



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

**Title: Re-assessment Report for the continued acceptance of Safety in Mines,  
Testing and Research Station, SIMTARS, as an Accepted Certification Body  
(ExCB)**

**To: Members of the IECEx Management Committee, ExMC**

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### **Introduction**

In accordance with the 5 year re-assessment plan for the surveillance and monitoring of bodies within the IECEx System, the following document contains the IECEx Re-assessment Report for ***Safety in Mines, Testing and Research Station, SIMTARS***, as an Accepted Certification Body (ExCB)

This report is issued for endorsement during the 2013 Fortaleza, Brazil Meeting.

*Chris Agius*

**IECEx Secretariat**

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## IECEX ASSESSMENT REPORT FOR SIMTARS (IECEX Certification Body ExCB)

**Type of Assessment: (please mark)**

**Initial Assessment for Candidate ExCB**

**Re-Assessment of ExCB** **X**

**Scope Extension of ExCB**

**Schemes Covered:**

IECEX 02	Equipment Scheme	<b>X</b>
IECEX 03	Services Scheme	<b>X</b>
IECEX 04	Mark Licensing	<b>X</b>

### **1. OBJECT AND FIELD OF Re-ASSESSMENT**

#### **1.1 Country:**

AUSTRALIA

#### **1.2 Name of Accepted ExCB**

SIMTARS - Safety in Mines, Testing and Research Station

#### **1.3 Members of the Assessment Team**

IECEX Team Leader: Thierry Houeix  
Expert Assessor: Herbert Peters  
Observers: Chris Agius

#### **1.4 Place and Date of Assessment**

2 Smith Street, REDBANK, QLD 4301, Australia  
27-30 June 2011

#### **1.5 Assessment References**

- i) IECEx 02- IECEx 02 Scheme rules of procedure
- ii) Ex OD 003 - IECEx Assessment procedures
- iii) Ex OD 005-1 Quality System requirements for manufacturers
- iv) Ex OD 009 - Issuing of CoCs, ExTRs and QARs

- v) Ex OD 025 - Management of assessment and surveillance programs for manufacturers
- vi) ISO/IEC Guide 65:1996
- vii) Ex OD 17 Drawing and documentation guidance
- viii) IECEx 03 Ex service facility certification
- ix) Ex OD 016 Assessment Procedures for IECEx 03 Certification Bodies
- x) Ex OD 015 Technical Requirements for IECEx Service Facilities involved in repair, overhaul and modification of Ex equipment
- xi) Ex OD 014 Quality Management System requirements for IECEx Service Facilities
- xii) IECEx 04 IECEx Conformity Mark Licensing System – Regulations
- xiii) Ex OD 022 Rules and Procedures for the granting of Licenses to issue and use the IECEx Conformity Mark
- xiv) Ex OD 023 Terms and Conditions for use of the IECEx Conformity Mark

### 1.6 Scope of Assessment

Number	Title
60079-0 Edition 5	Explosive atmospheres - Part 0: Equipment - General requirements
60079-1 Edition 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures “d”
60079-2 Edition 5	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure «p»
60079-5 Edition 3	Explosive atmospheres - Part 5: Equipment protection by powder filling «q»
60079-6 Edition 3	Explosive atmospheres - Part 6: Equipment protection by oil immersion «o»
60079-7 Edition 4	Explosive atmospheres - Part 7: Equipment protection by increased safety “e”
60079-11 Edition 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i”
60079-15 Edition 4	Electrical apparatus for explosive gas atmospheres - Part 15: Construction, test and marking of type of protection “n” electrical apparatus
60079-18 Edition 3	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation “m” electrical apparatus
60079-19 Edition 3.0	Explosive atmospheres – Part 19: Equipment repair, overhaul and reclamation
60079-25 Edition 2	Electrical apparatus for explosive gas atmospheres - Part 25: Intrinsically safe systems
60079-27 Edition 2	Explosive atmospheres – Part 27: Fieldbus intrinsically safe concept (FISCO)

Number	Title
60079-30-1 Edition 1	Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing
60079-31 Edition 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
60079-35-1 Edition 1	Explosive atmospheres Part 35-1: Caplights for use in mines susceptible to firedamp - General requirements - Construction and testing in relation to the risk of explosion
61241-0 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
61241-1 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures 'tD'
61241-1-1 Edition 1	Electrical apparatus for use in the presence of combustible dust Part 1: Electrical apparatus protected by enclosures and surface temperature limitation - Specification for apparatus
61241-4 Edition 1	Electrical apparatus for use in the presence of combustible dust Part 4: Protection by enclosures "tD" plus -1
61241-11 Edition 1	Electrical apparatus for use in the presence of combustible dust – Part 11: Type of Protection 'pD'
61241-18 Edition 1	Electrical apparatus for use in the presence of combustible dust Part 18: Protection by encapsulation "mD"
62013-1 Edition 2	Caplights for use in mines susceptible to firedamp Part 1: General requirements - Construction and testing in relation to the risk of explosion
62086-1 Edition 1	Electrical apparatus for explosive gas atmospheres – Electrical resistance trace heating – Part 1: General and testing requirements

### 1.7 **Accepted ExCB Persons Interviewed**

Name	Position
Jim Birch	Manager – ETCC
André De Kock	Principal Engineer
Ashraf Chowdhury	Principal Engineer
Chang Woo Lee	Supervising Senior Engineer

### 1.8 **Legal Entity of the Accepted ExCB**

SIMTARS (the Safety in Mines Testing and Research Station) is a division of the Queensland Government - Department of Employment, Economic Development and Innovation. It reports to the Minister for Natural Resources, Mines and Energy and Minister for Trade through the Associate Director General – Mines & Energy.

### 1.9 **Associated Testing Laboratories**

SIMTARS - Safety in Mines, Testing and Research Station - Engineering, Testing and Certification Centre, ETCC



TUV Rheinland Australia Pty., Ltd.,

#### **1.10 Associated Certification Functions**

The commercial activities related to Ex activity are self financing through the fees required to its customers.

#### **1.11 National Marks and Certificates**

MP69 – Explosion-protected electrical equipment – Certification scheme  
MP 87.1 – ANZEx Scheme: Product Certification Program  
MP 87.2 – ANZEx Scheme: Recognised Service Facilities Program  
IECEx Mark of Conformity

#### **1.12 Financial Support**

SIMTARS is a division of the Queensland Department of Employment, Economic Development and Innovation (DEEDI). It's operating and capital expenditures are funded by the Department on an annual budget basis, with a requirement to achieve a budgeted revenue by charging fees for its services.

#### **1.13 History**

SIMTARS was established in 1986 by the Queensland Government as a result of mining disasters in Queensland to provide research and technical services aimed at reducing the risk of disaster events and minimising fatalities, lost-time injuries and occupational disease in mining and related industries.  
Commercial activities began in the 1990s when industry recognised the commercial relevance of the work undertaken.

Core functions are to:

- Conduct mine safety research
- Undertake testing of explosion-protected and general purpose equipment
- Investigate technical aspects of accidents
- Investigate mine fires and explosions
- Scientifically assess health and safety
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SIMTARS achieved accreditation to ISO/IEC 17025 in 1989 and its management system was certified in 1993. In 1999 the certification service was accredited to Guide 65, followed by recognition by the IECEx for product certification. Acceptance into the IECEx Service Facility program was in 2007 and the Mark Licensing program in 2009.

#### **1.14 Standards Accepted**

See clause 1.6 of this report

#### **1.15 National Differences to IEC Standards**

National differences to IEC standards are listed in the latest version of the IECEx Scheme Bulletin, noting that AU has full adoption of the IEC TC 31 Standards.

## 2. ORGANISATION

### 2.1. Names, Titles and Experience of the Senior Executives

Name	Title	Experience
Bipin Parmar	A/Director – Engineering Testing and Certification Centre	9 years Explosion Protection concepts as Supervising Technical Officer 7 years as Principal Engineer, Section Head, Auditor 3 years as A/Manager - STC 1 year as A/Director - ETCC

### 2.2. Name, Title and Experience of the Quality Management Representative

Name	Title	Experience
Ashraf Chowdhury	Quality Coordinator	4 years Flameproof as Section Head 11 years Certification as Section Head Includes Quality Co-ordinator role

### 2.3. Name and Title of Nominated Principal Contact

Name	Title	Comments
Bipin Parmar	A/Director	

### 2.4. Name and Title of Signatories for Certification

Name	Title	Comments
Bipin Parmar	A/Director	
Ashraf Chowdhury	Principal Engineer	

### 2.5. Other Employees in ExCB activity

Name	Title	Responsibility and Experience in Ex
Andre De Kock	Principal Engineer	Section Head – Ex Testing Auditor 4 years
Geoff Barnier	Principal Engineer	Section Head – General Testing, Auditor Ex d, p, e, i, n, m, t, iD, mD 20 Years
Chang Woo Lee	Supervising Senior Engineer	Certification, Ex Testing, Auditor 15 years
Gunter Lenicek	Senior Engineer	Testing & assessment, Auditor Ex i, iD

Name	Title	Responsibility and Experience in Ex
		14 years
David Soady	Senior Technical Officer	Testing & assessment Ex d, t 17 years
John Ellis	Assessment Officer	Testing & assessment Ex d, p, e, n, m, t, mD 13 years
Grant Ross	Testing Officer	Testing & assessment, IP tests 5 years
Ewan Paton	Testing Officer	Testing & assessment 5 years

## 2.6. Organizational Structure

Refer to SIMTARS Organisational Chart in Annex 1

## 2.7. Administration (including Indemnity Insurance)

Professional Indemnity, Product & Public Liability - Covered for unlimited amount worldwide through Queensland Government Insurance Fund.

# 3. RESOURCES

Resources are allocated in terms of buildings, equipment, services and trained personnel by the Ex Managers. A business plan is produced from which budgets are set and reviewed quarterly during the Directors meetings. Competent staff are ensured by an annual appraisal system which identifies future training needs.

# 4. COMMITTEES / Governing Board / Appeals / Advisory Board

ETCC has a Governing Board and Certification Advisory Committee which meet the requirements of ISO/IEC Guide 65. The Governing board comprises the Executive Director of SIMTARS, Manager F & A, Manager ETCC and the Principal engineer Certification. The Certification Advisory Committee has seven members including two ETCC staff and five people representing users, manufacturers and regulatory authorities.

The Product Certification Manual provides for applicants to appeal to the Certification Advisory Committee against a decision of ETCC and provides a route to appeal to the IECEx. Procedure EP0117 details the process for handling of appeals made to SIMTARS. One appeal has been received during the past five years.

# 5. CERTIFICATION OPERATIONS

## 5.1. National Approval/Certification Methods

SIMTARS operates as a CB & TL in two national Ex certification programs. The AUSEx scheme is a Type 1 scheme which is being phased out as the ANZEx scheme

(Type 5) is phased in. The ANZEx scheme is very close to the IECEx scheme in structure and operation and comprises the Product and Repair and Overhaul certifications. The standards and methods used for the various conformity assessment activities do, relate closely to those employed within IECEx.

### **5.2. Certification Policy**

Access to certification and licensing, is contained in the ExCB's Quality Manual and is available to all applicants. It is not restricted for example on grounds such as the applicant not applying for other services or not a member of a particular group or association. Certification to a specific standard or other normative document will not be denied on the grounds that the applicant does not comply with matters not covered by that standard, such as environmental matters, other than where a potential risk in the use of the product is identified, and has not been satisfactorily addressed by the applicant. This was seen to be in conformity with the requirements of ISO/IEC Guide 65. IECEx 02 IECEx Certified Equipment Scheme covering equipment for use in explosive atmospheres – Rules of Procedure and IECEx 03 IECEx Certified Service Facilities Scheme covering repair and overhaul of Ex equipment – Rules of Procedure

### **5.3. Application for Certification**

Applications for certification are made on an application form (EF0186) which provides the information required by ISO/IEC Guide 65 and the IECEx 02 program, form EF0293 applies for certification of Service Facilities. The information facilitates contract review, quotation and job planning.

### **5.4. Certification Decision**

SIMTARS will ensure that the certification decision is made by personnel independent of the testing or assessment process and will not delegate authority for this decision outside of SIMTARS.

Certification decision is made primarily by the Manager or the Principal Engineer in the Certification area, who are not involved in testing or system assessment.

### **5.5. Suspension and Cancellation of Certificates**

Details of the Suspension & cancellation process is outlined in the Certification Regulation Manual. When a certificate holder or licensee fails to maintain their products, services or quality management system in conformance with the requirements of the certification scheme, or applicable agreement, the certificate and/or license may be suspended for a limited period to enable urgent corrective action to be undertaken. Information regarding activity during the period of suspension, lifting of the suspension is provided to applicants.

The procedure covers advising of the IECEx Secretary of suspensions or cancellation of certificates.

## **6. STATISTICS**

### **6.1. Certificates Issued**

Number of certificates issued under the IECEx, national or regional schemes in the preceding four years for each type of protection:



Standards	Title	Number of issued certificates				Total  Part 0 included in numbers below
		2008	2009	2010	2011	
IEC60079	Part 1: Equipment protection by flameproof enclosures "d"	20	13	15	14	62
IEC60079	Part 2: Equipment protection by pressurized Enclosure "p"	-	-	-	-	0
IEC60079	Part 5: Equipment protection by powder filling "q"	-	-	-	-	0
IEC60079	Part 6: Equipment protection by oil immersion «o»	-	-	-	-	0
IEC60079	Part 7: Equipment protection by increased safety "e"	1	1	-	5	7
IEC60079	Part 11: Equipment protection by intrinsic safety "i"	5	2	6	3	16
IEC60079	Part 15: Construction, test and marking of type of protection "n" electrical apparatus	1	1	1	1	4
IEC60079	Part 18: Construction, test and marking of type of protection encapsulation "m" electrical apparatus	-	1	1	-	2
IEC60079	Part 30-1: Electrical resistance trace heating – General and testing requirements	-	-	-	-	0
IEC60079	Part 31: Equipment dust ignition protection by enclosure "t"	5	3	1	7	16
IEC61241	Part 4: Protection by enclosures "pD"	-	-	-	-	0
IEC61241	Part 11: Protection by intrinsic safety 'iD'	-	-	-	-	0
IEC61241	Part 18: Protection by encapsulation "mD"	-	1	1	-	2
IEC62013	Part 1: General requirements - Construction and testing in relation to the risk of explosion	-	-	-	-	0

## 7. DOCUMENTATION

### 7.1. Quality Manual

SIMTARS has a comprehensive quality manual supported by other procedural documents, which refer to ISO 9001, ISO/IEC 17025 standards and ISO/IEC Guide 65 as well as the IECEx rules, procedures and relevant documents.

### **7.2. Procedures**

SIMTARS has a very comprehensive range of procedures covering all aspects of the testing operations that were audited as part of this assessment. Where applicable each procedure has with it an associated test sheet for completion by the staff.

### **7.3. Work Instructions**

Work Instructions (EI series documents) are controlled electronically and are accessible to all staff. Instructions are available for tasks that are not fully defined in the Standards or if it has been found to be required to maintain consistency.

### **7.4. Records**

All records are maintained in accordance with EP0020 procedure. The records (EF series documents) are controlled electronically and are accessible to all staff. Test data are held on structured job files and each bear identification. Procedure (EP0020) provides guidance on information to be recorded. This was found to comply with IECEx requirements.

### **7.5. Document Change Control**

Procedure for changes to controlled documents is addressed in QP0010. The procedure involves making of the changes, circulation for feedback, issuing by the document controller and notification to staff. The Workwise work flow software is used to log details of the change.

## **8. CONFIDENTIALITY**

All employees and members of committees sign confidentiality agreements. Examples of these were sighted by the team. Confidentiality is addressed in CI 18 of the Certification Regulation Manual. Code of Conduct also addresses confidentiality and conflict of interest was found to comply with ISO/IEC Guide 65 as well as the IECEx rules, procedures and relevant documents.

## **9. PUBLICATIONS**

SIMTARS ETCC does contribute articles in Queensland Mining Journal. Application forms are available on request.

## **10. NATIONAL ACCREDITATION**

SIMTARS is accredited for product certification against ISO Guide 65 by JAS-ANZ for the ANZEx Scheme (MP 69 and MP 87) and IECEx 02 scheme.

SIMTARS is also accredited for Service Facilities Program against ISO Guide 65 by JAS-ANZ for the ANZEx Scheme (MP 87.2) and IECEx 03 scheme.

The current JASANZ accreditation certificate No. Z1630296AB was issued on 3 September 1999 and the current schedule was issued on 10 March 2010.



Details can be found on:

[JAS-ANZ web site](#)

## **11. RECOGNITION AND AGREEMENTS**

SIMTARS have a Memorandum of Understanding with Korea Gas Safety Corporation (KGS), an Accepted ExCB and ExTL within the IECEX System, which covers cooperative ventures between the two organisations.

## **12. INTERNAL AUDIT AND PERIODIC MANAGEMENT REVIEW**

Internal audits are carried out once a year for each type of operation. The last internal audit for IECEx was carried out in June and November 2010, the results were reviewed. The Internal audit schedule is available electronically on the system. Audits are scheduled for assessment against elements of ISO/IEC 17025, Guide 65 and ISO 9001. Requirements of the IECEx are addressed through such assessments. The System is reviewed by management and is carried out at Management Meetings, which are planned to be held once every two months.

## **13. SUBCONTRACTING, USE OF OTHER LABS AND USE OF OTHER LOCATIONS**

Subcontracting is covered in EM0001 (SIMTARS Certification Regulation Manual) document which relates principally to the ExTL activity. Tests for IECEx certification can be subcontracted to only another IECEx ExTL.

## **14. TRAINING**

Training records are held on personnel files. Training needs are assessed annually. Competence is attained mostly through on the job training, with assessments by experienced staff being recorded to build up the competence matrix. Additional training of SIMTARS staff was conducted with the Assessment Team reviewing corrective actions and found to meet the requirements of the IECEx. Details are included in the site assessment report and held by the Secretariat. Some of the training courses recently attended by staff are: measurement uncertainty, root cause analysis, project management.

There is a competency matrix for all Activity branches which include the ExCB and the ExTL tasks.

## **15. ASSESSMENT OF MANUFACTURERS AND ISSUE OF QARS**

Procedure EP0108 (Procedure for audit activities) addresses assessments of manufacturers. The report format is addressed in EI0022 (Instruction for the Preparation and Processing of Test Report) and includes the all requirements from the IECEx Scheme requirements.

Two external auditors are used and are on contract. All audits are co-ordinated by the certification area, which manages scheduling, review and issue of the audit reports.

*A number of SIMTARS QAR files were reviewed and seen to be satisfactory.*

## **16. COMPLAINTS AND APPEALS (Including appeals to IECEx)**

SIMTARS operates a customer feedback system which deals with complaints and appreciations of service. The form which is used allows for follow-up action to be identified and satisfactory completion to be recorded. One appeal was lodged since the last IECEx assessment. This appeal did not go past SIMTARS. There have been no complaints and some appreciations.

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

### **17.1. Supporting Documentation**

Copies of additional supporting information for this assessment have been provided to the applicant and the IECEx Secretariat. These include:

- Details of issues raised and how these have been resolved
- Checklist for ISO/IEC Guide 65

### **17.2. Certificate Files Reviewed**

A review was made of files for the following certificates:

1. IECEx SIM 08.0006
2. IECEx SIM 08.0012
3. AU/SIM/ExTR 08.0010/00

## **18. COMMENTS (Including issues found during assessment)**

There were some issues during re-assessment that were subsequently resolved to the satisfaction of the assessment team. These issues were to do with:

- Criteria of the auditor for IECEx 02
- Staff confidentiality agreement

All issues were resolved to the satisfaction of the assessment team.

## **19. RECOMMENDATION**

Based on the re-assessment performed on 21-23 June 2011, SIMTARS is recommended for continued acceptance in the IECEx system as an IECEx Certification Body (ExCB) for the product certification scheme (IECEx 02) according to the scope of the standards listed in this document, for the Service Facilities scheme (IECEx 03) and for the IECEx Mark of Conformity delivery (IECEx 04).

Thierry Houeix  
Lead Assessor

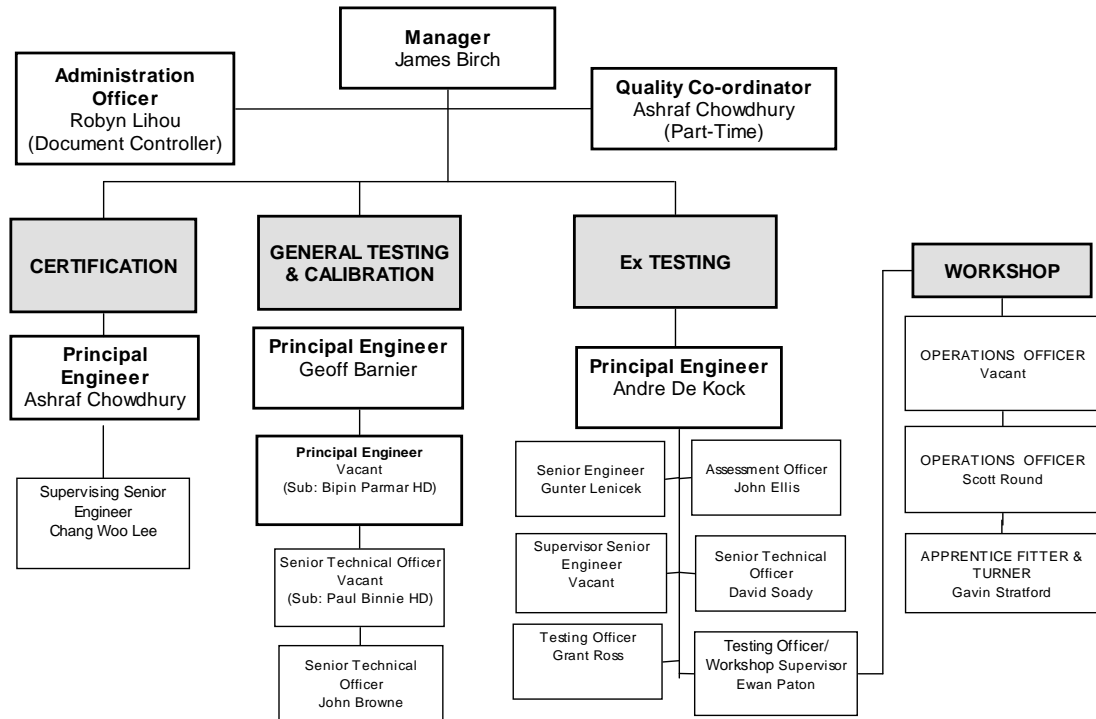
Herbert Peters  
Expert Assessor



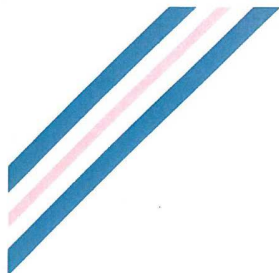
**List of Annexes:**

1. Overall Organization Chart of SIMTARS
2. Accreditation Certificate for Product Certification

Annex 1  
Organization Chart of SIMTARS



Annex 2  
Accreditation Certificate for Product Certification



JOINT ACCREDITATION SYSTEM OF AUSTRALIA AND NEW ZEALAND



INTERNATIONAL ACCREDITATION FORUM

*This is to attest that*  
**Simtars**  
*Safety in Mines Testing*  
*and Research Station*

*has been accredited by the Joint Accreditation System*  
*of Australia and New Zealand*  
*as detailed in the accreditation schedule for*

*Product Certification*

Signed this 3rd day of September 1999

  
Chairman  
  
Chief Executive

This certificate remains the property of  
the Joint Accreditation System of Australia and New Zealand.  
Accreditation No

**Z1630296AB**

Refer to JAS-ANZ register [www.jas-anz.com.au](http://www.jas-anz.com.au) for certificate validity

