

# PROFILE



# Substation installation, Testing & Commissioning, Condition Monitoring, Diagnostic Testing

- ➤ We are a group of highly motivated and organized individuals having experience of more than 18 years in Service domain and we are supporting our customers in the Electrical Power industry to improve operations and optimize Electrical System's performance by maximizing Electrical Asset's life and optimizing the maintenance cost.
- ➤ We offer comprehensive services to ensure Electrical Equipment's full availability and performance which is either condition based or time based depending on the customer's maintenance pattern or criticality of the electrical system. Our objective in doing so is to reduce the down time and mitigate the operational risk.

Email: sales@mstme.com Vadodara



## **INDUSTRIES WE SERVE**

Our depth of Electrical Service experience extends across industries, from airports to solar generation.

- Airports
- Automotive
- Education
- Electrical Utilities
- Health Care
- Hotels

- Municipality
- > Pharmaceuticals Plants
- Power Plants
- Processing plants
- Refinery plants
- Solar Plants



**POWER PLANTS** 



**HOTELS** 



**HOSPITALS** 



PHARMACEUTICALS PLANTS



**AIRPORTS** 



REFINERY PLANTS



**ELECTRICAL UTILITIES** 



**SOLAR** 



# **Electrical Assets - Service and Maintenance**

- Transformer and Switchgear Testing
- > Tan Delta and Capacitance Measurement
- > SFRA Test
- DIRANA Test
- Thermography
- Diagnostic Testing
- Power Quality Analysis
- Condition Monitoring of Electrical Equipments
- Motor Control Center Panel Testing (MCC)

- Automatic Power Factor Control Panel Testing (APFC)
- ATS and AMF Panel Service and Maintenance
- RCD Testing
- ACB Service and Maintenance
- Motor and VFD Testing Service and Maintenance
- Substation Installation
- Electrical Safety Testing and Earth Pit Testing
- Solar Panel Installation, Service and Maintenance





# **Retrofitting and Modification Services**

Installation/Replacement of Critical Panel Parts

# **Cable Testing and Fault Location Services**

- Insulation Resistance
- DC Hipot
- > AC Hipot

- > Sheath Testing
- Sheath Fault Location and Pin Pointing
- > Cable Fault Location and Pin Pointing





# **DIAGNOSTIC TESTING & CONDITION MONITORING**

There are many maintenance strategies in practice in various industries. Condition Based Maintenance (CBM) is proactive predictive maintenance (PDM) strategy. CBM helps the plant or asset owners to increase the Reliability and Availability of the plant thereby increasing the return on investment. Condition Assessment of Electrical and Mechanical assets through Diagnostic Testing is a prerequisite to implementing the CBM. it is important to use the right tools to carry out tests and then interpret the test results for correct assessment of the health of the equipments.

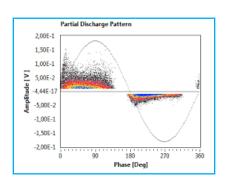
MST has acquired both, the best tools and the expertise required for Diagnostic Testing on all Electrical and Mechanical Testing equipments. MST has the capability to carry out Diagnostic Testing on the following electrical and mechanical equipments in line with IEEE and IEC relevant standards.

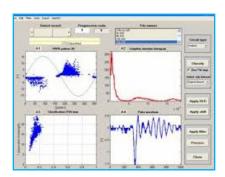
### **PARTIAL DISCHARGE MEASUREMENT:**

- A) Online PD Measurement
- B) Offline PD Measurement

#### PD Measurements on

1) Switchgears 2) Transformers 3) Cables





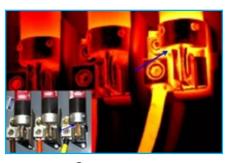
### **THERMOGRAPHY**

- A) Indoor Substation
- B) Outdoor Substation

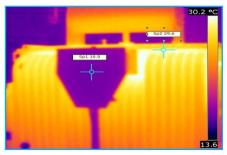
**Fuse** 

#### Thermography on

- 1) Switchgears
- 3) Rotating Equipments
- 2) Transformers
- 4) Boilers



Contractor



Transformer



### **SWITCHGEAR TESTING AND INSTALLATION**

## **Medium Voltage Switchgear Testing and Installation**







### Service and Maintenance for all types of Medium Voltage & Low Voltage Switchgear

- > Partial Discharge (PD) Measurement on Switchgear
- Installation
- Vacuum Circuit Breaker (VCB) Testing.
- SF6 Breaker Testing.
- Air Circuit Breaker (ACB) Testing
- Moulded Case Circuit Breaker (MCCB) Testing
- Switch Disconnector and Fuse Unit (SDF) Testing
- Switching and Protection Devices Testing
- Meter Testing
- Cable Termination and Bus Bar Checking
- Internal Connection Modification
- Protection Relay Testing
- Retrofitting



## LV Switchgear Testing and Installation



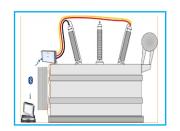




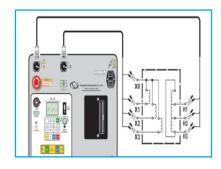
# **TRANSFORMER TESTING**

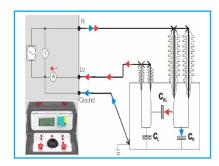


- Installation
- Insulation Resistance Test
- Transformer Turns Ratio Test
- Magnetic Balance Test
- **Short Circuit Test**
- Sweep Frequency Response Analysis (SFRA)
- Tan Delta And Capacitance Test
- **DIRANA** Test
- Winding Resistance Measurement Test
- Infrared Thermography Analysis Of Transformer
- Frequency Dielectrospectroscopy (FDS)
- Retrofitting











#### AIR CIRCUIT BREAKER TESTING

#### ACB TESTING AND SERVICING

- Contact Resistance Test
- Breaker Timing Test ( Velocity & Interruptions)
- Insulation Resistance Test
- > Primary Injection Test for Short Delay, Long Delay, Instantaneous.
- Complete Servicing





### SOLAR PANEL SERVICE AND MAINTENANCE

> Since there are no moving parts, solar panels require very little maintenance. Having said that, you should inspect them a few times per year for dirt or some other things that might have piled on top. It is important that the panels are clean and there is nothing blocking them from efficiently absorbing the sun.





### **POWER QUALITY**

- **Electrical power is an important raw material for all commercial operations and like any other raw** material, the quality of supply is very important. Any interruption, however short, can cause a production line to stop or data processing operations to fail. It is estimated that power quality problems cost industry and commerce in the EU about 10 Billion EURO per annum while expending on preventative measured is less than 5% of this (Leonardo da Vinci)
- MST is very much concerned about the Quality of power. MST has the capability to provide Power Quality survey, measurement, analysis and recommendation to mitigate Power quality related problems.

#### **OUR CUSTOMERS**

#### **CONTRACTORS**

- Electropower Engineering Services. Indore
- Sunirmal Engineers. Nasik
- Multi Engineering Services. Ratlam
- Electro Power Engineers, Indore
- ▲ Al-Fanar Power Transmission & Distribution, Aurangabad
- M Shivmegh Enterprise, Kutch
- M Kemco Electrical & Mechanical Est. Doha, Qatar
- M Electrical Daddy Pvt. Ltd. Bhopal
- M AB Corporation, Mumbai. ■
- M Kailash Devbuild (India) Pvt. Ltd.

  Jabalpur, MP.
- M Panchotiya Electricity, Indore, MP.
- M Ambica Enterprise, Udaipur. RJ

#### **END CUSTOMERS**

- M Adani Power, Kota, Rajasthan.
- M Nayara Energy Ltd. Vadinar, Gujarat. ■
- M IOCL, Ratlam Terminal
- M MPPTCL, Madhya Pradesh
- M Goodyear South Asia Tyres Pvt. Ltd.
- Jayesh Electricals Limited. Vadodara
- M HPCL, Palanpur, Gujarat. ■
- M Qapco, Qatar.
- BTW Atlanta Transformer India Pvt. Ltd. Bharuch
- M Voltamp Transformers Ltd. Vadodara. ■
- M MSETCL, Maharastra
- Megnum Lignite Corportation. Bikaner. RJ
- M S R Energy Consultants, Pune. ■

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