



ExMC/270/R
August 2005

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

**Title: Re-assessment Report for the continued acceptance of International
Testing and Certification Services (ITACS) as an Ex Test Laboratory (ExTL)**

To: Members of the IECEx Management Committee, ExMC

Introduction

This document contains the IECEx Re-assessment Report for International Testing and Certification Services (ITACS) of Australia as an Ex Test Laboratory in accordance with the 5-year re-assessment plan for the surveillance and monitoring of bodies under the IECEx Scheme.

This Report is issued for endorsement at the 2005 ExMC Buxton Meeting.

It should be noted that the re-assessment of ITACS was conducted as a joint IECEx/NATA Assessment in accordance with the IEC/ILAC MOU.

Chris Agius
IECEx Secretariat

Address:

**SAI Building
286 Sussex Street
Sydney NSW 2000
Australia**

Contact Details:

**Tel: +61 2 8206 6940
Fax: +61 2 8206 6272
e-mail: chris.agius@iecex.com
<http://www.iecex.com>**



ExMC/270/R
August 2005

IECEx RE-ASSESSMENT REPORT FORM

For Accepted Ex Testing Laboratory (ExTL)

1. OBJECT AND FIELD OF APPLICATION

1.1 **Country**
Australia

1.2 **ExTL under Re-Assessment**
International Testing and Certification Services (ITACS)

1.3 **Members of the Assessment Team**
Ian Cleare, Lead assessor
Wolf Dill, Assessor

1.4 **Place and Date of Re-Assessment**
4-6 Second Street, Bowden, South Australia, 5007
2 + 3 December 2004

1.5 **Assessment References**
Document:
i) IECEx 02 Second Edition
ii) IECEx Operational Document OD/009/V1
iii) ISO/IEC 17025
iv) IECEx Technical Guidance Documents

1.6 **Current Scope of Acceptance**

Product Category	Standard
General Requirements	IEC 60079-0
Flameproof enclosure "d"	IEC 60079-1
Pressurization "p"	IEC 60079-2
Powder filling "q"	IEC 60079-5
Oil immersion "o"	IEC 60079-6
Increased safety "e"	IEC 60079-7
Intrinsic safety "i"	IEC 60079-11
Encapsulation "m"	IEC 60079-18
Apparatus for combustible dusts	IEC 61241-1-1
Part 4 Type of protection 'pD'	IEC 61241-4

1.7 **Any Changes in Scope**
Changes in scope were discussed.

1.8 **ExTL Persons Interviewed**

Jurek Botiuk	Testing Manager	Management of evaluation and testing
David Walker	HAE* Manager	Management of intrinsic safety evaluation and testing
Adam Kennewell	Testing Officer	Evaluation and testing



ExMC/270/R
August 2005

1.9 Any changes in Legal Status and/or national accreditation of the ExTL

ITACS is a company registered in South Australia, Registration No. 0335759A. It is a wholly owned subsidiary of Gerard Corporation Pty Ltd.

1.10 Associated Certifying ExCB

International Testing and Certification Services (ITACS)

Note: the assessment for ExCB acceptance was conducted at the same time as the ExTL re-assessment. See separate report ExMC/241/DV.

1.11 Financial Support

ITACS has full accounting responsibility as a subsidiary of Gerard Corporation Pty Ltd. Its operations are profitable and it has control of operating and capital expenditure within the parent company's accounting policies.

2. ORGANISATION

2.1 Names, Titles and Experience of the Senior Executives

Name	Title	Experience
David Gray	General Manager	Appointed in 1989

2.2 Name, Title and Experience of the Quality Management Representative

Name	Title	Experience
Daniel Ramm	Quality Manager	Appointed in 2004

2.3 Name and Title of Nominated Principal Contact

Name	Title	Comments
David Gray	General Manager	

2.4 Other Employees in ExTL activity

Name	Title	Responsibility
Jurek Botiuk	Testing Manager	Management of evaluation and testing
David Walker	HAE* Manager	Management of HAE Business Unit
Ralph Wigg	HAE* Auditor	Evaluation and testing of HAE
Adam Kennewell	Testing Officer	QA audits, Evaluation
Phil Sinclair	Testing Officer	Evaluation and testing
Daniel Ramm	Testing Team Leader	Evaluation and testing
		Supervision of testing

* HAE = Hazardous Area Equipment

2.5 Information about external staff (if any) working for the ExTL

No external staff is working for the ExTL.

2.6 Organisational Structure (Including Changes since Last Assessment)

		David Gray General Manager		Daniel Ramm Quality Manager
Chris Agius Certification Officer	Alyssa Veale Office Manager	Jurek Botiuk Testing Manager	David Walker HAE Manager HAE Auditor	(Other Managers)
		Daniel Ramm Testing Team	Ralph Wigg	



ExMC/270/R
August 2005

		Leader	HAE Auditor	
		Adam Kennewell Phil Sinclair Testing Officers		

3. RESOURCES

ITACS appears to have an adequate number of staff for the current level of business. There are a few experienced staff in hazardous area evaluation and testing and others undergoing training. The company is sufficiently small for the General Manager to be closely involved with all facets of the work but recent growth has revealed the need for a more sophisticated approach to organization, management and documentation.

The laboratory and offices are located in an industrial unit that provides adequate protected accommodation and stable environmental conditions for testing equipment. The work equipment appears adequate for its purpose and workspace for engineers in shared areas provides for reasonable communication and supervision. The layout of the site ensures adequate security for the protection of confidential information. The testing equipment is suitable for the range of tests carried out in house.

4. TEST METHODS

4.1 Procedures

Activities of ITACS are documented in policies and procedures defined in the Quality Manual, with individual test methods being documented in staff work instructions.

4.2 Staff Work Instructions

Staff work instructions are contained in a comprehensive set of Test Methods and Procedures that include ExTAG decisions. The TMPs are cross-referenced to the standards to which they relate.

4.3 New or upgraded laboratory equipment

New dust chambers for larger equipment
Multi channel chart recorders

4.4 Laboratory equipment put out of service without replacement

None

4.5 Review of subcontracted work

During the assessment two applications, which included explosion testing, were reviewed. The testing tasks were subcontracted giving all necessary details and boundary conditions. The subcontracted work was carried out competently and thoroughly.

5. TEST REPORTS AND RECORDS

5.1 IECEx Test Reports (ExTRs) Issued During the Past 2 Years:

Type of Protection	Code	2003	2002
flameproof	d		2



ExMC/270/R
August 2005

intrinsic safety	i	1	
DIP			2

5.2 Other Test Reports Issued During the Past 2 Years

Type of Protection	Code	2004	2003
flameproof	d	9	1
intrinsic safety	i	10	7
increased safety	e	2	2
powder filled	q	-	-
encapsulated	m	2	-
non-sparking	n	1	1
pressurised	p	-	-
DIP		1	1

5.3 Test Records

Tests since 2002 until date of assessment:

Test Description	Approximate Number Conducted
Impact	3
Drop	5
DIP	3
Temperature Rise	4
Surface Resistance Test	2
Electrolyte Leakage	1

Amount of witnessed testing at manufacturer's premises per year:

None

6. CALIBRATION

- During the site visit of the laboratory calibration labels of test equipment were inspected and found to be satisfactory.
- Most calibrations are done internally.
- External calibrations only by NATA accredited calibration laboratories with traceability to national & international standards

7. DOCUMENTATION

7.1 Quality Manual

The quality manual is integral with the ExCB's manual.
Quality system requirements apparently support and help to improve laboratories' activities. Review of applications, services to clients, control of records and test and calibration methods in selected sample jobs showed good housekeeping in every aspect.
The Quality Manual meets the requirements of ISO 17025, although, as noted above, a more robust management system would help to maintain conformity as the business develops. The procedures are demonstrably linked to the IECEx requirements, although



ExMC/270/R
August 2005

dated references to the IECEx documents would aid updating in response to changes in those documents.

7.2 Document Change Control

Covered by ExCB assessment.

8. AUDIT AND PERIODIC REVIEW

8.1 Internals audits

Covered by ExCB assessment.

8.2. External audits (national accreditors, other accreditors)

The laboratory is accredited by NATA, accreditation No. 1700. The last assessments by NATA were made 19 March 1999 and 11-13 December 2002.

No observations related to the content of this report were made.

9. COMPLAINTS

Covered by ExCB assessment.

10. REVIEW OF ISSUED EXTRS BY ASSESSMENT TEAM

The following jobs including test reports were reviewed:

Job No.	Test report	Type(s) of protection	Equipment type
2475	2475	Ex d IIC T6 IP 66	Flammable Gas Head
2500	2500	Ex d IIC Ex e II	Cable glands
2885	2885	Ex e IIC T6	Junction box
2825	2825	Ex ia I	Display
2677	2677	Ex em [ia] I	Gas monitoring system
2782	2782	Ex ia IIC T6	Sensors

No major observations were made, no non-conformances found. Results are commented in section 11.

11. FINDINGS FROM THE RE-ASSESSMENT

Partners for interviews, review of documents and inspection of test equipment were David Walker (HAE Manager), Jurek Botiuk (Testing Manager), Adam Kennewell (Testing Officer)

The assessment consisted of five elements:

- Interviews with staff working in testing and assessment
- Using certification files together with the TGDs in co-operation with staff to identify compatibility of existing testing and assessment procedures with IEC standards and IECEx requirements and as check for nonconformities.
- A visit to the laboratory to check existing test equipment and discuss suitability for IEC testing.
- Review of a project data records and test records
- Demonstration of one test set-up for a key test method



ExMC/270/R
August 2005

High competence of technical staff was found, particularly for Intrinsic Safety and General Requirements.

Up-to date and calibrated laboratory equipment is used. Good housekeeping in laboratories and in offices was visible.

Because the laboratory is not equipped with test equipment to perform tests in and with explosive mixtures of flammable gases or combustible dusts with air, the testing capabilities for the following standards, which are listed with exclusions in the accredited scope of the laboratory, are restricted:

IEC 60079-0 ED4	General requirements	Small hot components (5.5 tests according to 26.5.3)
IEC 60079-1	Flameproof enclosure	Tests according to 79-0 and dimensional checks of gaps can be made, as well as assessment of clauses that do not require explosion testing
IEC 60079-11	Intrinsic Safety	No spark ignition, no hot component ignition testing (10.3, 10.4, 10.7, 10.9.3a, Annex B)

These tests are sub-contracted to another ExTL, SIMTARS which is nationally accredited and accepted by IECEx.

The following standards in the accredited scope of the ExTL in very specific cases also require the use of explosive mixtures. Because these tests are requested not very often, subcontracting on a case-by case practice generally is deemed to be acceptable for accreditation / acceptance.

IEC 60079-7 ED3	Increased Safety	High voltage rotating machines (6.2.3.1)
IEC 60079-15 ED2	Non-sparking	Enclosed break devices, non-incendive components (26.5), energy limited apparatus (26.7)

The laboratory equipment is suitable to do all other tests required by IEC standards as listed in section 1.

No non-conformities related to test equipment or test procedures were found.

Procedures for updating calibrations were working no problems were detected.

The review of the application of / conformity with the Technical Guidance Documents (TGD) has been made via

- review of specific testing files (IECEx TR, or - if not available - TR produced for national certification),
- interviewing involved staff,
- visual inspection of test equipment.

One key test set-up (IEC 60079-0, maximum surface temperature determination) has been demonstrated successfully.

No applications for review were available for:

- Sand Filling
- Oil Immersion
- Pressurisation (not in scope of NATA accreditation)



ExMC/270/R
August 2005

The review of the project data records showed a good documentation of all engineering based assessments, calculations and evaluations. Testing procedures and sample test records were containing all necessary information.

Filing system showed good housekeeping. The files itself contain all project related documents or documents on CD-ROM.

Some observations noted during site assessment led to proposals for improvement, which have been noted in the Technical Guidance Document forms, which will stay confidential.

12. RECOMMENDATIONS

The assessment team recommends that the acceptance of ITACS as ExTL for the existing scope is continued.

LIST OF ANNEXES

None