



ExMC/137/R
2002 09

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Title: IECEx Assessment Report for the acceptance of ITS Testing & Certification Limited as an Accepted Ex Test Laboratory (ExTL)

This document contains the IECEx Assessment Report for ITS Testing & Certification Limited

Following assessment, including a site assessment, the Assessment team recommends acceptance of ITS as an Ex Test Laboratory (ExTL) within the IECEx Scheme.

This report has been issued for consideration during the next ExMC Meeting being held in Seoul October 2002 under Item 8 of Draft Agenda ExMC/127/DA.

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Australia**

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IECEX ASSESSMENT REPORT FORM

For Application of ITS to be ExTL (TEST LABORATORY – ExTL)

Type of Assessment:

Initial Assessment for Candidate ExTL ☒

Surveillance Assessment for existing ACB ☐

1. OBJECT AND FIELD OF APPLICATION

1.1 **Country:**
United Kingdom

1.2 **Name of Candidate TL**
ITS Testing & Certification Limited

1.3 **Members Of The Assessment Team**
Jim Munro (Lead assessor)
Janos Hanko
Gregor Arnold (by correspondence only)

1.4 **Place And Date Of Assessment**
ITS House
Cleeve Road
Leatherhead
Surrey KT22 7SB
www.etlsemko.com/uk

17 and 18 April 2002

1.5 **Assessment References**

Document:

- i) IECEx 02 First Edition 1995-03
- ii) IECEx Operational Document OD/003
- iii) ISO/IEC Guide 25: 1990 or ISO 17025
- iv) IECEx Technical Guidance Documents
- iv) ExTL application documents

1.6 Scope Of Application

Product Category
General Requirements

Standard
IEC 60079-0

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

- 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 (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 (Non-Sparking)
- 60079-18 Electrical apparatus for explosive gas atmospheres
Part 18: Encapsulation 'm'
- 61241-1-1 Electrical apparatus for use in the presence of combustible dust
Part 1: Electrical apparatus protected by enclosures
Section 1: Specification for apparatus



1.7 ***Candidate TL Persons Interviewed***

Name	Position
Clive Patten	General Manager
Mark Conboy	Departmental Manager
Andy Austin	Principal Engineer – Industrial Products
Bob Adams	Quality Manager
Ron Webb	Senior Engineer (Flameproof testing)
Vijay Varma	Senior Engineer (Intrinsic safety testing)
Tony Cuthbert	Technical Support & Training Manager

1.8 ***Legal Entity Of The Candidate TL***

ITS is a limited company owned by the Charterhouse Group, a London Financial Investment Company.

The legal status of the company and its Articles of Association have been defined and are maintained at Its Head Office, Savile Row, London.

Note: Since the assessment the legal status has changed. Intertek Testing Services PLC is now a Public company listed on the London Stock Exchange as of the end of May 2002.

1.9 ***Associated ACB***

Names of Laboratories	Address
N/A	

1.12 ***Financial Support*** Self-Funding

1.13 ***History*** ITS Testing & Certification Limited was formed on 1 July 1999 subsequent to the purchase by ITS of ERA Technology Assessment Division

1.14 ***Relevant Standards*** Equipment CENELEC standards



2. ORGANISATION

2.1 Names, Titles And Experience Of The Senior Executives

Clive Patten	General Manager	Senior Management in excess of 10 years
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Mark Conboy	Departmental Manager	2 years as Departmental Manager 3 years as Quality Manager
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2.2 Name, Title And Experience of The Quality Management Representative

Name	Title	Experience
Bob Adams	Quality Manager	33 years experience in UKAS laboratory 13 years as Department Manager 2 years as Quality Manager

2.3 Name And Title of Nominated Principal Contact

Name	Title	Comments
Andy Austin	Principal Engineer	With ERA and then ITS since 1980

2.4 Employees

Senior testing staff additional to above are:

Ron Webb	Senior Engineer	Flameproof Testing
Vijay Varma	Senior Engineer	Intrinsic Safety Testing

See also 3. Resources.

2.5 Organisational Structure

See attached.

3. RESOURCES

The total number of staff in the whole Test Laboratory is 96.

There eight people directly involved in hazardous area testing and certification. Three of these are also involved with factory inspections. These are located in the Industrial & Electronic Products Branch.

The facility has the necessary test equipment and systems to carry out testing to the standards requested.

4. TEST METHODS

4.1 Procedures

Covered in Procedures Manual.

4.2 Staff Work Instructions

As above.

5. TEST REPORTS AND RECORDS

5.1 Test Reports Issued

Since January 2001:

Type of protection	Number of test reports
d	10
e	5
i	27
m	2
DIP	3
p	-
n	5
o	-

5.2 Test Records

Test records retained in files. Data generally written in project notebooks. All data is held in hard copy.

6. CALIBRATION

Most equipment calibrated externally by Wyko calibration services.
Ukas accreditation 0572.

7. DOCUMENTATION

7.1 *Quality Manual*

There is a comprehensive quality manual supported by certification and procedures manuals.

7.2 *Document Change Control*

Do by hard copy. Records retained of changes issued and made.

8. CONFIDENTIALLY

All staff signed confidentiality agreements. Access to test areas by customers is regulated.

9. NATIONAL ACCREDITATION

UKAS testing no 0029. An extract of the accreditation is attached at Annex B.

The full schedule of accreditation is available on UKAS web-site www.ukas.org.

10. RECOGNITION AND AGREEMENTS

The company is a European Notified/Competent Body Number 0359.

11. INTERNAL AUDIT AND PERIODIC REVIEW

Internal audits are carried out by Quality Manager. There is an annual review of the quality system.

12. COMPLAINTS MECHANISM

The complaints system is administered by the quality manager. The system breaks feedback into "complaints" and "anomalies".

13. SPECIAL FACTS TO BE NOTED

None

14. COMMENTS

Testing was assessed to ISO/IEC standard 17025. Found to be in compliance with some work still proceeding on uncertainty of measurement. IECEx Technical Guidance Documents were also used and completed copies of these will be provided to the IECEx Scheme Secretariat.

15. RECOMMENDATION

It is the recommendation of the assessment team that ITS Testing & Certification Limited be accepted as an ExTL in the IECEx Scheme.



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LIST OF ANNEXES

Annex A ITS Organisational Charts

Annex B UKAS Laboratory Accreditation

Annex C Issues Found by Assessment Team



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IECEX

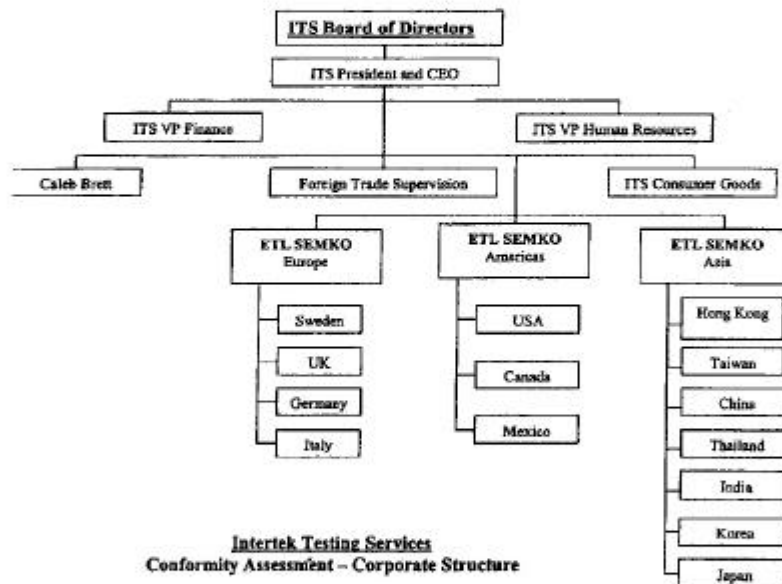
Annex A

Report on ITS, April 2002

ITS TESTING & CERTIFICATION LTD	Section	2
LABORATORY QUALITY MANUAL	Page	8 of 8
	Issue no.	5
TITLE OF SECTION	Issue date:	6 March 2002
	Issued by:	R M Adams
Organisation and Management	Approved by:	

Fig 2

WORLDWIDE Organisation Diagram



End of Document



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Annex B

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE

Copy



**TESTING LABORATORY
No. 0029**

**ITS Testing & Certification Ltd
ITS House
Cleeve Road
Leatherhead
Surrey
KT22 7SB**

is accredited to undertake tests as detailed in the schedule bearing the above accreditation number. From time to time this schedule may be revised and reissued by the United Kingdom Accreditation Service.

Accredited laboratories comply with the requirements of International Standard BS EN ISO/IEC 17025, which replaces ISO/IEC Guide 25 and EN45001. Testing and calibration laboratories that comply with the requirements of this International Standard operate a quality system for their testing and calibration activities that also meets the requirements of ISO 9001 when they engage in the design/development of new methods, and/or develop test programmes combining standard and non-standard test and calibration methods, and ISO 9002 when they only use standard methods.

This Accreditation shall remain in force until the expiry date printed below, subject to continuing compliance with United Kingdom Accreditation Service requirements.

Initial Accreditation 22 February 1982

Michael Bangham

Accreditation Manager, United Kingdom Accreditation Service


This certificate issued on 24 June 2002

Expiry date 31 July 2003

The Department of Trade and Industry (DTI) has entered into a memorandum of understanding with the United Kingdom Accreditation Service (UKAS) through which UKAS is recognised as the national body responsible for assessing and accrediting the competence of organisations in the fields of calibration, testing, inspection and certification of systems, products and personnel.

Annex B

Extract of UKAS Laboratory Accreditation

	ITS Testing & Certification Ltd Issue No:024 Issue Date:10/09/2001	
	Address: ITS House Cleeve Road Leatherhead Surrey KT227SB	Contact: Mr B Adams Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370999 E-Mail: BADAMS@its-ctlsemko.co.uk Website:
Testing performed at permanent laboratory		

Summary (see schedule for detailed accreditation)

CONSTRUCTION

Plumbing

Items in contact with water distribution network

ELECTRICAL

Apparatus for use in potentially explosive atmospheres

Apparatus protected by enclosures

Battery operated vehicles

Cable glands

Combustible dusts

Equipment in aircraft

Ex d Flameproof enclosures

Ex e Increased safety

Ex i Intrinsically safe

Ex m Encapsulated

Ex n Type N protection

Ex o Oil filled

Ex p Purged & pressurised

Ex q Powder filled

Ex s Special protection

Explosive atmosphere tests

Flame arresters



Gas detectors	
General requirements	
Ignition temperature	
Non-electrical apparatus	
Small craft	
Surface heating devices	
Temperature rise/ thermal testing	
Electrical & electronic equipment	
Controls	
Enclosures & ingress protection	
Industrial machines	
Mains operated electronic household apparatus	
Measurement, control & laboratory use	
Medical	
Fuses	
Thermal links	
Household appliances & similar	
Aquarium & pool appliances	
Battery chargers	
Clocks	
Clothes dryers & towel rails	
Cooking appliances & range hoods	
Dispensing appliances	
Electric blankets	
Electric irons & ironers	
Fans	
Floor polishers	
Insect killers	
Kitchen machines	
Lawn mowers & gardening appliances	
Liquid heaters including kettles	
Portable heating tools	
Pumps & motor compressors	
Refrigerators & food freezers	
Room heaters	
Sewing machines	
Shavers, tooth brushes & similar devices	



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Skin, hair care & massage appliances
Toasters, grills, roasters & similar
Vacuum cleaners
Washer machines & similar
Industrial appliances & tools
Industrial appliances & tools
Lamps & luminaires
Lamps & luminaires
Plugs & sockets
Appliance connectors
Cord-sets
Plugs & socket-outlets
Socket-outlets incorporating residual current devices
Switchgear & controlgear
Busbar systems
Electromechanical control devices
Low voltage
Power transformers & power supply units
Wiring & accessories
Adaptors
Boxes
Cable reels
Cable trunking
Ceiling roses
Co-axial sockets
Conduit systems
Connection units
Cooker control units
Earthing clamps
General
Junction boxes
Lampholders
Portable residual current devices
Switches
Switches, electronic
Switches, household & similar
Switches, remote control



Switches, time delay

EMC, IT, RADIO & TELECOMS

EMC, commercial

Conducted current harmonic emissions
Conducted electromagnetic immunity
Conducted emissions
Discontinuous emissions
Electrostatic discharge immunity
Insertion loss
Magnetic immunity
Power absorbing emissions
Radiated electric field emissions
Radiated electromagnetic field immunity
Radiated magnetic field emissions
Surge immunity
Transient immunity
Voltage dips, interruptions & fluctuations

EMC, military & aerospace

Conducted emissions
Conducted susceptibility
Electrostatic discharge susceptibility
Insertion loss
Magnetic field emissions
Magnetic fields
Radiated susceptibility, electric field
Radiated susceptibility, magnetic field
Surface transfer impedance
Transient emissions
Transient susceptibility

IT

Business machines
Data processing equipment
IT equipment
Telecom connections

Telecommunications

Cellular, analogue
Cellular, digital

Cordless telephones
Radio transmitters & receivers
Satellites & terminals

ENGINEERING MATERIALS, MACHINERY, STRUCTURES & PRODUCTS

Machinery & mechanical devices

Lawnmowers

ENVIRONMENTAL SAMPLES

Water, drinking/ potable

Drinking water testing specification

FOSSIL FUEL BURNING APPLIANCES

Gas appliances

Absorption refrigerators

Barbeques

Commercial catering equipment

Cooking appliances

Gas fires

LPG appliances for outdoors use

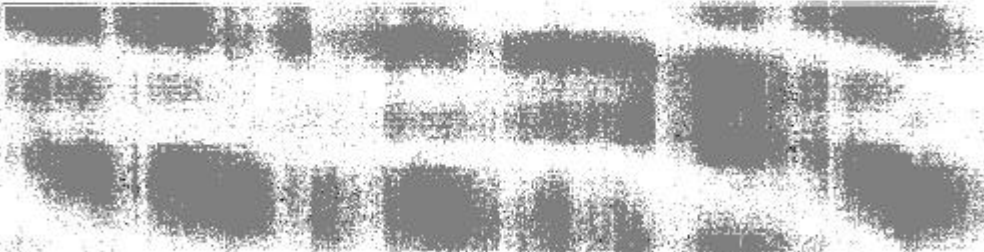
LPG space heaters

**TOYS /CHILDCARE PRODUCTS/ SPORTS & LEISURE EQUIPMENT/
WRITING INSTRUMENTS**

Toys & toy packaging

Electrical

Other Locations



Other Locations

ITS Testing & Certification Ltd
A member of ITS Testing & Certification Ltd Group
Cleeve Road
Leatherhead



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Woodfield Business Park
Pontlanfraith
Blackwood
Gwent
NP12 2DG

Contact : Mr J Bearpark
Telephone : +44 (0)1495 229219
Fax : +44 (0)1495 228331

Annex C

Issues Found by Assessment Team

The assessment team did not raise any formal non-compliances that require rectification before ITS could be accepted as an ACB and ExTL.

However, it did find the following issues that it recommends should be addressed:

- The information on the Safeguarding Committee for the certification operation was not included in the quality system documentation nor included in any formal record system.
- References remain in the documentation to the position of 'Technical Services Manager', even though this position no longer exists. These should be removed.
- There is a skills matrix but it needs updating.
- Anomalies were found in calibration due dates on an instrument, the external system run by Wyko and the internal records. It was noted that the external system is still under development and that the internal records appeared to be correct.
- There was conflict between stated practice and the procedures on the ITS staff doing consulting on design of Ex equipment.
- The flameproof testing laboratory was still using ERA procedures that should have been superseded by ITS procedures (with the same technical content).
- The testing environment in the flameproof testing area appeared to be subject to adverse affects from the weather and dust.
- A commitment has been given by ITS Management to address the above issues.