102710-ELE-1MPSyz-E-2004
Protection Engineer

Holds a B. Sc. in Electrical Power Engineering and a Diploma of High Studies in stations and electrical grids. Has over 19 years' experience working in maintenance, protection and commissioning at Power Plants.

PERSONAL DATA

Nationality	:	Egyptian
Birth Date	:	12/12/1982
Gender	:	Male
Marital Status	:	Married
Residence	:	El-Behira

EDUCATION

: B. Sc. in Electrical Power Engineering, Tanta University, 2004
: Diploma of High Studies in stations and electrical grids, 2008

LANGUAGES

Arabic	:	Native Language
English	:	Very Good

COMPUTER SKILLS

: Windows, MS Office, Internet
: Electrical programs

TRAINING COURSES AND CERTIFICATIONS

: Operation and Maintenance of Gas Turbine, Abu Qir Power Station Training Center (Jan./Feb. 2006).
: GE Gas turbine and generator maintenance training (this training covered MK VI Gas turbine control maintenance and generator control and excitation (EX2100)), Belfort – France (Jan./Feb. 2009).
: Protection for transformer (this training covered GE Transformer Differential Protection Relay (T60-T35) – GE Time & Instantaneous over Current Protection Relay (MIFII) - GE Neutral Over Current Protection Relay (MIFII N)), Nubaria (Apr. 2009).
: Basic Training on Mark VI controls, Nubaria (Apr./May 2009).
: DC & UPS System (this training covered BENNING DC Batteries Chargers - BENNING DC/AC 100kVA Inverter and Constant Voltage Transformer - FIAMM 125VDC Lead-Acid Batteries - BTECH Batteries Monitoring System), Nubaria (May 2009).

: Generator protection and synchronizing panel (this training covered AREVA MICOM 343 Protection Relay and ABB Synchrotact.5 Synchronizing Device), Nubaria (Apr. 2010).

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Jul. 2021 till now
Project : Nubaria Power Station Module III (750MW)
Job title : Protection Engineer
Job Description :
- Follow up the Protection Activities programs, periodic inspection for Protection equipment, analyze, and troubleshoot all faults and errors.
- Testing of the GSU & Aux. power transformers.
- Testing for all Protection Relays.
- Review the Protection Setting for the Relays.
- Follow up the maintenance programs, periodic inspection for electrical equipment, analyze and troubleshoot all faults and errors.

Dates : From Feb. 2013 till Jul. 2021
Employer : Saudi Electricity Co.
Project : Sharourah Power Station
Job title : Protection Engineer
Job Description :
- Follow up the Protection Activities programs, periodic inspection for Protection equipment, analyze, and troubleshoot all faults and errors.
- Testing of the GSU & Aux. power transformers.
- Testing for all Protection Relays.
- Review the Protection Setting for the Relays.
- Participate and Review all protection Scope of work.
- Also work as Maintenance Section Head for one year and Technical Support Engineer.

Dates : From Jan. 2013 till Feb. 2013
Employer : Middle Delta Electricity Production Co.
Project : Nubaria Power Station I & II & III (2250MW)
Job title : Protection & Maintenance Engineer
Job Description : Follow up the maintenance programs, periodic inspection for electrical equipment, analyze, and troubleshoot all faults and errors.

Dates : From Dec. 2011 till Jan. 2013
Employer : Kharafi National
Project : West Damietta Simple Cycle Gas Turbine Units 500MW (4x125MW)
Job title : Commissioning, Protection & Maintenance Engineer

Dates : From May 2011 till Dec. 2011
Employer : Kharafi National
Project : Al-Shabab Simple Cycle Gas Turbine Units 1000MW (8x125MW):
- General Electric (G.E) CTG 125MW Type 9E Turbine.

- General Electric (G.E) CTG 125MW Type BDAX9 Turbine.
- 220KV GIS (SIEMENS & HYUNDAI).
- Medium Voltage (6.6KV) Switchgear (SCHNEIDER).
- Low Voltage (400 V) Motor Control Center (MCC).
- Generator circuit breaker AREVA type.
- CTG Main Transformers 15/220KV (HYUNDAI).
- Two Auxiliary Transformers 15/6.6KV (HYUNDAI).
- Service Transformers 6.6KV/400 V.

Job title : Commissioning, Protection & Maintenance Engineer

Job Description :

- Testing of the Main & Aux. power transformers (Megger, DC resistance, turns ratio, tanδ, electrical and mechanical trips).
- Testing and commissioning for 6.6KV switchgear, SEPAM protection relay, 6.6/0.4KV dry type transformers, 400 V load centers, MCC, and emergency diesel generator.
- Testing and commissioning for the gas turbine generator such as Megger, winding resistance.
- Testing and commissioning and startup generator protection panel, generator protection relays.
- Testing and commissioning (AREVA) Generator circuit breaker such as Timing, contact resistance, inspection and function and interlocking test & Sf6 Leakage test.
- Testing and commissioning for voltage transformers 15KV primary such as Turns ratio, polarity & insulation resistance.
- Testing and commissioning for current transformer such as Turns ratio, polarity, insulation resistance, tan delta & saturation curve.
- Testing and commissioning for the DC/UPS system (Charger - Battery - Inverter - Distribution Panels).
- Testing and commissioning for all motors in site.
- Testing and commissioning for transformer protection panels, transformer protection relays.
- Overall commissioning of the plant (Interfacing between the different systems such as interlocking, status signals, alarms, trip signals, and CT & VT signals).
- Stability test for all differential relays (Main & Aux Transformer diff relays – Overall diff relay – cable differential relay).
- Preparing and reviewing with all related contractors and dispatch center, the energization procedures for the plant starting with switchyard energization and then back energizing the Main & Aux. transformers to energize the M.V switchgear and after that starting-up the unit and synchronization.
- Providing a fault analysis and Troubleshooting procedure for many problems appeared during the start-up period such as trip for main transformer, unit overall differential relay CT polarity problem, unit overall differential relay setting problem (poor selectivity), and swapping problem in CTs between measuring and protection core in Aux transformer.
- DCS loop check for all system and function check for the DCS signals.

Dates : From Oct. 2005 till May 2011

Employer : Middle Delta Electricity Production Co.

Project : Nubaria Power Station I & II & III (2250MW):

- One Module consists of:
  - Two General Electric (G.E) CTG 250MW Type 9FA Turbines.
  - Two Horizontal STF HRSG.
  - One ALSTOM STG 250MW (HP, IP, LP) Turbine.
- Two Modules consists of:
  - Two Siemens CTG 250MW Type V94.3a.
  - Two Horizontal ALSTOM HRSG.
  - One Mitsubishi STG 250MW (HP, IP, LP) Turbine.
- Four Tie Transformers 500/220KV.
- 500KV Switchyard.
- 220KV Switchyard.
- Medium Voltage (6.3KV) Switchgear.
- Low Voltage (400 V) Motor Control Center (MCC).
- CTG Main Transformers.
- STG Main Transformers.
- Auxiliary Transformer.
- Generator circuit breaker.

Job title : Commissioning, Protection & Maintenance Engineer

Job Description :

- During Construction Period:
  - Preparation of MRR (Material Receiving Report) after site inspection for all electrical equipment (cables, cable trays, motors, transformers, generators and accessories, protection panels, distribution panels, and all auxiliary systems related to the project).
  - Issuance of Change Notices according to the project conditions and study of contractor change request.
  - Issuance of punch list items for site work and follow up the contractor action.
  - Factory inspection and testing for many electrical equipment such as medium and low voltage cables, 500KV bare conductors, distribution transformers, medium and low voltage switchgear, Generator circuit breaker, motor control centers, protection panels, Isolated phase bus duct (IPB), AC and DC distribution panels.
  - Follow up Construction activities for all electrical equipment's installed in the site such as temporary construction power, grounding grid, Medium & low voltage cables, 500KV Air Insulated Switchyard, 6.3KV Medium Voltage Switchgear, low voltage load centers, motor control centers, batteries, battery chargers, DC & UPS system, large power transformers (main & auxiliary).
  - Follow up Construction for Two Gas Turbine Generator (GE-MS9001FA) and its accessories as following [motors, interconnection cables, lighting system, earthing system.
  - Follow up Construction for Steam Turbine Generator (50WX23Z-109) and its accessories as following [motors, interconnection cables, lighting system, earthing system & Excitation transformer (19000/690 V) & P320 V2 static excitation system.
- During Commissioning & Start-up Period:
  - Testing and commissioning of the 500KV air insulated switchyard circuit breakers, CTs, VTs, and disconnecting switches (Megger, DC resistance, contact resistance, timing, insulation power factor tanδ interlocking and control circuit).

- Testing of the main & aux. power transformers (Megger, DC resistance, turns ratio, tanδ).
- Testing and commissioning for 6.3KV switchgear, SEPAM protection relay, 6.3/0.4KV dry type transformers, 400 V load centers, MCC, and emergency diesel generator.
- Testing and commissioning for the gas turbine generator such as Megger, High potential, winding resistance.
- Testing and commissioning and start-up generator protection system (GP2100).
- Testing and commissioning for the DC/UPS system (Charger - Battery - Inverter - Distribution Panels).
- Testing and commissioning (ABB) Generator circuit breaker such as Timing, contact resistance, inspection and function and interlocking test & Sf6 Leakage test.
- Testing and commissioning for 500KV Air Insulated Switchyard such as Timing, Contact resistance, SF6 First Stage-Second Stage test, Dew point, Sf6 percentage & Anti pumping.
- Testing and commissioning for voltage transformers type (Trench-France) 500KV primary such as Turns ratio, polarity & insulation resistance.
- Testing and commissioning for current transformer type Trench-France such as Turns ratio, polarity, insulation resistance, tan delta & saturation curve.
- Overall commissioning of the plant (Interfacing between the different systems such as interlocking, status signals, alarms, trip signals and CT & VT signals).
- Preparing and reviewing with all related contractors and dispatch center, the energization procedures for the plant starting with switchyard energization and then back energizing the main & aux. transformers to energize the M.V switchgear and after that starting-up the unit and synchronization.
- Providing a fault analysis and Troubleshooting procedure for many problems appeared during the start-up period such as generator protection panel VT connection, transformer protection panel and unit overall differential relay CT polarity problem, unit overall differential relay setting problem (poor selectivity), and DC earth fault problem.
- Attend and do All Protection Tests for GE Gas Turbine Generator (GE G60 – GE C60 – GE T60) Relays.
- Attend all Protection Testes for ALSTOM STG Turbine Generator (MICOM P343) Relay.
- Attend and do All Protection Testes for All Transformers (GE T60-GE T35-GE MIFII) Relays.
- Attend and do All Protection Tests for sepam series 20, series 40 and M41.

- After Turnover (Maintenance):
  - Preparing and review the spare parts list required for two years of operation for all equipment.
  - Preparing maintenance programs for generators and aux. systems, main and aux. transformers, MV & LV switchgear, 500KV air insulated switchyard, and all other aux. Systems.
  - Preparing maintenance programs for gas turbine component (Motors & MCC & Batteries & Battery Chargers & Excitation

Compartment & Excitation Transformer & Collector Brushes & All Electrical Panels ...).

- Follow up the maintenance programs, periodic inspection for electrical equipment, analyze, and troubleshoot all faults and errors.

Dates	**:**	From Aug. 2004 till Oct. 2005
Employer	**:**	HAMZA SOFT COMPANY TRAINING CENTER
Job title	**:**	Trainer
Job Description	**:**	Trainer for Matlab software & PLC & generator protection & transformer protection.