

**104609-ELE-12DPSTyz-E-2006**  
**Lead Electrical Protection & Design Engineer**

Holds B. Sc., M. Sc. and PhD in Electrical Power & Machines Engineering, a Higher Studies Diploma in Protection of Electrical Power System and MBA. Has about 17 years' experience in electrical protection, testing, commissioning and design.

## PERSONAL DATA

Nationality : Egyptian  
Birth Date : 09/02/1982  
Gender : Male  
Marital Status : Married  
Residence : Currently Oman

## EDUCATION

- : B. Sc. in Electrical Power & Machines Engineering, Cairo University, 2006
- : Higher Studies Diploma in Protection of Electrical Power System, Cairo University, 2011
- : M. Sc. in Electrical Protection Engineering, Cairo University, 2015
- : PHD in Electrical Engineering (Protection & Substation Automation), Al-Azhar University, 2020
- : Master of Business Administration in General Management (MBA), The International Business School of Scandinavia, Denmark, accredited by ASIC, UK (2018)

## LANGUAGES

Arabic : Native Language  
English : Fluent

## COMPUTER SKILLS

- : Windows, MS Office (Word, Excel, Power Point), Internet
- : Photoshop
- : AutoCAD
- : Matlab simulation & programming
- : Fuzzy logic control modeling
- : DIALUX & ETAP

## TRAINING COURSES AND CERTIFICATIONS

- : Project Management Professional (PMP), Project Management Institute (PMI), USA.

- : Risk Management Professional (RMP), PMI, USA.
- : Technical & Administrative Training Institute (TATI), OMAN:
  - IOSH Manage Safely.
  - American Heart Saver / First Aid.
  - Electrical Safety Rules.
  - HSE Induction.
- : Advanced training course about Substation Automation Systems "Operation and Maintenance Micom Protection and DS Agile control system", Alstom Grid Technical Institute, Montpellier - France (Feb./Mar. 2014).
- : Apex- Dubai for Development and Consultancy Services:
  - Root Cause Failure Analysis.
  - How to Deal During Crisis.
- : Evorest for Project Management and Consultancy Services, Cairo, Egypt:
  - Project Management and PMP preparation.
  - Risk Management.
- : Training of Trainer course (T.O.T.), Leadership Development Center (Nov./Dec. 2015).
- : Cairo Electricity Production Company (CEPC), Cairo, Egypt:
  - Hands-on training course about Protection of Electrical Power Plants (Apr. 2014).
  - Advanced training course about Current & Voltage Transformers and its Applications (Feb. 2016).
  - Quality Management Systems training course.
  - Transitioning to ISO 9001-2015.
  - ISO 9001-2015 Internal Audit.
  - 220 & 66KV GIS Substation Operation and Protection.
  - 500KV GIS Operation and Breakdown repair (by ALSTOM).
  - Bus bar protection (by SIEMENS).
  - Feeder protection (by ABB).
  - Thyripol Automatic Voltage Regulator Erection and Commissioning (SIEMENS).
  - Unit (Generator and Transformer) Protection.
  - Protection and Maintenance of Low and Medium Voltage Switchgears.
  - Training program of concentrated study of power plant equipment, system theory, and application (3 months duration).
- : At Shoubra El-Kheima Training Center: Advanced training (Bechtel course) Shoubra El-Kheima power plant basic and site-specific training courses, constituting a program of concentrated study of power plant equipment and system theory and application. Training offered by Bechtel Consultant Group (from Jan. till Mar. 2009).
- : At Egyptian Syndicate Engineers: Advanced training course about Simulation of Electrical Power Systems and its Electrical Transient Investigation by MATLAB Simulink Program (Jan./Feb. 2014).
- : English: score of 500 marks in TOEFL test.

## CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Sep. 2020 till now
- Employer** : Universal Consulting Engineering, Muscat – OMAN
- Projects** : • Construction of Al-Khaborah Interconnection Station 220/132/33KV

- Construction of 132/33KV Grid Station at Saih Al-Khairat along with Associated OHL from Thumrait to Saih Al-Khairat Grid Station
- Construction and Installation of Third Transformer 220/132KV, 500 MVA with associated GIS bays at Airport Heights and New 132KV UG Cable Circuit between Airport Heights and Ghala Grid Station

**Job title** : Lead Electrical Protection & Design Engineer

- Job Description** :
- Oman Electricity Transmission Company (OETC) approved Protection Engineer for grid station projects 400/220/132/33KV.
  - Oman Distribution Code Review Panel (DCRP Level 4) approved Protection Engineer for power distribution projects.
  - Prepare & review power system studies, protection relays setting calculations, and coordination studies using standard computer software applications.
  - Prepare & review project's design, relay setting calculations, tender specifications, BOQ, drawings, SLD, schedules, installation & testing and commissioning plans of project's equipment and systems.
  - Collate, investigate and study network data for equipment sizing and protection calculations and coordination.
  - Design & review CT/VT sizing calculations, protection and metering diagrams, and protection schemes for the technical compliance.
  - Provide site supervision support for testing and commissioning activities and HV test.
  - Design & review of engineering documents for substations such as SLD, Layouts, Calculations, drawings, and etc.
  - Prepare & review preliminary & detailed design engineering documents (primary and secondary design) and configurations for substation equipment (from 33KV to 400KV).
  - Design and review of substation auxiliary LVAC and DC systems.
  - Review EHV & MV GIS design, cable sizing calculations (EHV, MV & LV), and power transformer vendor drawings.
  - Design review of vendor engineering documents for the technical compliances, primary & secondary documents.
  - Review vendors' Material Approval Sheet (MAS) and give the required approval.
  - Manage and attend Factory Acceptance Tests for substation equipment such as control and relay panels (CRP), GIS, Transformers, Power cables, OHL, and DC and LVAC systems.
  - Investigate and analyze problems facing and coordinate between vendors, contractor and client.
  - Monitor progress and perform against the project plan; take necessary actions to avoid delays.
  - Develop schedules, budgets, and forecasts, identify & gather the resources and project staff needed to complete the project.
  - Review of commissioning documents modifications, red marks and As-Built drawings for the technical compliances.
  - Prepare sizing calculations of high, medium and low voltage power cables, cable schedule, and review their manufacturer data and prepare bill of quantities.
  - Ability to communicate and influence stake holders to accept practices and approaches.
  - Strong knowledge of codes and international applicable standards.

**Dates** : From Jan. 2019 till Feb. 2020  
**Employer** : ISCOA – SIEMENS, KSA  
**Job title** : Senior Protection Engineer  
**Job Description** :

- Provide technical support for grid stations and power station engineering such as layout, SLD, PMD, protection, SAS, GIS engineering and etc.
- Review of engineering documents for the technical compliance.
- Meeting client for all workshops resolve the issues and ensure timely approval of documents.
- Tender clarification, support proposal & tendering team for the preparation.
- Design, develop, and deliver training programs as per contract requirements (classroom and on-job training) as a Siemens' representative for Siemens' client such as Saudi Electricity Company, Aramco, Yanbu Aramco Sinopec Refining Company (YASREF), Sabic Company, ENGIE, Saudi Cement and Al-Yamama Cement Company.

**Dates** : From Apr. 2007 till Jan. 2019  
**Employer** : Egyptian Electricity Holding Co. (EEHC)  
**Projects** :

- Cairo West 1E 500/220KV Grid Station Project (Alstom/Siemens) with associated tie transformers 500/220KV, 750MVA (TBEA)
- Cairo West 500KV Grid Station Extension Project (ALSTOM)
- Giza North 500/220KV Grid Station Project (HYUNDAI) with associated tie transformers 500/220KV, 750MVA
- Cairo West 220/66KV Grid Station Extension Project (GE)
- Cairo North Power Plant Rehabilitation Project 750MW (ALSTOM)
- Busbar Protection Systems Upgrading project for Cairo West Grid Station (220/66/11KV) with SIEMENS IEDs
- Upgrading of Protection systems of Cairo West Substations (500, 220 and 66KV) with Micom Alstom IEDs
- Upgrading of Generator Protection Systems of Cairo West Plant (units 5 & 6) (SIEMENS)
- Cairo West Distributer 11KV Extension Project (ABB)
- Extension of third transformer 500 MVA, 500/220KV Project at Cairo West GS
- Extension of third transformer 40 MVA, 66/11KV at Cairo West GS
- Transformer no. 02 500MVA, 500/220KV Rehabilitation Project at Cairo West GS

**Job title** : Senior Protection Engineer  
**Job Description** :

- Approved and authorized Protection Engineer for substations 500, 220, 66/11KV.
- Review Substation protection design, PMD, BLD, coordination and schemes.
- Review vendor documents of substation equipment for the technical compliance.
- Manage and supervise testing and commissioning activities for metering and protection relays of different vendors such as Siemens, Alstom, Schneider and etc.
- Manage and supervise testing and commissioning activities for CTs & VTs, SAS interfaces, substation's equipment such as power transformers, GIS, LV & MV Switchgears and etc.

- Manage and supervise HV test for GIS.
- Prepare and review technical reports, procedures, test sheets & etc.
- Participate in fault analysis and root cause failure analysis committee.
- Follow up with the stakeholders for resolving the issues and ensure timely approval of engineering deliverables.
- Participate in assessing the overall status of risks in the projects.
- Review and give the required approval for the project's vendor documents.
- Review of electrical diagrams and schematics relevant to commissioning documents, modifications, red marks, and As-Built documents.
- Managing and Attending Factory Acceptance Tests (onshore and offshore) for substation equipment such as protection IEDs and SCS, high and medium voltage equipment, and power & control cables.
- Represent assigned projects as a testing and commissioning engineer contact person.
- Develop coordination and communication with the dispatch to coordinate the shutdown plans.
- Participate in the Cairo zone audit committee for substations protection audit.
- Provide training, coaching, and mentoring for projects' junior engineers.

**Dates** : From Jun. 2006 till Apr. 2007

**Employer** : Tiba Company for Trading & Contracting

**Job title** : Electrical Design Engineer

**Job Description** :

- Perform electrical design activities for low and medium voltage equipment.
- Perform cable sizing and voltage drop calculations (MV & LV).
- Perform transformer calculations.
- Perform shop drawings and as built drawings as per the site performed works.

Skills:

- Ability to present technical deliverable and discussion as speaker with large audience scale (Speaker in the power system protection summit, arranged by OMICRON for MEA region).
- Prepare and review power system studies using relevant software such as load flow and short circuit study, protection setting and coordination study.
- Sizing calculations of battery and battery charger and reviewing of their manufacturer data.

Research Publications:

- A Novel Protection Scheme to Prevent Unnecessary Outages of Generating Units During Power System Disturbances, Journal of Engineering and Applied Science, 2019.
- A Novel IEC 61850-Based Protection Scheme to Maintain the Generator Synchronous Operation during Power System Disturbances, Journal of Engineering and Applied Science, 2019.