

**104647-ELE-1CMSTyz-E-2003**  
**Lead Electrical Maintenance Engineer**

Holds a B. Sc. in Electrical Power & Machines Engineering and has about 18 years' experience working in maintenance, commissioning and construction.

## PERSONAL DATA

Nationality : Egyptian  
Birth Date : 18/08/1981  
Gender : Male  
Marital Status : Married  
Residence : El-Behira

## EDUCATION

: B. Sc. in Electrical Power & Machines Engineering, Menoufia University, 2003

## LANGUAGES

Arabic : Native Language  
English : Fluent

## COMPUTER SKILLS

: Windows, MS Office, Internet

## TRAINING COURSES AND CERTIFICATIONS

- : Transparency & Integrity (MDEPC) (Nov. 2017).
- : On-shore training on UPS and DC system (Jun. 2006).
- : On-shore training on Generator & Transformer protection for MITSUBISHI Steam Turbine unit (Jul. 2006).
- : On-shore training on Transformer Protection by PSP (Apr. 2009).
- : On-shore training on GE 9FA Gas Turbine Generator Maintenance (Apr. 2009).
- : On-shore training on GE 9FA Gas Turbine Mark VI controls (Apr./May 2009).
- : On-shore training on GE Gas Turbine (Electrical systems) (May 2009) as following:
  - Generator protection.
  - LCI LS2100 (load commutated inverter).
  - Excitation EX2100 system.
- : On-shore training on DC & UPS system (BENING) (May 2009).

- : Off-shore Maintenance training in Germany, Mannheim (Nov./Dec. 2009) on the following:
  - Steam turbine Generator & Auxiliaries (ALSTOM).
  - Excitation system.
  - Generator Protection System.
  - Practical training steam turbine Maintenance.
- : First Aid Training (GE O&M) (Mar. 2012).
- : EHS Training (Mar. 2012).
- : Safety Induction training (Mar. 2012).
- : Competent Person Training for Lotto Process (Jun. 2012).
- : EHS Training (Mar. 2013).
- : PMP Training (Nubaria Power Station Site) (Mar. 2015).
- : High Voltage breaker Training (GE – Kuwait) (May 2015).

## CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Jan. 2017 till now
- Employer** : Middle Delta Electricity Production Company (MDEPC)
- Project** : Nubaria Power Station 1x750MW Combined Cycle (CCGT)
- Job title** : Lead Electrical Maintenance Engineer
- Job Description** :
- Supervise and execute all power plant Electrical equipment maintenance.
  - Plan and execute all predictive & Preventative maintenance of Electrical equipment.
  - Apply and update maintenance work instruction.
  - Organize and lead maintenance staff members.
  - Manage and implement the company EHS procedures within area of responsibility.
  - Initiate, negotiate, and managing electrical service contracts.
  - Proposing solutions for all possible operational malfunction protection relays & equipments.
  - Make the fault analysis and prepare the fault analysis report.
  - Preparing and reviewing the maintenance programs for the electrical equipments.
  - Make the coordination between Electrical Department and Operation team on all corrective maintenance.
  - Facility compliance in all areas of Health, Safety and Environmental programs and procedures as applicable to the Power Station.
  - Review the daily troubles report and Issue the daily work tasks for the maintenance engineer teams.
  - Provide technical leadership to other personnel assigned to support the effort on assigned tasks.
  - Providing support to engineering team in technical expertise of maintenance process.
  - Prepare the outage Schedule required for all Electrical equipments maintenance.
  - Review all Routine Test results for all electrical equipments.
  - Prepare the Electrical annually Budget.
  - Provide the technical support for the team to perform the routine (PM &

PDM), Emergency maintenance & trouble shooting and tests for the following systems:

- GE gas turbine Generator.
  - Static start system for gas turbine "LCI" model LS2100.
  - Static excitation system EX2100.
  - Medium & low voltage motors.
  - Medium & Low Voltage Switchgear.
  - DC & UPS Systems.
  - ALSTOM Steam turbine Generator.
  - Generator protection system (GE Relays - G60 & C60).
  - Transformer protection system (GE Relays - T60 & T35).
  - Generator Circuit Breaker (ABB – HEC 100L Model).
  - 500KV switchyard Equipments (breakers, Disconnectors, CTs & Vts and earthing switches).
- Support Operation team for Electrical Switching.
  - Represent the electrical team on the meetings and calls.
  - Working as a trainer for ISCOA Training Center.

**Dates** : From Oct. 2016 till Jan. 2017  
**Employer** : Siemens, Egypt  
**Project** : Beni Suef 4800MW Power Plant  
**Job title** : Electrical Commissioning Engineer  
**Job Description** : 

- Perform the interface signal checks and interlocks verification between HV GIS & Protection System and Turbine control system.
- Perform the interface signal checks and interlocks verification between GCB (BAC) & Protection System and Turbine control system.
- Perform the interface signal checks and interlocks verification between Main Transformer (BAT) & Protection System and Turbine control.
- Perform the interface signal checks and interlocks verification between Main Transformer (BBT) & Protection System and Turbine control.
- Perform the interface signal checks and interlocks verification for MV switchgear.
- Check & Verify the MV switchgear internal wiring.
- Perform function checks for MV Switchgear.
- Check and secondary injection for Generator CTs circuits.
- Check and secondary injection for Main transformer CTs circuits.
- Check and secondary injection for Aux. transformer CTs circuits.
- Check and secondary injection for Excitation & SFC transformer CTs circuits.
- Check & Adjust Generator Grounding Brushes.
- Check & Verify the Generator Rotor Earth fault Protection.
- Check & Verify the Generator & Transformer Panels internal wiring.
- Check & commissioning LV feeders.
- Check & commissioning LV Motors.
- Check & Commissioning unit Dry Transformers.

**Dates** : From Dec. 2013 till Oct. 2016  
**Employer** : Middle Delta Electricity Production Company (MDEPC)  
**Project** : Nubaria Power Station 1x750MW Combined Cycle (CCGT)  
**Job title** : Lead Electrical Maintenance Engineer

- Job Description** :
- Supervise and execute all power plant Electrical equipment maintenance.
  - Plan and execute all predictive & Preventative maintenance of Electrical equipment.
  - Apply and update maintenance work instruction.
  - Organize and lead maintenance staff members.
  - Manage and implement the company EHS procedures within area of responsibility.
  - Initiate, negotiate, and managing electrical service contracts.
  - Proposing solutions for all possible operational malfunction protection relays & equipments.
  - Make the fault analysis and prepare the fault analysis report.
  - Preparing and reviewing the maintenance programs for the electrical equipments.
  - Make the coordination between Electrical Department and Operation team on all corrective maintenance.
  - Facility compliance in all areas of Health, Safety and Environmental programs and procedures as applicable to the Power Station.
  - Review the daily troubles report and Issue the daily work tasks for the maintenance engineer teams.
  - Provide technical leadership to other personnel assigned to support the effort on assigned tasks.
  - Providing support to engineering team in technical expertise of maintenance process.
  - Prepare the outage Schedule required for all Electrical equipments maintenance.
  - Review all Routine Test results for all electrical equipments.
  - Prepare the Electrical annually Budget.
  - Provide the technical support for the team to perform the routine (PM & PDM), Emergency maintenance & troubleshooting and tests for the following systems:
    - GE gas turbine Generator.
    - Static start system for gas turbine "LCI" model LS2100.
    - Static excitation system EX2100.
    - Medium & low voltage motors.
    - Medium & Low Voltage Switchgear.
    - DC & UPS Systems.
    - ALSTOM Steam turbine Generator.
    - Generator protection system (GE Relays - G60 & C60).
    - Transformer protection system (GE Relays - T60 & T35).
    - Generator Circuit Breaker (ABB – HEC 100L Model).
    - 500KV switchyard Equipments (breakers, Disconnectors, CTs & Vts and earthing switches).
  - Support Operation team for Electrical Switching.
  - Represent the electrical team on the meetings and calls.
  - Working as a trainer for ISCOA Training Center.

**Dates** : From Mar. 2012 till Dec. 2013  
**Employer** : GE O&M  
**Project** : SABIYA POWER STATION CCGT, Kuwait  
**Job title** : Senior Electrical Engineer

- Job Description** :
- Implementing GE EHS procedures within area of responsibility.
  - Plan and execute all predictive & Preventative maintenance of Electrical equipment.
  - Preparing and reviewing the maintenance programs "PM & PDM Plan" for the electrical equipments.
  - Organize and lead maintenance staff members.
  - Make the coordination between Electrical Department and operation team on all corrective maintenance.
  - Perform the Hazard Hunt as per GE EHS procedures.
  - Review the daily troubles report and Issue the daily work tasks for the maintenance engineer teams.
  - Provide technical leadership to other personnel assigned to support the effort on assigned tasks.
  - Providing support to engineering team in technical expertise of maintenance process.
  - Prepare the outage Schedule required for all Electrical equipments maintenance.
  - Review all Routine Test results for all electrical equipments.
  - Make the routine, Emergency maintenance & troubleshooting and tests for the following systems:
    - GE gas turbine Generator.
    - Static start system for gas turbine "LCI" model LS2100.
    - Static excitation system EX2100.
    - Medium & low voltage motors.
    - Medium & Low Voltage Switchgear.
    - DC & UPS Systems.
    - Gas compressors.
    - GE Steam turbine Generator.
  - Prepare the Electrical annually Budget.
  - Prepare the data Base required for the maintenance management program (Maximo).
  - Prepare the electrical scope for Plant Electrical Maintenance subcontract.
  - Prepare the Elevators Maintenance scope Contract.
  - Raising PAC Cases, communicating the engineering team and implement the engineering recommendation.
  - Implementing the TIL and MIL related to the electrical equipments.
  - Preparing the operation procedures for switchgear.
  - Review and update the warranty claim list (WCR).
  - Acting Electrical Team Leader.
  - Support Operation team for Electrical Switching.

**Dates** : From 2009 till Mar. 2012

**Employer** : Middle Delta Electricity Production Company (MDEPC)

**Project** : Nubaria Power Station 1x750MW Combined Cycle (CCGT)

**Job title** : Lead Electrical Maintenance Engineer

- Job Description** :
- Supervise and execute all power plant Electrical equipment maintenance.
  - Manage and implement the company EHS procedures within area of responsibility.
  - Initiate, negotiate, and managing electrical service contracts.

- Plan and execute all predictive & Preventative maintenance of Electrical equipment.
- Apply and update maintenance work instruction
- Proposing solutions for all possible operational malfunction protection relays & equipments.
- Make the fault analysis and prepare the fault analysis report.
- Preparing and reviewing the maintenance programs for the electrical equipments.
- Make the routine, Emergency maintenance & troubleshooting and tests for the following systems:
  - GE gas turbine Generator.
  - Static start system for gas turbine "LCI" model LS2100.
  - Static excitation system EX2100.
  - Medium & low voltage motors.
  - 400 v MCC (Schneider).
  - Main transformer (2x300) MVA, 15.75/500KV HYUNDAI, delta/star for gas turbine unit.
  - Main transformer (1x340) MVA, 19/500KV HYUNDAI, delta/star for steam turbine.
  - Auxiliary transformers (2x32) MVA, 15.75/6.3/6.3KV.
  - Medium voltage SWGR (6.3KV).
  - Back up diesel Generator.
  - 500KV Switchyard Equipments (circuit breakers, disconnectors & Earthing switches, voltage transformers, current transformers).
  - DC System (Battery & Battery Charger).
  - UPS & LV distribution panels.
  - Generator Circuit Breaker (ABB – HEC 100L Model).
- Implement application Root cause Analysis Failure (RCA) for critical problems.
- Make the routine checks for the Generator protection relays (GE relays G60 and C60).
- Make the routine checks for the transformer protection relays (GE relays T60 and T35).
- Study, analyze, evaluate and modify if required the technical specification, for the tender document related to 340MVA 15.75/500KV power transformer as spare for NUBARIA & Sidi Krir Power Station.
- Review the technical data and the design drawing related to 340MVA 15.75/500KV power transformer as spare for NUBARIA & Sidi Krir Power Station.
- Measure the earth resistivity.
- Measure the grounding resistance.
- Measure the battery internal impedance.

**Dates** : From 2007 till 2009

**Employer** : Middle Delta Electricity Production Company (MDEPC)

**Project** : Nubaria III Power Station (1x750MW) Combined Cycle (CCGT)

**Job title** : Electrical Construction & Commissioning Engineer

**Job Description** :
 

- Study, analyze, evaluate and modify if required the prequalification, the technical specification, for the tender document related to all the following contract packages & purchase orders of the project:
  - 500KV switchyard.

- Main & Auxiliaries power transformers.
- Medium & low voltage Switchgear.
- Electrical Installation.
- Pumps and Motor Drives.
- Civil Works (electrical scope).
- Mechanical installation (electrical scope).
- Review the submittal design drawings.
- Make the required coordination with the Consultant (PGESCO) to cover all design drawings comments.
- Construction power Installation & testing and startup for the system.
- Make Inspection for the received electrical equipments on the site (MRR).
- Factory inspection for the following electrical equipments:
  - EI Sweedy Power Cables.
  - EL GIZA Power cables.
  - Schneider Medium voltage switchgear (6.3KV).
  - Schneider Low voltage load center (400V).
  - Schneider Low voltage Motor control center (400V).
  - 6300/400 V Auxiliary transformer (EGYTRAFO).
- Follow up the construction activities for the following systems:
  - 500KV Switchyard equipments (Circuit breaker GL317, current transformers IOSK 550, disconnecter switches S2DAT & S2DA2T, voltage transformers VEOS 525 & CVE550 and earthing switches) for 3 bays (double breaker double bus bar).
  - 500KV bus bar extensions (with the existing NUBARIA I & II bus bar).
  - DC system (220 Vdc) for 500KV SWRD equipments.
  - Grounding system and main grid interconnection.
  - Surge Arrester (396KV) for main power trans.
  - Main power transformers (2x180/240/300 MVA, 15.75/500KV, HYUNDAI, delta/star for gas turbine unit + (1x340 MVA 19/500KV delta /star for steam turbine unit).
  - Auxiliary transformers (2x32/16/16 MVA, 15.75/6.6/6.3KV, HYUNDAI).
  - Iso phase bus duct from main transformers to Aux. transformer and generator.
  - Generator Circuit Breakers (ABB, HEC100L type).
  - Two GE Gas turbine generator 300MW.
  - LCI LS2100 (load commutated inverter) for the gas turbine generator.
  - Excitation system EX2100 for GE Gas turbine generator.
  - Medium & low voltage Motors.
  - Medium voltage SWGR (6.3KV).
  - Dc & UPS system for the power station auxiliaries.
  - Back up Diesel generator 2.000 KVA 1.600 kW (ELECTRA MOLINS, Model EMO-2000).
  - Cathodic protection for the under-ground pipes.
  - Roads and buildings lighting systems.
  - Turbine Building Overhead Electrical cranes (120/20 ton).
  - Pump house overhead cranes (20/5 Ton).
- Review the Change Notices which issued for the electrical systems in the project.
- Studying and preparing the required spare parts Lists for the electrical

systems with reference to the contract specification and the contractor recommendation.

- Inspect all the received spare parts and check it in accordance to spare parts document.
- Make the required interfacing between the different contractors.
- Attend the weekly progress meetings.
- Attend the daily start up meetings.
- Preparation of MRR, RFI, FCN, FCR, NCR & CN for site work.
- Review the Construction Completion Certificate (CCC), Taking Over and Acceptance Certificate (TOAC) and Provisional Acceptance Certificate (PAC) for all project packages.
- Witness for the following electrical tests:
  - 500KV Switchyard:
    - C.B contact Resistance test.
    - C.B timing test.
    - C.B function & Interlocks test.
    - Voltage transformer insulation resistance.
    - Voltage transformer turns ratio.
    - Current transformer insulation resistance.
    - Current transformer polarity test.
    - Current transformer  $\tan \delta$ .
    - Disconnecter switch alignment.
    - Disconnecter switch function & interlocks test.
    - Electrical connection cables insulation resistance.
    - Electrical connection cables continuity.
    - Primary current injection.
  - Electrical Generator:
    - Stator windings Hipot test.
    - Stator winding insulation resistance & polarization index measurements.
    - Stator DC winding resistance measurement.
    - Rotor insulation resistance & polarization index measurement.
    - Rotor DC winding resistance measurement.
    - Rotor winding AC impedance measurement.
  - Main Power Transformer:
    - Insulation Resistance & polarization index measurement.
    - DC winding Resistance measurements at each tap.
    - Windings Insulation power factor measurement ( $\tan \delta$ ).
    - Bushing Insulation power factor measurement ( $\tan \delta$ ).
    - Oil Insulation power factor measurement ( $\tan \delta$ ).
    - Oil dielectric strength test.
    - Turns ratio at each tap.
  - Generator Circuit Breaker:
    - C.B contact Resistance.
    - C.B timing test.
    - C.B function & Interlocks test.
    - Voltage transformer insulation resistance measurement.
    - Voltage transformer turns ratio check.
  - Auxiliary power transformer 15.75/6.3/6.3KV:
    - Insulation Resistance & polarization index measurement.
    - DC winding Resistance measurements at each tap.
    - Windings Insulation power factor measurement ( $\tan \delta$ ).
    - Bushing Insulation power factor measurement ( $\tan \delta$ ).



- Oil Insulation power factor measurement ( $\tan \delta$ ).
- Oil dielectric strength test.
- Turns ratio at each tap.
- AVR setting and on load Tap changer checks.
- Medium Voltage switchgear 6.3KV (Schneider Electric):
  - Bus bar Insulation resistance measurements.
  - Bus bar Hipot test.
  - C.B DC contact Resistance measurement.
  - Circuit Breaker Timing Test.
  - Function & interlock testing.
  - Protection relays (SEPAM S20, S40, M41) test.
- LV load center 400V:
  - Bus bar Insulation resistance measurements.
  - Bus bar Hipot test.
  - LC transformer tests.
- Back up diesel Generator:
  - Stator Winding Insulation resistance measurements.
  - Stator Winding Hipot test.
  - Stator Dc winding Resistance measurement.
- Preparation start-up procedures for the following:
  - Preparing the energization program for 500KV Busbar.
  - Preparing the back-energization program for (2x300MVA) 15.75/500KV gas turbine main transformers.
  - Preparing the back-energization program for (1x340MVA) 19/500KV steam turbine main transformers.

**Dates** : From 2005 till 2007

**Employer** : West Delta Electricity Production Company (WDEPC)

**Project** : Nubaria I & II Power Station (2x750MW) Combined Cycle (CCGT)

**Job title** : Electrical Maintenance Engineer

**Job Description** : Perform the routine maintenance required for the following electrical equipments:

- Electrical Generator (Siemens).
- Static Excitation (SEE).
- Static Starting system (SFC).
- Medium & Low voltage motors.
- Step up transformers (4x300 MVA, 16.5/500KV, ZTR) for gas turbines.
- Step up transformers (2x340 MVA, 15/500KV, ZTR) for steam turbines.
- Auxiliaires transformers (4x32/16/16 MVA, 16.5/6.6/6.3KV ZTR).
- Medium voltage switchgear (6.3KV) Schneider.
- Low voltage load centers & Motor Control Centers (MCC).
- 500KV switchyard (double Busbar Double Breaker).

**Managements Activities:**

- Organize and lead maintenance staff members.
- Make the coordination between Electrical Department and other Departments.
- Prepare the outage Schedule required for all Electrical equipments maintenance.
- Make the interface between the Department and Dispatch Center.
- Review all Routine Test results for all electrical equipments.

- Make maintenance planning for all electrical equipments.
- Review the stock quantities for electrical spare parts and make order for the required spare parts.
- Coordinate with technical staff in developing the technical data base for electrical equipments.
- Prepare the Annual Budget for the Electrical Department.
- Prepare the maintenance works report.
- Review the daily troubles report and Issue the daily work tasks for the maintenance engineer teams.
- Provide technical leadership to other personnel assigned to support the effort on assigned tasks.
- Providing support to engineering team in technical expertise of maintenance process.
- Review the periodic and shutdown work plans.
- Monitor and manage the assigned electrical maintenance and engineering staff performance. Participate in annual performance appraisal of staff.