

**103313-ELE-1CMPS-E-2007**  
**Senior Electrical Project Engineer**

Holds a B. Sc. in Electrical Power & Machines Engineering and has over 13 years hands-on experience working in construction, commissioning and maintenance.

## PERSONAL DATA

Nationality : Egyptian  
Birth Date : 09/11/1985  
Gender : Male  
Marital Status : Married  
Residence : Nasr City, Cairo

## EDUCATION

: B. Sc. in Electrical Power & Machines Engineering, Tanta University, 2007

## LANGUAGES

Arabic : Native Language  
English : Very Good

## COMPUTER SKILLS

: Windows, MS Office, Internet

## TRAINING COURSES AND CERTIFICATIONS

- : Duba Power Plant training (GE – SIEMENES MV SWGR - ABB LV SWGR, etc.).
- : On-shore training at GE for ex2100e generator control maintenance.
- : On-shore training for Siemens protection relays.
- : On-shore training for Schneider MV switchgear (mc set), LV load center and MCC.
- : On-shore training for transformer protection relay.
- : Off-shore training at Ansaldo Caldaie Company for heat recovery steam generators (HRSG maintenance).
- : Off-shore training at Ansaldo Energia Company for steam turbine generator & condenser maintenance).
- : Training in Delta Electrical Networks in Tanta (summer 2005).
- : Training in Tanta Oil Co. (summer 2006).
- : Basic course of the Operation of Steam Power Stations (El-Kureimat I 2x650MW Steam Power Plant).
- : Basic course of Operation of Combined Cycle Power Plant (El-Kureimat Training Center).

- : Training course (LCI, SEE) through GE Company in El-Kureimat Training Center.
- : Training course (Transformer) through HITACHI Company in El-Kureimat Training Center.
- : Training course (MCC, Lighting, HRSG) through CMI & SKODA.
- : English certification from The American University in Cairo (AUC) up to Toefl I.

## CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Jun. 2016 till Jun. 2021
- Employer** : SAUDI ELECTERICITY COMPANY (SEC)
- Project** : DUBA GREEN INTEGRATED SOLAR COMBINED CYCLE POWER PLANT, KSA
- Job title** : Senior Electrical Project Engineer
- Job Description** :
- SEC Representative, responsible for supervising construction and commissioning of all Electrical works, assurance that all works have been done according to Contract and Generation Engineering & Material Standard Specifications (GEMSS).
  - Design Review:
    - Generator Protection System (Main & Back-up).
    - Generator Excitation System.
    - Excitation Transformer, Synchronizing System.
    - 250 & 400MVA GSUT, 63MVA UAT Overall Protection.
    - BSDG Control and Protection.
    - ALSTOM GCB Control Panel, 250&400MVA - HYUNDAI GSUT Control Panel (OAF cooling system), UAT Transformers Control Panels, AVR, Tariff Metering.
    - Interface and interlock drawings, HSTS, ATS.
    - 13.8KV MV SWGR (Protection & Control Ckt's), 4.16KV MV SWGR (Protection & Control Ckt's), 480V LV SWGR, ACB Feeders "Air Circuit breaker" Protection & control schematic drawings, MCC's (Motor feeders) schematic drawing review.
  - Review the Testing & Commissioning Method Statements of:
    - Stability Test.
    - Protection & Control panels of Generator.
    - Generator Excitation System.
    - Synchronizing System.
    - GSUT, UAT transformers (Main relays, Lockout relays, Interlock Ckt's, Metering Ckt's, Interface signals, Aux. Relays, MCB's, etc.).
    - GSUT Transformers, UAT Transformers, AVR, Tariff Metering.
    - Dry type transformers, Oil type distribution power transformers.
    - 13.8KV SWGR, 4.16KV SWGR, 480v LV SWGR & MCC's, MV & LV Motors, LV Motors, IPB, SPB, NSPB, H.V & MV Cables, Battery chargers, UPS, Batteries, Metering Circuits.
  - Review the installation method statement of:
    - Generator.
    - GSUT /UAT Transformers.
    - MV SWGRs, LV SWGRs.
    - Control & Protection Panels.
  - Field Inspection of Construction work:
    - 400 & 250MVA GSUT, 63/40/40MVA UAT ONAF Type

- Transformers.
- 13.8KV MV SWGR, 4.16KV MV SWGR, 480V LV SWGR ACB & MCC's.
- Dry type transformers, Oil type transformer.
- IPB, SPB, NSPB.
- Battery chargers and UPS.
- VFD panels.
- Testing & Commissioning Activities:
  - Schematic drawing check & update as per international standards, Contract Specifications and Site Requirements.
  - 280MVA Generator Test (Hipot, Stator Winding Resistance, IR Test for Stator, Rotor Winding Resistance, IR Test for Rotor).
  - Testing of Overall Protection Panel (GE Main Relay G60, T60).
  - Unit Stability Test.
  - 250MW (GE) Generator Protection (G60 - Differential, 100% Stator Earth Fault Low Frequency Injection Based, 95% Stator Earth Fault, Rotor Earth Fault Injection Based, Under Excitation, Over Excitation, Pole Slip, Under Voltage, Under/Over Frequency, Negative Phase Sequence, Thermal O/L, Reverse Power, Low Forward Power, Dead Machine, CBF, etc.).
  - Auto & Manual Synchronizing System.
  - Generator Excitation Transformer.
  - Static Excitation System EX2100e (Function test for Bridges, OC Protection, O/P According to firing angle, Under/Over Excitation limiters, Over fluxing limiter, Stator Current limiters, Over/Under voltage limiters).
  - Generator PTs Cubicle and CTs.
  - GSUT Protection Panels (Main & Back-up) (GE Main Relays T60, Differential, Restricted Earth Fault, Over Current, Ground Fault, Over fluxing).
  - UAT Transformers Protection (GE Main Relays T60) Main protection relay test for MV & LV SWGRs.
  - 400 & 250MVA OFAF Cooling Type 18/380KV GSU Transformer (HYUNDAI Manufacturer) - (Ratio, Winding Resistance, Vector group, Zero sequence impedance, Dissipation power factor, Winding insulation test, SFRA, Dielectric oil test, mechanical protection function test, bushing CT, Magnetic balance, Excitation current test, LCP Function test, OLTC Function test).
  - 63/40/40 MVA Three winding ONAF Cooling UAT Transformers (ZTR Manufacturer) - (Ratio, Winding Resistance, Vector group, Zero sequence impedance, Dissipation power factor, Winding insulation test, FRA & DFRA, Dielectric oil test, mechanical protection function test, bushing CT, Magnetic balance, Excitation current test, LCP Function test, OLTC Function Test, Insulation Oil DGA, Sound level, etc.).
  - GSUT, UAT/CAT AVR Function Test.
  - GCB - (ALSTOM Manufacturer) (Hi-pot Test, CTs, PTs, Insulation resistance, Contact resistance, Timing test, interlock check, GCB Monitoring relay GMS600, GCB Control panel function test).
  - IPB and SPB (Insulation resistance, Contact resistance, Hi-pot Test).
  - Bus Bar stability test.
  - HSTS / ATS– function test SIEMENS Manufacturer (High speed

- transfer Switch).
- 125 & 220 VDC Battery Chargers function test (JEMA Manufacturer).
- UPS & DC (JEMA Manufacturer) System function Test.
- SWGR Arc protection relay test.
- VCB & ACB Test (Siemens & ABB) Manufacturer (Closing & Opening time, Contact resistance, Insulation test, Function test).
- MV / LV SWGR (CT & PT) Test.
- CT test (Ratio, Saturation Curve Knee point, Resistance, Burden, polarity).
- Battery (Charging & Discharging) Test.
- Power & Control cables test.

- Dates** : From Oct. 2012 till Jun. 2016
- Employer** : Middle Delta Electricity Production Company (MDEPC)
- Project** : BANHA 750MW Combined Cycle Power Plant
- Job title** : Electrical Construction & Commissioning Engineer
- Job Description** :
- MDEPC Representative, responsible for supervising construction and commissioning of all Electrical works, assurance that all works have been done according to contract and technical Specification and issue of punch list items.
  - Electrical works include:
    - "Electrical drawings review and approval" according to the contract specification requirements.
    - Coordination and supervision of all Contractors Electrical Works and identify any deviation from the contract for the following Contractors.
    - Generator, main transformer and Unit Auxiliary Transformers.
    - Generator Circuit Breakers.
    - GIS 220KV switch yard.
    - MV Switch Gear (Schneider Electric (MCset1, 2, 3) SF6 / 6.3KV).
    - Batteries and Battery chargers and Uninterruptible Power Supply (UPS).
    - Medium & Low voltage cable.
    - Interior and Exterior Illumination, Low current).
    - Electrical distribution Panels.
    - MV & LV Motors.
    - (6.3 KV/400V) Transformers.
    - Lighting Systems of All Office Buildings.
    - Lighting Systems of Yard.
    - Grounding system.
  - Generators: 324X017/018 (305 MVA HDROGEN COOLED) Testing (Hi-pot, IR, Stator Winding Resistance & Field Winding Resistance).
  - Excitation: (EX2100e) Testing & On load Function Test "Limiters Over Excitation Limit & Under Excitation Limit, Step Response, PSS, Lagging P.F Operation, Leading Power Factor Operation, Voltage Control & VAR Control.
  - LCI:
    - (LCI 2100) Load Commutated Inverter (Cooling System Startup & operation - insulation Test - Shorted SCRs Test - Voltage Signal Phasing and Balancing - Load Phase Sequence Test - etc.
    - AC & DC loop test and continuity.

- VT loop check & VT test: IR & turns ratio & winding resistance.
- CT loop check & CT test: insulation resistance & turns ratio & Winding resistance & polarity & saturation curve - Confirm knee point.
- 220KV SF6 circuit breaker filling with Sf6 gas and testing (contact resistance on/off time - IR).
- Bus bar stability & sensitivity.
- Relay testing distance, Breaker failure test, auto- re-closure test, pole discrepancy test.
- High voltage test (HI-POT) for GIS.
- Check interlocking.
- Power transformer (2 x 300 MVA) (220/15.75KV): (Ratio, Winding Resistance, Vector group, Zero sequence impedance, Dissipation power factor, Winding insulation test, SFRA, Dielectric oil test, mechanical protection function test, bushing CT, Magnetic balance, Excitation current test, LCP Function test, OLTC Function test.
- 6.3KV MV Switch Gear (Schneider SF6 C.B MC SET 1,2,3) 7.2KV, 40KA S.C:
  - Perform function of operation test and alarms and signal indication are appearing correctly.
  - Perform functional interlock test (electrical & mechanical).
  - Protective relay test (O.C (50/51) I >, I> >, E/F (50N/51N), over voltage (59), under voltage (27), etc. With secondary injection test.
  - Primary injection test.
  - Dc contact resistance.
  - Insulation resistance & hi-pot test.
- Dc system: Batteries and Battery chargers and Uninterruptible Power Supply (UPS):
  - Battery filling and charging and discharging test.
  - Check battery charger mode of operation (floating, equalizing & boost).
  - Test all alarms for battery charger & ups and DCS signals.
  - Test inverter modes of operation (inverter, bypass & manual bypass).

**Dates** : From Dec. 2009 till Oct. 2012

**Employer** : Upper Egypt Electricity Production Company (UEEPC)

**Project** : El-Kureimat II & III Power Station

**Job title** : Electrical Maintenance Engineer

**Job Description** :
 

- Responsible for maintenance and troubleshooting of all electrical equipments during normal Operation as well as during minor and major overhauls. Preventive maintenance program for all types of electrical equipments according to manufacture manuals.
- Electrical works include:
  - GE & SIEMENS Generators maintenance and its excitation, LCI.
  - Power Transformers Maintenance (16.5/220KV & 15.75/220KV, 180/240/300 MVA).
  - Unit Auxiliary Transformer (16.5/6.3KV, 19.2/32 MVA).
  - Low voltage transformer dry type (6.3/0.4KV).
  - MV switchgear maintenance (ABB breakers, natus breakers,

- Schneider breakers).
- MV & Low voltage motors (6.3KV & 0.4KV).
- MCC (motor control center).
- GIS 220KV (One and half circuit breaker).
- Battery & battery charger.
- UPS.

- Dates** : From Jun. 2008 till Dec. 2009
- Employer** : Upper Egypt Electricity Production Company (UEEPC)
- Project** : El-Kureimat II & III Power Station
- Job title** : Electrical Construction & Commissioning Engineer
- Job Description** :
- UEEPC Representative, responsible for supervising construction and commissioning of all Electrical works, assurance that all works have been done according to contract and technical Specification and issue of punch list items.
  - As Electrical Construction Engineer:
    - "Electrical drawings review and approval" according to contract specification requirements & installing of following system.
    - Electrical Panels.
    - MV Switch Gear (ABB & Siemens /SF6 & Vacuum C.B 6.3KV).
    - MV & LV Motors.
    - MV & LV (6.3KV/400V) Transformers.
    - Battery Charger (125VDC/Benning).
    - Batteries.
    - SFC System (Static Frequency Converter) & SEE System (Static Excitation Equipment).
  - As Electrical Commissioning Engineer:
    - Transformer tests (function test, insulation resistance test, turns ratio, Dc resistance).
    - Hi-pot test, mechanical protection test and dielectric oil test...etc).
    - Generator circuit breaker (ABB HEC100M Switzerland & 16.5KV-10KA).
    - (Close, trip) ON/OFF Time & DC resistance by circuit breaker analyzer.
    - C.B (220KV (GIS) & 6.3KV & 400 V) (ON/OFF Time & DC resistance by circuit breaker analyzer tester, insulation resistance test, hi-pot test and function test).
    - Bus bar test (insulation resistance & hi-pot).
    - Generator (300MVA) tests (stator insulation test, rotor insulation test, DC winding resistance of field winding).
    - Function test for all panels.
    - Motor tests (heat run test, phase rotation, insulation resistance and DC resistance test.....etc.).
    - Test all cables (insulation resistance & hi-pot test).
    - Loop check and continuity test.

- Dates** : From Dec. 2007 till May 2008
- Employer** : Detac Company for trade and construction
- Project** : Eastern Company at 6th of October

- Field of experience :**
- Extensive experience of Projects & Maintenance of LV, MV & HV Electrical Systems. Experienced & qualified Power Engineer, skilled with experience in the power plant. Familiar with GE electrical equipment generators and its accessories excitation EX21000e, LCI and its software also SIEMENS equipment's. MV switchgear (SIEMENS - ABB - SCHNEIDER). Power transformers. GIS switch yard one and half circuit breaker (SIEMENS - HHI). Protection relays (G60, C60, T60, SEPAM (S40, S42, B21, M87), SIEMENS RELAY SIPROTEC 4 (7UT612, 7SJ, 7SA522, etc., SIPROTEC 5 7SJ82-85 - 7UT85 - 7SK85), ABB relays (REF620 - REF615 - REM615).
  - Skills:
    - Experienced with (H.V, MV and LV SYSTEM).
    - Drawings and schematics.
    - Technical specifications.
    - Technical documentation understanding.
    - Knowledge of industrial standards.
    - Pre-commissioning procedures.
    - Team leadership skills.