



POWER SYSTEM SERVICES

TRANSMISSION & DISTRIBUTION



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Tex Onsite Pty Ltd has taken every reasonable precaution to ensure the accuracy of the information of this catalogue. Nevertheless, Tex Onsite Pty Ltd cannot hold itself responsible for the consequences of incorrect or misrepresented information, or errors that may have inadvertently arisen during its preparation.

Welcome to TEX Onsite

We employ dedicated experts in all sections of the business - from our Power System Services professionals, our on-site instrument calibration and PPE / Operational equipment HV testing technicians, to our Scientific Services / R&D Team - all personnel are at your service to provide solutions to fulfill your every requirement.

TEX Onsite operate across Australia and New Zealand, providing an extensive range of test and calibration products:

- Power System Services – a full range of MV/HV maintenance and installation works
- On-site Electrical Testing of PPE and Operational Equipment
- On-site Calibration of a vast range of Instruments
- NATA laboratory products / facilities
- Sales of an extensive selection of products

As an industry leader, we have the largest services and products portfolio and the widest service reach, with over 30 service vans on the road and our own aircraft servicing remote areas.

This document is designed to expressly support the Power System Services we offer in both Australia and New Zealand. Please contact our representative for more information regarding the PPE/operational equipment HV testing and instrument calibrations as well as our wide range of items for sale in our shop.

Our in-house IT engineers embrace continual improvement in data capture and management, allowing us to maintain client's accessible registers and provide scheduling for all re-testing requirements ensuring compliance at all times. TEX Onsite provides that confidence.

TEX Onsite are specialists in MV/HV protection systems and in transformer and switchgear installation, servicing and maintenance. The TEX Onsite footprint, logistics resources and strong relationships with industry professionals, support the team in delivering solutions to the Electricity Generation and Supply Industry.

Although TEX Onsite are based in Australia and New Zealand, we do regularly carry out work in other countries such as Laos, Fiji and New Guinea.

TEX Onsite Vision, Mission & Values

In our relentless quest to provide the very best in customer service, along with an ever increasing product range designed to meet industry needs, all TEX Onsite staff believe in and adhere to the principles supporting our Vision, Mission & Values that are the backbone of this company.

Our Vision

We will increase our global footprint by combining continued innovation with quality technical solutions meeting industry needs, with a dedicated team reflecting our values and sharing in our success.

Our Mission

In pursuit of our vision, through research, development and continuous improvement, we will endeavor to meet client needs, investing in our people, equipment and processes to provide quality solutions.

Our Values

- Honesty
- Respect
- Pride
- Sustainability
- Teamwork
- Excellence





Contact & Locations

TEX Onsite is available to be contacted at the following locations:

Head Office

Melbourne Bayswater Office

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Sydney

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Te Rapa, NZ 3200

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Comprehensive Management System

TEX Onsite's unique Comprehensive Management System (CMS) undertakes to manage all the test & calibration requirements for an organisation including the documentation & record keeping responsibilities. CMS provides a hassle free ongoing structure for total management of your inventory.

Services Provided

This TEX Onsite exclusive CMS system is supported by our vast range of in-house products as well as our close network of specialist outsource suppliers throughout Australia and New Zealand, providing a one-stop shop for test & calibration requirements as well as Power System Services.

The cornerstone of the CMS is through the application of three available service methodologies:

- In-house on site
- In-house at our NATA laboratory
- Outsource specialist items to our approved expert suppliers

Through the utilisation of the CMS, we are particularly interested in promoting our Whole of Business service rate which offers significant discounts where TEX Onsite services all of the client's requirements across all sites.



Advantage

This innovative CMS is designed with the client in mind - providing peace of mind in compliance and operational security, whilst dealing with one supplier across both countries.

CMS links in perfectly with and is supported by our:

- Client Accessed Secure Data Management Service
- Compliance Due Date Reminder System
- Works Scheduling Calendar Management Procedure



High Voltage System Maintenance Management Service

Our unique High Voltage System Maintenance Management Service (HVSM), makes TEX Onsite the leading complete system evaluation specialists.

Each HVSM service is thoroughly and meticulously planned and includes both non-intrusive and intrusive inspection and test procedures, reducing downtime, whilst recognizing all applicable legislation and local directions.

Each installation is evaluated on its own merits, a unique annual maintenance plan is produced and approved by the client prior to proceeding. Such plans can recognise maintenance requirements up to seven years duration, ensuring worry free operation and compliance.

With ageing HV systems and networks still in service and limited funds available to replace them, the HVSM service provides an accurate conditional assessment whilst offering peace of mind.

The program is aimed at removing the serious inconvenience and massive expense encountered in unplanned interruptions and system shutdowns.

Specifications

The HVSM Program Covers:

- Transmission Systems
- Distribution Systems
- Protection Equipment
- Switchgear: indoor & outdoor
- Switch Rooms: all functions
- Earth Grid: EPR, step & touch
- Battery Installations
- Station Auxiliary
- Circuit Breakers, Isolator & Earthing Switch
- Oil Analysis Reporting/Recommendations
- Transformer, Tap Changers, Condition Monitoring etc.



High Voltage System Maintenance Management Service

Advantage

When the HVSM service is incorporated with our HV testing of operational and PPE tools and equipment, together with our vast range of instrument calibration - HVSM forms the only complete HV maintenance service.

Please refer to our specific product information on:

- High Voltage Testing
- Electrical Instrument Calibration
- Height Safety/Fall Arrest

The HVSM program has been developed to ensure all high voltage systems are maintained in compliance with:

- Maintenance Recommendations of Relevant Standards
- Manufacturers Requirements
- Industry Best Practice
- OHS&E Legislative Requirements
- Applicable Supply Authority Requirements – Service Rules, ISMP etc.



Power System Protection Maintenance

Service

Utilising the latest test equipment combined with expert technicians, TEX Onsite provide a broad range of power system protection services to a variety of customers including Generation, Industrial, Transmission & Distribution, Commercial, Mining, Rail, and Shipping.



Importance

Thorough commissioning testing prevents operating glitches, design issues, installation errors and incorrect settings. This ensures a new system that is safe and without frustration for all involved in the future running of the plant.

In addition to ensuring legal compliance, regular maintenance and periodic testing allows plant owners to monitor the condition of their equipment, as well as identify and correct potential issues prior to catastrophic failures.

Safety, supply system integrity and asset longevity are all compromised when protection systems are not functioning to the original design intent.



Specifications

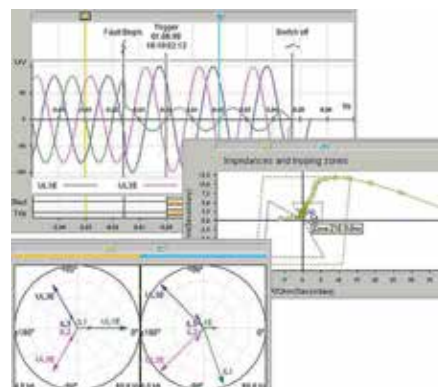
TEX Onsite designs and customises high voltage protection solutions to specifically suit customer needs. This includes balancing equipment importance and priority with outage time limits, supply authority connection requirements and budget.



Power System Protection Maintenance - Our Scope

Primary Equipment Testing

- Feeder and Distribution Systems
- Generators and Motors
- Busbars, Switchboards and Associated Equipment
- Indoor and Outdoor Switchgear
- CT's and VT's
- Transformers and Associated Equipment
- Mining Equipment
- Earth Grid Testing
- Primary Injection Differential Balancing
- CB Timing Shots



Secondary Injection & Functional Testing

- Overcurrent and Earth Fault
- Differential Protection
- Impedance/Distance Protection
- Generator Protection and Synchronising Relays
- Auto Reclose Systems
- Motor Protection
- Transformer Protection
- Tap Changer and Voltage Regulation Controls
- CB Fail and Intertrip Schemes
- Auxiliary Protection Equipment
- IEC 61850 Compliance Testing
- Realistic Network Simulation Relay Stability Tests



Minor Design & Installation Solutions / Analysis

- Protection Relay Retrofits
- Protection Relay Overhauls
- Setting Alterations
- Site HV & LV Thermographic Surveys
- Provision of Transformer Oil Sampling and Testing
- Recommendations



Earth System Testing

The fundamental requirement of any electrical earthing system is to ensure the safety of people and protection of electrical plant during the occurrence of an electrical system fault. This is achieved by ensuring hazardous voltage rises and destructive currents are limited via a combination of good earthing design and rapid operation of protection systems.

TEX Onsite offer a range of individual earth system testing services. These include:

- Soil Resistivity Testing
- Earth Potential Rise Profiling
- Step, Touch and Transfer Voltage Measurements
- Fault Current Distribution Analysis
- Continuity checks by DC Current Injection
- Maintenance or Commissioning
- Auditing and Maintenance Management Plans

Advantage

Earthing systems are generally considered passive components of a power system and often neglected during maintenance and condition monitoring activities. However, the effectiveness of earthing systems can dilapidate with age and system alterations.

It is the plant owners' responsibility to understand the performance capabilities and condition of their earthing systems and adopt an ongoing management and maintenance regime to ensure effective performance throughout the life cycle of the electrical plant.

TEX Onsite can ensure earthing systems are designed, installed, commissioned and routinely maintained in accordance with the relevant standards and national guidelines.

- AS/NZS 3000-2007 - Electrical Installations - Australian/NZ Wiring Rules
- AS2067-2015 - Substations and high voltage installations exceeding 1 KV a.c.
- AS/NZS 3007 2013 - Electrical Equipment in Mines and Quarries
- ENA EG1 & EGO - Substation Earthing Guide

We can also consolidate the various individual testing services into complete earth system maintenance programs that can be easily integrated into our complete High Voltage Systems Maintenance Management packages.

Under our program, plant owners can rest assured that inherent legal and compliance obligations are met and their electrical systems can be continually operated in a safe and reliable manner in all typical situations.

Power Transformer Condition Monitoring

Scope

TEX Onsite provides high end Power Transformer Condition Monitoring services including:

- Oil Sampling
- Complete Laboratory Analysis
- Condition Assessment & Recommendation
- Transformer Management Plans

Advantage

- Avoid Catastrophic Failures
- Extend the Life of Equipment
- Identify Transformers' End of Life Term
- Know the Condition of your Equipment Through Accurate Reporting
- Syringe Type Sampling System Available

Specifications

Electrical Diagnostic Packages include:

- Dielectric Dissipation Factor, Tan Delta and Capacitance
- Insulation Moisture Content by Dielectric Response Analysis
- Frequency Response Analysis for Core and Winding Diagnostics
- On Load Tap Changer Diagnostics
- Leakage Reactance, Short Circuit Impedance and Excitation Testing
- DC Winding Resistance, Turns Ratio and Polarisation Index Testing
- WTI and OTI Calibration

Oil Test Diagnostic Packages include:

- Transformer Condition Assessment
- Tap Changer Activity Signature Analysis
- Circuit Breaker Oil Analysis
- Breakdown Voltage Testing
- Gas Analysis for SF6 Filled Equipment

Power Transformer & Switchgear Services

TEX Onsite specialise in transformer and switchgear installation and maintenance. Our teams of specialist electrical fitters are completely mobile and ready to meet any sites requirements. Below is a just a sample of services available.

Services Provided

Transformers

- Install, assemble, test & commission
- Vacuum filling
- Repairs and refurbishments including half-life refurb
- Streamlining and fullers earth filtering on-line
- Capacity upgrade
- Associated equipment servicing and replacement
- Insulator replacements
- Full earthing studies... **and much more!**

Switchgear

- Install, assemble, test & commission
- Arc Flash management
- Insulating oil, SF6 sampling and analysis
- Maintenance and repairs
- HV switchboard repairs and maintenance
- Full earthing studies... **and much more!**



Advantage

Our specialists combine experience and innovation to offer the most cost effective solutions, ensuring equipment is operating at its ultimate efficiency.

Insulating Oil Sampling, Analysis & Reconditioning

TEX Onsite specialise in the complete insulating oil treatment package - from obtaining secure sterile oil samples right through the analysing and reporting process to on-line filtering and reconditioning, including Streamlining and Fullers Earth servicing.



Advantage

Our service can provide an accurate analysis of existing oil and the corresponding condition of the electrical equipment from which the oil is taken. This is a useful tool for Asset Management, providing condition status trending and data for “remaining life of asset” considerations.

Our capability for complete oil servicing of insulating oil in electrical equipment, such as transformers, is highly efficient and cost effective. Through the servicing of oil we aim to increase the breakdown voltage, remove impurities, dissolved gasses, moisture and acidity for example, by utilizing our Vacuum, Streamlining and Fullers Earth equipment.

This effectively provides for the ongoing efficient operation of the equipment ensuring a maximum service life.

Electrical Planning, Design & Risk Mitigation Consultancy

Through our vast in-house skill set, and in association with our many talented professional partners, TEX Onsite can facilitate a wide range of Power System consultancy services across Australia & New Zealand, including but not limited to below.

Scope

Operational & Maintenance Planning

- HV System Maintenance Plans
- Operational Procedures Development
- Electrical Equipment Serviceability Evaluation
- Equipment Selection / Appropriateness Advice
- Electrical Project Planning
- Transformer Capacity Upgrades

Power System Design & Analysis

- Design of - Substations, LV / HV Power & Control Systems, HV Connections
- Earth System Design & Installation
- Switchboard Design & Installation
- Power System Modeling (Loadflow / Fault Level / Harmonics / Stability)
- Protection Studies
- Arc Flash Studies
- Electrical Drafting

Risk Mitigation

- Risk Assessment Facilitation / Electrical Audits
- Electrical Equipment Failure / Incident Investigation
- Expert Witness – Electrical Systems
- Functional Safety Assessments
- Grid Connection Facilitation / Supply Authority Liaison

Advantage

It is extremely important that all Power Supply Systems and their integral components are designed and serviced in accordance with manufacturer's requirements and industry standard best practices, thereby ensuring a safe and efficiently operating network/supply system.

POWER SYSTEM SERVICES

TRANSMISSION & DISTRIBUTION



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Visit us online www.texonsite.com.au and www.texonsite.co.nz