS into the IECEX Scheme and maintenance in the Scheme being dependant on any required future surveillance and/or the scope of accreditation including the relevant IEC standards.

Supplied test reports only to be accepted when they bear the Norwegian Metrology and Accreditation Service logo.



D. M. PEARSON

15 May 2001

ANNEX A

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AKKREDITERINGSdokUMENT

Akkrediteringsnummer P033

Norges elektriske materiellkontroll (NEMKO)

Gaustadalléen 30

Postboks 73 Blindern

0314 OSLO

Akkrediteringen omfatter prøving på områdene dimensjonsmåling (P4), elektronikk (P5), elektromagnetisk kompatibilitet (P6), fysikk (P7) og sikkerhet (P20) i henhold til de neste sidene i dette dokumentet.

Akkreditering i henhold til NS-EN 45001 (1993) og ISO/IEC Guide 25 (1990) er første gang innvilget 27. mars 1995, og er gitt i overensstemmelse med Stortingsprop. nr. 106 (1989/90), og Norsk Akkrediterings statutter fastsatt i Kgl. resolusjon 7. oktober 1993.

Akkrediteringen forutsetter regelmessig oppfølging, og er gyldig til 27. mars 1999.

Akkrediteringsbeslutningen innebærer at Norsk Akkreditering har funnet at organisasjonen oppfyller kravene for akkreditert virksomhet innenfor det aktuelle akkrediteringsområdet. Organisasjonen står selv ansvarlig for resultatene av utførte målinger.

JUSTERVESENET

03.01.96
Dato

Helge Kildal
justeringsdirektør



Akkrediteringsdokument
Akkrediteringsnr. P033
Utgave: 4

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Prøving i permanent laboratorium:
Seksjon AM32, Ex-utstyr

Materiale/produkt	Prøvingsstype	Standardspesifikasjon Utstyr/Teknikk	Merknader/ ref. til intern prosedyre
Eksplosjonsbeskyttet utstyr (akkrediteringen omfatter gruppe II* utstyr)	Generelle krav	NEK-EN 50 014 (1992)	§ 23.4.7.5 er ikke inkludert i akkrediteringen/ P32301
Ex p-utstyr		NEK-EN 50 016 (1977), tillegg 1	P32302
Ex d-utstyr		NEK-EN 50 018 (1977), tillegg 1, 2 og 3	P32303
Ex e-utstyr		NEK-EN 50 019 (1977), tillegg 1, 2, 3, 4 og 5	§ 5.5.2 er ikke inkludert i akkrediteringen/ P32304
Ex i-utstyr		NEK-EN 50 020 (1977), tillegg 1, 2, 3, 4 og 5	P32305
Ex m-utstyr		NEK-EN 50 028 (1988)	P32306
Ex i-systemer		NEK-EN 50 039 (1982)	P32305

*Gruppe II utstyr: elektriske apparater for bruk i potensielt eksplosive omgivelser bortsett fra gruver.

Underskriftsberettigede:

Frank Skarpsno (seksjon DE31, medisinsk elektrisk utstyr)
Leif Gunnar Karlstad (seksjon DE31, medisinsk elektrisk utstyr)
Tom Erik Gulliksen (seksjon DE33, EMC)
Arne Hølbjøm (seksjon DE33, EMC)
Håkon Håkonsen (seksjon AM21, installasjonsmaterieil)
Inge Aardal (seksjon AM21, installasjonsmaterieil)
Arne Hornmann (seksjon AM32, eksplosjonsbeskyttet utstyr)
Rune Slapgard (seksjon AM32, eksplosjonsbeskyttet utstyr)

03.01.96
Dato

Kelja Kisthøf
justeringsskriver

NA-571
Skjema godkjent: 10.11.95