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Electrical Maintenance Engineer

Holds a B. Sc. in Electrical Power & Machines Engineering and has over 12 years hands-on experience working in maintenance, construction and commissioning.

PERSONAL DATA

Nationality : Egyptian
Birth Date : 21/08/1979
Gender : Male
Marital Status : Married
Residence : Currently KSA

EDUCATION

: B. Sc. in Electrical Power & Machines Engineering, Menoufia University, 2004

LANGUAGES

Arabic : Native Language
English : Very Good

COMPUTER SKILLS

: Windows, MS Office, Internet

TRAINING COURSES AND CERTIFICATIONS

- : Training in SEC: EXCITATION SYSTEM, MV C.B (JDAC) FACTORY, GSU TRANSFORMER & GENRATORS.
- : General background for electrical maintenance of gas turbine generator and accessories, power transformers, M.V switchgear, MCC, DC and UPS system, Nubaria Power Station I & II (Jul./Aug. 2009).
- : DCS Maintenance Training Program for distribution control system & Combustion Turbine Generator & Auxiliaries (off-shore training) in Yokogawa in Bahrain (Feb. 2009):
 - MS9001FA gas turbine maintenance & Generator maintenance & DCS system.
 - Mark VI turbine control system fundamentals and Toolbox software.
 - Generator control and protection (EX2100 excitation system, LS2100 static starter system, GP2100 generator protection panel).
- : ALSTOM maintenance training program for steam turbine generator and auxiliaries (on-shore training at Nubaria site) (from Mar. till May 2010):
 - Excitation P320 V2.
 - Air cooled generator 50WX23Z-109.

- P320 GTC V2+ Steam Turbine Control System.
 - ALSTOM CM condenser.
 - Areva Micom P343 protection relay & ABB synchrotract.5 synchronizing device.
 - BTG Valve & Smartrak maintenance & calibration.
 - Condenser exhauster vacuum pump unit & water box priming units.
- : Erection, operation and maintenance of solar treatment plant training, INITEC Energia / CHEMTROL - Nubaria Power Station III site.
- : Training period for operating HRSG in Talkha Power Station (750MW) (Jan. 2010).
- : Training period for DCS Control system (May 2008).
- : Training period for maintenance Instrument and Control Department on Combined Cycle unit (Mar./Apr. 2008).
- : Training period for maintenance Instrument and Control on Siemens gas turbine (Mar. 2008).
- : Training period for operating and maintenance on combined cycle units (Mar. 2007).

CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Jan. 2014 till now
- Employer** : Saudi Electricity Co. (SEC)
- Project** : PP10 Electrical Power Plant:
- 5 blocks x 8 units Gas turbine x 70MW =2800MW.
 - Extension - Combined Cycle Project.
 - 40 Boilers +10 STG (steam turbine generation).
 - GSU Transformers, Generators, 13.8KV SWGR, 4.16KV SWGR, DC & UPS system)
- Job title** : Electrical Maintenance Engineer
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- Dates** : From Sep. 2010 till Jan. 2014
- Employer** : Middle Delta Electricity Production Company (MDEPC)
- Project** : Nubaria III Combined Cycle (1x750MW) Power Station:
- One module, each module consists of:
 - Two GE Energy CTG 250MW type MS9001FA.
 - Two STF horizontal HRSG.
 - One ALSTOM STG 250 MW (HP, IP, LP).
 - 500KV switchyard.
 - Medium and Low Voltage Switchgears.
- Job title** : Electrical Maintenance Engineer
- Job Description** : • During Construction Period:
- Preparation of MRR (Material Receiving Report) after site inspection for all electrical equipments (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 equipments such as medium and low voltage cables, 500KV bare conductors, distribution transformers, medium and low voltage switchgear, motor control centers, protection panels, Isolated phase bus duct (IPB), AC and DC distribution panels.
- Follow up Construction activities for all electrical equipments 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 tow Gas Turbine Generator (GE-MS9001FA) and its accessories as following (motors, interconnection cables, lighting system, earthing system & Packaged Electrical/Electronic Control Compartment (PEECC) & Excitation transformer (6300/900 V) & EX2100 static excitation system 100 MM SCR WARM BACKUP & Static start isolation transformer (6300/2080/2080 V) & LS2100 load commutated inverter (LCI).
- During Commissioning and 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 $\tan\delta$ interlocking and control circuit).
 - Testing of the main & aux. power transformers (Megger, DC resistance, turns ratio, $\tan\delta$).
 - Testing and commissioning for 6.3KV switchgear, SEPAM protection relay, 6.3 to 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 startup for the generator excitation system (EX2100), the gas turbine static starter system GE LCI (LS2100) and generator protection system (GP2100).
 - Testing and commissioning for the DC/UPS system.
 - 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.
- After turn over (Maintenance):
 - Preparing and review the spare parts list required for two years of operation for all equipments.
 - Preparing maintenance programs for generators and aux. systems,

main and aux. transformers, MV & LV switchgear, 500 KV air insulated switchyard, and all other aux. Systems.

- Preparing maintenance programs for gas turbine component (pecc & motors & mcc & batteries & battery chargers & Ici transformer & Ici compartment & excitation compartment & excitation transformer & collector brush rigging & shaft voltage rigging & PDA monitoring & all electrical panels
- Follow up the maintenance programs, periodic inspection for electrical equipment, analyze, and troubleshoot all faults and errors.
- Monitor the status of material & spare parts to specify the required parts.

- Dates** : From Jan. 2006 till Sep. 2010
- Employer** : West Delta Electricity Production Company (WDEPC)
- Project** : Nubaria I & II Combined Cycle (2x750MW) Power Station:
Two modules, each module consists of:
- Two SIEMENS Energy CTG 250MW type V94.3A.
 - Two ALSTOM horizontal HRSG.
 - One Mitsubishi STG 250 MW (HP, IP, LP).
- Job title** : Electrical Construction & Commissioning Engineer
- Job Description** :
- Follow up Construction for four Gas Turbines Generator (Siemens) 250MW type V94.3A and its accessories as following: motors, interconnection cables, lighting system, earthing system, PCC, SFC and excitation system.
 - 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 $\tan\delta$ interlocking and control circuit).
 - Testing of the main & aux. power transformers (Megger, DC resistance, turns ratio, $\tan\delta$).
 - Testing and commissioning for 6.3KV switchgear, SEPAM protection relay, 6.3 to 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.
- Dates** : From Jun. 2005 till Jan. 2006
- Employer** : Alex International Company for electro-mechanical & planning and communication