

# 103162-ELE-12DPTyz-E-1998

## Lead Electrical Commissioning Engineer

Holds a B. Sc. in Electrical Engineering and has over 24 years' experience working in protection, testing and commissioning.

### PERSONAL DATA

Nationality : Egyptian  
Gender : Male  
Marital Status : Married

### EDUCATION

: B. Sc. in Electrical Engineering, Menoufia University, 1998

### LANGUAGES

Arabic : Native Language  
English : Good

### COMPUTER SKILLS

: Windows, MS Office, Internet

### TRAINING COURSES AND CERTIFICATIONS

- : Off-shore trainings:
  - Gas insulated switchgear (GIS) in Germany by SIEMENS (Mar. 2006).
  - Training on SIPROTEC numerical protection relays in Germany by SIEMENS (Mar. 2006).
  - SEL411L advanced line differential protection in KSA by SEL SCHWEITZER Engineering (Apr./May 2013).
- : On-shore trainings:
  - On-site training by ALSTOM on theoretical and practical course related to numerical (distance, current, voltage) relays (Dec. 2002):
    - Distance protection relay MICOM P442.
    - Zero sequence voltage relay MICOM P921.
    - Over current protection relay MICOM P121.
    - Earth fault protection relay MICOM P120.
  - Training on testing and maintenance of medium voltage Panels (Sep./Oct. 2002).
  - Instrument transformer and power measurement (P1) in Cairo South Training Center (Nov./Dec. 2003).
  - Protection fundamentals (p2) in Cairo South Training Center (May 2004).
  - Feeder protection P4c in Cairo South Training Center (Feb./Mar. 2005).

# CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Jan. 2018 till Mar. 2024
- Employer** : Shanahan Engineering
- Projects** :
  - 2x900MW EPCM PP13 CCPP (Nov. 2020 – Mar. 2024)
  - 2x900MW EPCM PP14 CCPP (Jan. 2018 – Nov. 2020)
- Job title** : Lead Electrical Commissioning Engineer
- Job Description** :
  - Generator Protection system design review.
  - Generator Synchronization system design review.
  - Generator excitation and LCI systems design review.
  - GSUTs & UATs Protection, AVR, OLTC and control systems design review.
  - GCB scheme and control systems design review.
  - MV SWGRs design review.
  - MV EDG system design review.
  - LV SWGRs design review.
  - Interlocking, schemes, and tripping matrix design review.
  - Battery charger and UPS systems design review.
  - Protection, MV SWGRs and LV SWGRs scheme check verification.
  - Do design and execute the required modifications to correct the design mistakes of protection systems, MV SWGRs schemes, LV SWGRs schemes, MCCs schemes.
  - Design and execute MV SWGR HSBT M-4272 Beckwith scheme modification.
  - Design and execute LV SWGR ATS scheme modification.
  - Protection settings review.
  - Generator protection relays G60 commissioning.
  - Generator transformer and unit auxiliary transformer protection relays T60 commissioning.
  - Excitation transformer and Isolation transformer protection relays T60 commissioning.
  - Overall differential protection relays T60 & T35 commissioning.
  - Micom P142, P143 protection for MV outgoing feeder commissioning.
  - Micom P242, P243 protection for MV motors commissioning.
  - Manage the Generators testing with the vendor.
  - Manage the Excitation and LCI systems testing with the vendor.
  - Do design and execution of required modifications in Excitation and LCI systems.
  - Manage the GSUTs and UATs testing with the vendor.
  - GSUTs, UATs LCP scheme verification, and external Interface checking.
  - GSUTs, UATs mechanical protection devices function test with DCS, GPP.
  - GSUTs, UATs AVR scheme verification, and external Interface checking.
  - GSUTs, UATs OLTC function test with DCS, AVR.
  - Manage the GCB testing with the vendor.
  - GCB scheme verification, and external Interface checking.
  - GCB function test with DCS, GPP and Mark Vie.
  - Interlocking verification between 380KV GIS, GCB and MV SWGR.
  - Intertrip test between 380KV GIS, GCB and MV SWGR.
  - MV SWGRs 13.8KV & 6.9KV Interlocking verification.

- MV SWGRs 13.8KV & 6.9KV Bus Bar protection stability.
- MV SWGRs trip test.
- Current transformer testing and CT loop checking by secondary injection.
- Voltage transformer testing and VT loop checking by secondary injection.
- Prepare the procedure, do required calculation for the Generator, GSUT, UAT, ET and overall Differential protection stability test.
- Manage and lead the Generator, GSUT, UAT, ET and overall Differential protection stability test.
- Prepare the procedure, manage, and lead first Back energization.
- Generator transformer 580MVA 380/18/18KV commissioning.
- Unit Auxiliary transformers 80MVA 18/13.8/6.9KV commissioning.
- MV switchgear 13.8KV and 6.9KV commissioning.
- MV SWGR HSBT M-4272 Beckwith commissioning and do function test.
- Auxiliary transformers 13.8/6.9KV, 13.8KV/480V and 6.9KV/480V commissioning.
- MV (Compressors, Pumps) motors commissioning.
- 480V LV switchgear commissioning.
- 480V LV switchgear ATS commissioning and do function test.
- 480V MCCs Sivacon S8 commissioning.
- 480V MCCs GE-SEN Plus commissioning.
- 480V MCCs GE-Evolution series E9000 commissioning.
- Design and execute LV MCCs motor buckets modifications.
- Do all required Electrical checks for:
  - Water treatment skids commissioning.
  - Air compressors commissioning.
  - Chemical dosing skids commissioning.
  - WSAC spray pumps and fans commissioning.
  - Hydrogen H2 system commissioning.
  - MV & LV Fire pumps commissioning.
  - ACC Fans and Vacuum pumps commissioning.
  - Water recycling plant commissioning.
- Motors solo and heat run tests.
- Do all required Electrical checks and attend the GT units first fire.
- Do all required Electrical checks and attend the STG units first rolling.
- Manage and lead generators dummy synchronization with the grid.
- Manage and lead generators first synchronization with the grid.
- MV Emergency diesel generators commissioning.
- Battery charger, UPS commissioning.
- Battery discharge test.
- Take overall responsibility for the day-to-day management of all Electrical commissioning activities on the project to ensure successful completion of these activities.
- Management of the specialist subcontractors and commissioning team.
- Interface and dealing with the client and its representative in a professional and positive manner and represent the company in a best practice setting to meet customer requirements.
- Produce weekly and monthly reports including reports to the client and internal reports.
- Implementation of Commissioning Strategy, including review of the

strategy from time to time to ensure it is up to date with relevant legislation and client requirements.

- Manage a core team of engineers in a fast-moving program environment.
- Manage the commissioning activities and troubleshooting technical problems.
- Writing concise commissioning method statements.

**Dates** : From Mar. 2017 till Nov. 2017  
**Employer** : [EGYPTROL](#)  
**Projects** :

- Cairo West Power Plant
- Suez 500/220KV AIS substation

**Job title** : Protection, Testing & Commissioning Team Leader  
**Job Description** :

- Design of protection and control scheme for 500/220KV 500MVA autotransformer.
- 500KV OHL complete testing and commissioning.

**Dates** : From Nov. 2016 till Mar. 2017  
**Employer** : [EGYPTROL](#), SIEMENS AG Subcontractor  
**Project** : Al-Burullus 4800MW Combined Cycle Power Plant  
**Job title** : Protection, Testing & Commissioning Senior Engineer  
**Job Description** :

- Generator Protection and synchronization system design review.
- GSUTs & UATs Protection, AVR, OLTC and control system design review.
- GCB scheme and control system design review.
- MV SWGRs design review.
- LV SWGRs design review.
- Interlocking, schemes, and tripping matrix design review.
- Battery charger and UPS systems design review.
- Testing and commissioning for:
  - Generator Protection relays 7UM622.
  - Generator transformer and Unit auxiliary transformer protection relays 7UT633.
  - Excitation transformer and starting transformer protection relays 7SJ611.
  - Overall differential protection relay 7UT633.
  - Synchronization: Automatic paralleling device 7VE63.
  - Synchronization: digital synchro check relay 7VK61.
  - Differential protection Stability test.
  - Interlocking verification between 500KV GIS, GCB and MV SWGR.
  - Stability test.
  - Protection schemes checking.
  - Trip test.
  - High speed bus bar fast transfer testing scheme, PLC, synch relay and operation.
  - Current transformer testing and CT loop checking by secondary injection.
  - Voltage transformer testing and VT loop checking by secondary injection.
  - Generator transformer testing (Insulation resistance, Vector group,

turns ratio, DC winding resistance, Tan delta, check mechanical protection devices, check Tap changer, check Cooling Fans and oil Pumps).

- Unit Auxiliary transformer testing (Insulation resistance, Vector group, turns ratio, DC winding resistance, bushing CT, check mechanical protection devices, check Tap changer, check Cooling Fans).
- Dry transformers (Insulation resistance, Vector group, Turns ratio).
- Transducers and energy meters testing.
- PT100 testing.
- Checking the protection, AVR and analog signals with the DCS.
- Manage and lead first Back energization and prepare the procedure for it.
- Attend first fire of the Gas Turbine.
- Synchronization with the grid.
- Checking the differential stability on load.
- Attend tripping and fault analysis.
- Battery charger, UPS and LV switch gear commissioning.
- Battery discharge test.

**Dates** : From Mar. 2015 till Oct. 2016  
**Employer** : [EGYPTROL](#)  
**Projects** :

- New West Damietta 4x125MW Power Plant
- New Assiut 8x125MW Power Plant

**Job title** : Protection, Testing & Commissioning Senior Engineer  
**Job Description** : Testing and commissioning for:

- Protection relays.
- Stability test for Bus Bar protection, Transformer Differential and REF protection, Line differential protection.
- Upgrading the old static and electromechanical protection systems by numerical protection relays.
- Power transformers (Insulation resistance, Vector group, turns ratio, DC winding resistance, Tan delta, check mechanical protection devices, check Tap changer, check Cooling Fans).
- GIS (CT, VT, CB, Scheme and Interlocking).
- MV Switchgear (CT, VT, CB, Scheme and Interlocking).
- Fault analysis.
- Battery discharge.

**Dates** : From Nov. 2006 till Jan. 2015  
**Employer** : SIEMENS Ltd Saudi Arabia  
**Projects** :

- JEDDAH:
  - JNW, Al Sanabel, HHR1 and New Al Kandarah 380/110/33/13.8KV substations
  - HVE, Al Faysaliah, Al Jamaah and KMT 380/110/13.8KV substations
  - Al Rewais, Al Rehab, Al Bawadi, HPR, AL Salamah, Al Naeem, New Airport, ABS, WBS, KKH 110/13.8KV substations
  - Abhor North, Thwal 33/13.8KV substations
- AL MADINAH:
  - Al Madinah East 380/110/13.8KV substation

- YANBU:
  - SWCC 380/110/13.8KV substation
- MAKKAH:
  - HVM and Old Al Aziziah 380/110/13.8KV substation
  - New Al Aziziah, Mina 1, Arafat, Um Al Qura and Al Jamom 110/13.8KV substations
- RIYADAH:
  - Power Plant 2 132KV GIS
- AL TAIF:
  - Ushairah, Gaya, Wadi Leyah, TPS and Al Taif North substation 110/13.8KV
- JIZAN:
  - Al Kudmi 380/132/33/13.8KV substation with AREVA
- AL DAHRAN:
  - Al Dahrhan 132/33/13.8KV substation
- AL JUBAIL:
  - Sadaf 33, 13.8KV SWG
  - Hadid 33, 13.8KV SWG
  - Sabic 33, 13.8KV SWG
- AL QASSIM:
  - 12 substations 33/13.8KV.
- OFF-SHORE ARABIAN GULF:
  - Work for ENPPI testing and commissioning of three 33KV PDPs
- DUBAI:
  - Work for J. RAY MCDERMOTT testing and commissioning of three 13.8KV Platforms

**Job title** : Protection, Testing & Commissioning Chief Engineer

**Job Description** :

- Design review of GIS, MV SWGRs and LV SWGRs (Protection schemes, control, Synchronization, Tripping, and Interlocking systems).
- Testing and commissioning for:
  - Siemens Protection relays (7SA522, 7SD522, 7SS522, 7UT61x, 7SJxx, 7VK61x, 7VH60x, 7VH83x ...).
  - SEL Protection relay SEL411L, SEL311L (line differential and distance protection).
  - Alstom Protection relays (micom P54X, P12X, P94X).
  - Protection schemes of (380, 132, 110, 33 and 13.8KV) Bus bar, cables, OHL and Transformers protection.
  - Upgrading the old static and electromechanical protection systems of (380, 132, 110, 33 and 13.8KV) Bus bar, cables, OHL and Transformers protection in live substations by numerical relays.
  - Stability for Bus Bar protection, Transformer differential Protection, Transformer restricted earth fault protection and line differential protection.
  - Drawing review and scheme check for all the electrical drawings.
  - Reviewing and verifying the interlocking schemes for the switchgear.
  - Fault analysis.
  - Close loop test with Load Dispatch Center.
  - Current and voltage transformers.
  - Transformer AVR systems.
  - Circuit breakers tests (timing, contact resistance, insulation resistance).

- High voltage test for 33 and 13.8KV switchgear.
- Metering and transducers.

**Dates** : From Aug. 1999 till Nov. 2006

**Employer** : Egyptian Electricity Holding Company (EEHC)

**Project** : El-Kureimat (2x627MW) Thermal Power Plant & 500/220/11KV Substation

**Job title** : Protection Engineer

**Job Description** :

- Carry out periodic testing of Generator and step-up Transformer 23/500KV protection relays.
- Carry out periodic testing protection relays of power transformer 500/220KV and start-up transformer 220/6.3KV.
- Carry out periodic testing protection relays of transmission line 500 and 220KV.
- Carry out periodic testing protection relays of Bus bar 500 and 220KV.
- Carry out periodic testing protection relays of medium voltage SWGR 11 and 6.3KV.
- Carry out periodic testing protection relays of diesel generators.
- Carry out periodic testing protection relays of low voltage equipment (power centers).
- Carry out periodic testing of transducers.
- Attend tripping.

**Familiar with Testers:**

- Omicron: CPC100 + CPTD1, CMC356 and CT analyzer.
- ISA: STS5000, TD5000, DRTS64 and CBA1000.
- Megger: sverker 900, Oden primary injection, MOM200A, TM1700, TORKEL840 + extra load unit TORKEL870.