

CAPABILITY GUIDE ELECTRICAL TESTING

TestSafe Australia carries out a range of electrical testing in its laboratories at Londonderry in Sydney's west.

By thorough testing and assessment TestSafe Australia can certify equipment to Australian, international and overseas standards. Overseas approval or certification can be achieved through our agreements with overseas approval and certification bodies.

Our test facilities are also available for product development or investigation projects.

TESTING

- *TestSafe Australia tests electrical equipment for hazardous locations for conformance with national, overseas and international standards:*

Flameproof equipment 'd'	Powder filling 'q'
Increased Safety 'e'	Intrinsically safe 'i' and 'iD'
Non-sparking 'n'	Encapsulation 'm' and 'mD'
Pressurisation 'p' and 'pD'	Cable glands
Ventilation 'v'	Battery operated vehicles
Special protection 's'	Fuel dispensers
Dust-tight and Dust-protected enclosures 'tD'	Electrical equipment for diesel vehicles
Oil immersion 'o'	

- *TestSafe Australia also tests against standards for coal mining (methane – fire damp – atmospheres):*

Flameproof plugs and receptacles.	Transformer substations for underground mines.
Bolted flameproof cable couplers.	Cap Lamps.
Electrical equipment for coal mines.	Electrical protection devices.
Machines.	

- *TestSafe Australia conducts short circuit and load testing of electrical equipment*

Testing at nominal voltages up to 11,000V.	Temperature rise tests.
Test currents to 30 kA.	Load tests to 8 MVA.
Switching duty cycling.	Fault level to 60 MVA.

- *TestSafe Australia carries out general electrical testing:*

Cables and connectors.	Protection (IP Code).
Dynamometer testing of rotating machines.	Electrical safety testing.
Insulation materials testing.	Solid object (including dust) and water ingress.
Physical environmental testing, variations in temperature and humidity.	Electrical motor heat rise and performance tests, including motor high efficiency testing.

FACILITIES

- **Flameproof test chamber**, up to 8m³. Larger sizes can be arranged. Testing with Group I and all Group II gases.
- **Overpressure test facility** up to 5.0 MPa, air or water.
- **On-Load High Current Testing facility** – Switching and through current tests up to 11,000 V and up to 30 kA. 8 MVA load and 60 MVA fault levels. Also temperature rise testing of loaded circuits up to 4,000 A.
- **Water sprays, Submersion, Dust Chamber, Probes** – water ingress, dust ingress and other solids ingress.
- **Environmental Chambers and Ovens** – Testing of equipment, materials and luminaries: Temperatures – 40 °C to +200 °C; and higher, up to 95% RH @ controlled temperatures.
- **Testing Laboratories** - TestSafe Australia has a number of specialist laboratories for electrical testing including the testing of intrinsically safe equipment using the spark test apparatus, needle flame and glow wire testing, comparative tracking index (CTI). AC mains voltage withstand test to 35 kV. Impulse voltage tests to 12 kV. Fast transient burst tests to 3 kV. Dielectric strength at elevated temperatures. Dynamometer installations 0.5 kW – 10 kW and 10 kW – 440 kW, with power supply of 110 V – 3.3 kV.

TestSafe Australia is an independent testing authority operating under a quality management system to ISO 9001:2000 and is recognized for the majority of its work as a NATA registered laboratory.

For further information please contact

*TestSafe Australia
PO Box 592 Richmond NSW 2753
919 Londonderry Road, Londonderry NSW 2753*

*Phone 02 4724 4900
Fax 02 4724 4999*

e-mail testsafe@workcover.nsw.gov.au

website: www.testsafe.com.au