# 100889-ELE-1CMPSyz-E-2003

**Electrical Engineer** 

Holds a B. Sc. in Electrical Power Engineering and has about 18 years hands-on experience working in construction, maintenance, commissioning, start-up and protection.

### PERSONAL DATA

Nationality : Egyptian Birth Date : 01/10/1978

Gender : Male

Marital Status : Married

Residence : Mahmoudia

### **EDUCATION**

B. Sc. in Electrical Power Engineering, Tanta University, 2003

### LANGUAGES

Arabic : Native Language

English : Excellent

### **COMPUTER SKILLS**

: Windows, MS Office (Word, Excel, Power Point), Internet

## TRAINING COURSES AND CERTIFICATIONS

- : Operating and maintenance of gas turbine frame M701F 750MW at Takasago City MHI Japan.
- Electric generator 290 MVA at Kobe City MHI Japan.
- SIEMENS:
  - On-shore protection system in 220KV GIS substation.
  - Siemens switchgear type 8DN9-2.
  - Functionality of C.B.
  - Interlocking system.
  - SF6 handling.
  - Partial discharge in gas insulated.
  - Manual operation of Disconnector & Earthing switch.
  - Handing of the SF6 maintenance machine DILO compact.
- : Toshiba: On-shore Transformer protection.
- Schneider:
  - M.V. Primary distribution equipment knowledge & use.
  - L.V. Switchboards.
- NEM: HRSG operation & maintenances.

Areva: Power transformer training.

### CHRONOLOGICAL EXPERIENCE RECORD

Dates : From 2008 till now

**Employer** : Middle Delta Company of Electricity Production

**Project**: EL-ATF Combined Cycle Power Station

(Installation of Mitsubishi Gas turbine units – Frame M701F):

- 2x250MW gas turbines by Mitsubishi (Frame M701F Diasys control).
- 1x250MW steam turbines by Ansaldo Energia.
- GIS 220KV switchyard one and half circuit breaker, consists of two bus bar, five bays, 6 over head transmission lines and 3 generator transformers.
- Two 21 / 220KV Step Up Transformers and one 15.75 / 220KV Step Up Transformer.
- Two auxiliary transformers (21/6.3KV) by Areva.
- 2 HRSGs by NEM.
- 6.3KV Switchgear by Schneider.

Job title
Job Description

Electrical EngineerConsultant duties:

- Responsible for supervising technical specification and Supervise the contract package schedule and related financial, technical specifications for Approving designs & submittals from vendors and check the Suitability of the submitted specifications to the required contracted Specifications, which also includes assigning the incompatible specifications and making additional implementations if necessary.
- Attend daily activity progress meetings and make sure that site activities are in line with project schedule.
- Coordinate all electrical activities (electrical Equipment installation) with other departments such as Civil, I&C and mechanical.
- Approving designs & submittals, site acceptance tests, commissioning & start-up and spare parts amount optimization regarding to cost of each spare parts, regarding to operation and maintenance manual.
- Prepare & apply punch Items list and manage with project time progress for successful start-up.

#### Protection duties:

- Check and adjust setting if necessary of all Digital Protection Relays for: Ac Generators, Main Transformers, Feeder E.G. (Differential Protection – Over Current – Over Voltage – Earth Fault – Negative Phase Sequence – Reverse Power – Distance Relay – Field Failure – etc.).
- Check all closing and tripping Circuits for CBs & apply Test Closing Time, Opening Time and Contact Resistance of Different Voltages CBs (6/11/66/220KV).
- Testing of:
  - Local protection devices of transformers (winding Temp, oil Temp - pressure, relive valves - sudden pressure device -BOCHHOLZ Relay).

- Using Omicron 356 for testing of digital multifunction protection relays as:
  - M3425A, M3310A of gas turbine.
  - Micom, P345, P141 of Steam turbine.
  - Siemens 7UT6131, 7SJS111, 7SA612, 7SD522
     \*SPRITEC 4\*.
  - Sepam Series 20, 40, 80 of 6KV Switchgear.
- Electrical maintenance work:
  - MAJOR INSPECTION and maintenance for 21KV A.C.
     Generators. M.H.I (Insulation Resistance Test Winding Cleaning hydrogen System etc.).
  - MAJOR INSPECTION and maintenance for 15.7KV A.C. Generators. ANSALDO (Insulation Resistance Test Winding Cleaning hydrogen System etc.).
  - MAJOR INSPECTION maintenance for 220KV & 66KV & 11KV CBs. and Test Close and Trip Circuits for CBs & maintenance of 220, 66, 11, 6.6, .380 Switchgear.
  - Check CTs & PTs (Turns Ratio Back To Back Test etc.).
  - Check D.C. Circuits and carrying out General Maintenance for batteries (adjust Electrolyte Level Specific Gravity Check Voltage / Cell internal resistance etc.).
  - Check Battery Charger Circuits.
  - Check and calibrate Excitation System (with Brushes Brush Less) – (AVR System – Rotating Diodes – etc.).
  - Check and calibrate Synchronizing System.
  - Carrying out maintenance for electrical motors and check their power and control circuits.
  - Maintenance for Transformers 11/220KV & 220/66/11KV (Turns Ratio Test – Oil Test – Change Silica Gel – Insulation Resistance Test – DC Resistance – Tan Delta.
  - Design CBs Interlock Control Circuits.
- Installation, erection and commissioning of:
  - Gas Turbine Generator 250MW (Mitsubishi Electric Corporation) & Digital Generator Protection Relay M-3425, M-3310 for Excitation Transformer.
  - 220KV GIS SIEMENS & Digital Protection Relay (SPERITEC-4) &
     220KV cable between Main Transformer and 220KV G.I.S.
  - MAIN transformer 21/220KV and auxiliary transformer 21/6.3KV (AREVA).
  - Medium Voltage Switchgear 6.3KV (SCHNEIDER, RENOX) & Digital Protection Relay (SEPAM 1000).
  - Medium & L.V. Motor (EPARA JAPAN).
  - Testing for Digital Relay by using OMICRON CMC356.
- Using the following instruments:
  - OMICRON CMC 356-Primary Injection Secondary Injection.
  - CPM 500 (megger) digital micrometer for contact resistance.
  - TM 1600 circuit breaker analyzer (opening time closing time).
  - C.A. 6423 CHAUVIN ARNOUX for ground resistance.
  - BITE2 (megger) for Internal impedance of battery.
  - MULTI RANGE MEGGER TESTER for Insulation resistance.
  - R002 (DILO) measuring device for SF6 percentage.
  - R001 (DILO) Moisture meter for SF6 gas.

PAUR oil tester DPA for measuring brake dawn voltage of oil.

- CPC 100 multi function tester.

- C.T. analyzer.

TTR 330 transformer turns ratio.

Dates : From Jan. 2021 till Apr. 2021 Employer : DOOSAN Heavy Industries

Project : RABIGH 2 Thermal Power Plant 4x 700MW (KSA)

Job title : Electrical Maintenance Engineer

Job Description : Performed overhaul major inspection for DOOSAN Generator &

Transformers maintenance (Inspection, measurements, test & start-up) for: Main, Auxiliary and Excitation Transformers / Generator Auxiliary Electrical

Motors.

Dates : From Oct. 2020 till Jan. 2021

Employer : Middle Delta Electricity Production CompanyProject : El-Atf Combined Cycle Power Plant 750MW

Job title : Electrical Maintenance Engineer

Job Description : Performed overhaul major inspection for MITSUBISHI GT Generator &

Transformers maintenance (Inspection, measurements, test & start-up) for: Main, Auxiliary and Excitation Transformers / Generator Auxiliary Electrical

Motors.

Dates : From Jun. 2013 till Mar. 2014

Project : Qurayyah Independent Power Plant 4000MW (KSA)

**Job Description**: • Performed high voltage test for 13.8KV & 4.16KV BUS BAR.

Performed all tests for L.V. C.B 400V.

Performed all tests for medium voltage C.B (4.16KV & 13.8KV).

Worked as a Protection Engineer and tested SIEMENS protection relay

kind 7sj621, 7sj622, 7sj624, 7um.

Attended T.R test (18KV-380KV & 13.8KV-4.16KV).

**Dates** : From 2003 till 2008

**Employer**: Middle Delta Electricity Production Company

**Project**: Mahmoudia Combined Cycle Power Station (300MW):

• 8x25MW gas turbine by GE (Frame 5), 2x50MW steam turbine by GE,

8 HRSGs by NEM.

220/66/11KV Transformers substations.

11/220KV Step Up Transformers.

11/6KV Transformers.

Feeder 220KV (6 sets) and feeder 66KV.

220KV Switchyard.

6.6KV Switchgear (Sf6 circuit breakers).

Infi 99 DCS by ABB, Mark II and Mark V by GE.

Job title : Electrical Engineer

Job Description : • Maintenance for Transformers 11/220KV & 220/66/11KV (Turns Ratio

Test – Oil Test – Change Silica Gel – Insulation Resistance Test – DC

Resistance - Tan Delta).

- MAJOR INSPECTION Maintenance for 220KV & 66KV & 11KV CBs and Test Close and Trip Circuits for CBs & Maintenance of 220, 66, 11, 6.6, .380 Switchgear.
- Carrying Out Maintenance for Electrical Motors and Check their Power and Control Circuits.
- Check D.C. Circuits and Carrying out General Maintenance for Batteries (Adjust Electrolyte Level Specific Gravity – Check Voltage / Cell – internal resistance .....).
- Check Battery Charger Circuit.
- Check C.Ts & P.Ts (Turns Ratio Back To Back Test ......).