

GULF TEST SAFETY CONSULTANCIES

First Company to be Accredited by Emirates National Accreditation System (EIAC) for Initial and In-Service Inspection of Electrical Distribution System.

- Initial and In-Service inspection of Electrical Distribution System inline with DEWA/ EIAC Req.
- Electrical Safety Audits
- Factory Acceptance Test
- Thermography Inspection
- Circuit Breaker Testing
- RCD/ ELCB Testing
- Portable Appliance Testing (PAT)
- Earth Pit Inspection
- Lightning Protection System Inspection
- Power Quality/ Harmonic Analysis and Solutions
- Electrical Safety Trainings for Technicians in line with Local and OSHAD Guidelines
- Electrical Safety Trainings for Supervisors/ Engineers inline with NFPA and BS Standard
- Lockout/ Tagout Trainings in-line with NFPA, Local and OSHAD COP 24.0 Guidelines



EIAC MANDATORY REQUIREMENT FOR ELECTRICAL DISTRIBUTION SYSTEM AND EQUIPMENT INSPECTION

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#	Scope	المجال	#	
	Initial & In-Service inspection of Structural bolts (Torque Verification):	التفتيش المبدئي والتفتيش الدوري على مسامير/ براغي الهياكل المستخدمة في (التحقق من عزم ربط المسامير/البراغي):		
12	1. Building	1. المباني	II .1 12	
	2. Structure including bridges	 الهياكل الإنشائية (مثل الجسور) 		
	3. Leisure and Entertainment	 معدات وأماكن التسلية والترفيه 		
12	Initial & In-Service Electrical system and equipment	التفتيش المبدئي والتفتيش الدوري الشامل على المعدات والأنظمة	12	
15	inspection	الكهربائية	15	

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EIAC ACCREDIATION CERTIFICATE



Scope of Accreditation



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021 -IB

Gulf Test Safety Consultancies

M03 Mahmoud Redwan Building, Al Muteena Street, Deira

Dubai- United Arab Emirates

Issue No.: 14

Date: 11-11-2020

Valid to: 12-05-2021

Inspection Category	Inspection field	Range of inspection	Stage of Inspection	Inspection criteria	Inspection Activity Type
Product	Mechanical Engineering of Lifting Accessories	Hook	In-service	BS EN 1677-5+A1	A
				BS EN 1677-6+A1	
		Webbing sling	In-service	BS EN 1492-1+A1	A
				BS EN 1492-4+A1	
		Round sling	In-service	BS EN 1492-2+A1	A
		Eyebolt	In-service	BS EN ISO 3266	A
		Spreader beam/lifting beam	In-service	BS EN 13155+A2	A
Product	Electrical Distribution System and Equipment	Circuit Breakers	Initial and In-Service Inspection	BS 7671:2018+A1:2020	A
	Inspection	BS EN 60947-1+A2::	BS EN 60947-1+A2:2014		
				BS EN 60947-2:2017	A
				NEMA AB4-2017	
		Miniature Circuit Breakers (MCB)	Initial and In-Service Inspection	BS EN 60898-1:2019	
		Residual Current Operated Circuit Breakers without integral overcurrent protection(RCCB)	urrent Operated Circuit Initial and In-Service Inspection BS EN 61008 vithout integral nt protection(RCCB)	BS EN 61008-1- 2012+A12:2017	A
		Residual Current Operated Circuit Breakers with integral overcurrent protection (RCBO)	Initial and In-Service Inspection	In-Service Inspection BS EN 61009- A 1:2012+A12:2016	A
		BUS BAR RISERS/ BUS BAR TRUNKING SYSTEM	Initial and In-Service Inspection	BS EN 61439-6:2012	A A A C A
		XLPE Cables	Initial and In-Service Inspection	BS 5467:2016	
		PVC Cables	Initial and In-Service Inspection	BS 6004:2012	
		Power Transformers	Initial and In-Service Inspection	BS EN IEC 60076-11:2018 - TC	
		Shunt Power Capacitors (Power Factor Correction Capacitor Bank)	Initial and In-Service Inspection	BS EN 60831-1:2014	A
		Contactors	Initial and In-Service Inspection	BS EN IEC 60947-4-1:2019	A
		Low Voltage Fuse	Initial and In-Service Inspection	BS EN 60269-1:2007+A2:2014	A
				BS 1362:1973	

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Inspection Inspection Inspection field Range of inspection Stage of Inspection Inspection criteria Category Activity Type Product 13 A Plugs and Socket Outlets BS 1363-1:2016+A1:2018 Electrical Distribution Initial and In-Service Inspection А System and Equipment Earthing Initial and In-Service Inspection IEEE 142:2014 А Inspection BS 7430:2011+A1:2015 Power Harmonics IEEE 519:2014 Initial and In-Service Inspection А BS EN 50160:2010+A3:2019 Enclosures BS EN 60529:1992+A2:2013 Initial and In-Service Inspection А IEC 61439-1:2011 BS EN 60670-23:2008 IEC 61439-5:2015 Lightning Protection System BS 62305-3-2011 Initial and In-Service Inspection А Infrared Thermography of ASTM E1934-99a (2018) Initial and In-Service Inspection Α Electrical and Mechanical Equipment ASTM E1933-14 (2018) Standard for Infrared Inspection of Electrical System and Rotating Equipment Edition 2016, Infraspection Institute Portable Appliance Test (PAT) AS/ NZS 3760:2010 Initial and In-Service Inspection А IET Code of Practice for Inservice inspection and Testing of Electrical Equipment – 4th Edition BS EN 61140:2016 BS EN 61242:1997+A13:2017 BS EN 60335-1:2012+A13:2017

GULF TEST SAFETY CONSULTANCIES



DEPARTMENT OF ENERGY, ABUDHABI APPROVAL

دائـــــرة الــطـــاقــــــة DEPARTMENT OF ENERGY



Company Name: GULF TEST SAFETY CONSULTANCIES

Attention : Siraj A Shaik Registration Number :9999327 Subject : Pre-Qualification Status

Fax:0097125575883

Date : 1 9 DEC 2018

We have pleasure to inform you that M/s. GULF TEST SAFETY CONSULTANCIES, United Arab Emirates, Code No. 9999327. has been pre-qualified as a possible source to supply of the following services. which has been rated as per the schedule below:

S.No	WG Criteria	WG No.	WG Description	Current Status	Decision	Validation Date	Remarks
1	C6	3510100	THIRD-PARTY INSPECTION SERVICES	AVERAGE	RPQSC/08/4621/ 2018	03-May-2023	
2	C7	3510300	INSPECTION OF LIFTS, CRANES, SLINGS, ETC., SERVICES	GOOD	RPQSC/08/4621/ 2018	03-May-2023	
3	C8	5120100	TRAINING QUALITY ASSURANCE AND HSE	VERY GOOD	RPQSC/01/2019	19-Dec-2023	

However you have to maintain and update your company records in DOE Commercial directory to avoid any inactivation due to such. These record shall be maintained and updated through e-registration system and shall include but not limited to the following documents once they are renewed.

1. Respective licenses

2. Agency certificates and Agreements where applicable

3. Any other changes in your address, contact person, owners/sponsors etc.

Please note that at the time of release of enquiries, a further short listing takes place based on exhibited interest at that time and the specifics of material/equipment in question as needed.

You are advised to quote your registration No.(9999327) in all future correspondence.

Regards,

6 ILd s Registral epartment of Ener

Ali Abdullah Al Shehhi Head Of Companies Registration Section

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 OUR VISION |
 DOE will be amongst the top quartile performers worldwide in water & electricity utilities by 2020.

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 OUR VALUES |
 Teamwark, Stakeholter Focus, Integrity, Continual Improvement and Corporate Citizenship Please consider the environment before period gate armsit

GULF TEST SAFETY CONSULTANCIES



INITIAL AND IN-SERVICE INSPECTION OF ELECTRICAL DISTRIBUTION SYSTEM AND EQUIPMENT / ELECTRICAL SAFETY AUDIT IN-LINE WITH INTERNATIONAL AND LOCAL REQUIREMENT



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• UAE Requirements for Inspection and Testing of Electrical Installations

- ✓ During Erection and on completion before being put into service
- In-Service Inspection
- Gulf Test Safety Consultancies is the first company accredited from Emirates International Accreditation Centre (EIAC) to Conduct Inspection and Testing of Electrical Distribution System in line with following International Standards and UAE Regulations
 - ✓ Requirements for Electrical Installations. IET Wiring Regulations (BS 7671)
 - ✓ Dubai Electricity and Water Authority (DEWA)
 - ✓ Sharjah Electricity and Water Authority (SEWA)
 - ✓ Federal Electricity and Water Authority (FEWA)
- Scope of Work:
 - ✓ Review and audit of the Electrical Documents, Single Line Diagram, Load Schedule etc. to ensure compliance with International Standard, Legal & statutory requirement.
 - ✓ Verification of Installation as per approved drawing.
 - ✓ Inspection and Testing of electrical distribution system, emphasizing on adequacy of protection device, cables, busbars etc.
 - ✓ Grounding and Lightning Protection System inspection.



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THERMOGRAPHY INSPECTION

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Infrared electrical inspections find hot spots caused by defects in connections and components. Infrared Thermography is used to find areas of excess heat (caused by increased resistance) so that problems can be corrected before a component fails, causing damage to the component, creating safety hazards and productivity loss. Because increased heating is a sign of failure, infrared is the best diagnostic tool available for finding these hot connections in the early stages of degeneration. This is why your insurance company may have asked for an electrical infrared inspection, to find and prevent problems before they cause damage to your personnel, equipment and facility.

Conditions detectable by an Infrared Inspection

- Loose/deteriorated connections
- Overloads
- Open circuits
- Unbalanced loads
- Inductive heating
- Defective equipment
- Harmonics

Benefits of Infrared Inspection

- Reduce unscheduled down time
- Increase equipment life
- No service interruption during inspection
- Lower risks
- Lower repair costs
- Prevent catastrophic failures
 - Lower insurance premiums du to reduced losses

CIRCUIT BREAKER TESTING

WHY TESTING CIRCUIT BREAKER IMPORTANT?

During its 20-40-year service life, a circuit breaker must be constantly prepared to operate. Typically, long periods of inactivity often elapse during which the breaker's mechanical and electrical components never move. The circuit breaker is the active link in a fault clearance situation. When a fault occurs on the electrical system, the associated fault current must be interrupted quickly and reliably. This action is referred to as fault clearing. If a breaker fails to clear a faulted circuit, the resulting damage can be very serious in terms of both personnel injury and equipment damage.

Even though circuit breakers are comparatively reliable, circuit breaker failures can and do occur. Therefore, circuit breakers must be tested and maintained to ensure proper operation during these faults. PRIMARY CURRENT INJECTION TEST – Primary injection testing has been the preferred method for circuit breaker testing since it verifies the sensors, wiring, and trip device as well as the conduction path in the breaker.

BENEFITS OF CIRCUIT BREAKER TESTING -

- Quick and easy to perform on site
- Tests performance of whole tripping cycle
- Tests overall timing of tripping system
- Identifies need for maintenance
- Find early indications of possible problems
- Build up a test record database for trending





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RESIDUAL CURRENT DEVICE (RCD)/ ELCB TESTING

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Residual Current Device is a device that quickly breaks an Electrical Circuit to prevent serious harm from an ongoing Electrical Shock. These Electrical wiring devices are designed to quickly and automatically disconnect a circuit when it detects that the electric current is not balanced between the supply and return conductor of circuit. Any difference between the current in these conductors indicate leakage current, which present a shock hazard.

RCDs are used to provide protection against the specific dangers that may arise in electrical installations, including:

a) fault protection b) additional protection c) Protection against fire.



POWER QUALITY/ HARMONIC ANALYSIS AND SOLUTIONS

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HARMONICS & ITS EFFECT

Harmonics are distortion of the normal electrical current waveform, generally transmitted by nonlinear loads. Switchmode power supplies (SMPS), variable speed motors and drives, photocopiers, personal computers, laser printers, fax machines, battery chargers and UPSs are examples of nonlinear loads. Single-phase non-linear loads are prevalent in modern office buildings, while three-phase, non-linear loads are widespread in factories and industrial plants.

These non-linear power supplies draw current in high-amplitude short pulses that create significant distortion in the electrical current and voltage wave shape—harmonic distortion, measured as total harmonic distortion (THD). The distortion travels back into the power source and can affect other equipment connected to the same source.

Most power systems can accommodate a certain level of harmonic currents but will experience problems when harmonics become a significant component of the overall load. As these higher frequency harmonic currents flow through the power system, they can cause communication errors, overheating and hardware damage, such as:

- > Overheating of electrical distribution equipment, cables, transformers, standby generators, etc.
- > Equipment malfunctions due to excessive voltage distortion
- > Increased internal energy losses in connected equipment, causing component failure and shortened life span
- > False tripping of branch circuit breakers, Metering errors
- Fires in wiring and distribution systems
- Generator failures
- Lower system power factor, resulting in penalties on monthly utility bills

GULF TEST CONDUCT POWER QUALITY/ HARMONIC ANALYSIS AND PROVIDE COST EFFECTIVE SOLUTIONS



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INSPECTION OF EARTH PITS AND LIGHTNING PROTECTION SYSTEM

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Lightning is one of nature's most power and destructive phenomena. Lightning strikes present a real and significant threat – to life, to the structure in which we live and work and to the electronic system which supports us in our daily lives. Protection against the consequences of lightning is now paramount important to our commercial, residential, industrial and public service institution. **Lightning Protection system** is fundamentally installed to reduce the risk of "loss of human life" and loss of service to public" in accordance with BSEN 62305.

EARTHING

Measurement of Earth Resistance is an important part of the maintenance of any electric installation. The function of a Earthing system is to ensure that all electric equipment are connected to the ground potential. Hence, a well-maintained Earthing system ensures the proper functioning of protection systems and provided safety to operating personnel.

The effectiveness of Earthing and lightning protection system may be reduced over a period of time due to physical damage, corrosion, adverse weather conditions or as result of addition or alterations to the building under protection.

As such it is industry recommendation that a test and inspection is carried out yearly in order to cover all season over a period of time.



PORTABLE APPLIANCE TESTING (PAT)

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Portable Appliance Testing (PAT) includes thorough Visual Inspection and Electrical Testing of Electrical Appliance and Equipment to ensure they are safe to use.

FIVE main Safety Tests

- Earth Bond and Continuity Tests.
- Insulation Test
- Touch Current Test
- Differential Leakage Test
- Substitute/Alternative Leakage Test
- Testing Extension Cord and IEC
 Power Cord Tests

Benefits for PAT Testing

- To meet the requirements of Health and Safety Policy and to comply with insurance requirements.
- Protect the integrity and professionalism of your company.
- Protect your company from possible damage to property & employee.
- Increase productivity through safe and reliable equipment.

Gulf Test carry out testing on all portable electrical appliances including but not limited to:











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ELECTRICAL SAFETY TRAININGS IN-LINE WITH NFPA, BS STANDARDS, LOCAL REGULATIONS AND OSHAD GUIDELINES

ELECTRICAL SAFETY TRAINING FOR SUPERVISORS/ ENGINEERS IN-LINE WITH NFPA, BRITISH STANDARDS AND LOCAL REGULATIONS

DURATION - 01 DAY

- ✓ Fundamentals of Electricity
- ✓ Electrical Safety Program
 - Inspection
 - Maintenance
 - Awareness and Discipline
 - Principles, Control and Procedures
- Employer and Employee Responsibilities
- ✓ Electrically Safe Work Condition
- Electrical Drawing Review
- ✓ Selection of Electrical Components (Circuit Breaker/ Cables etc.)
- ✓ Lockout/ Tagout Program
- ✓ Risk Assessment
- ✓ Shock and Arc Flash Personnel Protective Equipment Requirements
- ✓ Equipment Maintenance Program
- ✓ PPE Maintenance Requirements
- ✓ Safe Handling of Electrical Equipment



ELECTRICAL SAFETY PROGRAMS FOR TECHNICIAN INLINE WITH LOCAL AND OSHAD GUIDELINES

DURATION – 4HRS

- ✓ Basic Concept of Electricity
- ✓ Electrical Hazards
- ✓ Cause of Electrical Accident
- ✓ Control of Electrical Hazard
- ✓ Importance of Electrical safety
- Implementation of Electrical Safety
- ✓ Lockout/ Tagout
- ✓ Personal Protection
- ✓ Roles and Responsibilities



Pre and Post Test, Hands on Practical's will be conducted. The successful Candidates will be awarded with Gulf Test Certificate.

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LOCKOUT AND TAGOUT TRAINING INLINE WITH NFPA, LOCAL AND OSHAD COP 24.0 GUIDELINES

DURATION – 04 HRS

- ✓ Purpose, scope and application
- ✓ Energy control program components
- ✓ Lockout/ Tagout Materials and hard wares
- ✓ Application of Energy control device
- ✓ Release from Lockout/ Tagout
- ✓ Sub-contractors, group lockout/ tagout, and shift changes
- Training and communication
- ✓ Periodic inspection





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