

103933-ELE-1CMOS-E-2007

Combined Cycle Operation Engineer

Holds a B. Sc. in Electrical Power & Machines Engineering and a Diploma in Electrical Power System Protection. Has about 14 years hands-on experience working in construction, maintenance, operation, commissioning and start-up.

PERSONAL DATA

Nationality : Egyptian
Birth Date : May 1985
Gender : Male
Marital Status : Married
Residence : El-Behira

EDUCATION

- : B. Sc. in Electrical Power & Machines Engineering, Alexandria University, 2007
- : Diploma in Electrical Power System Protection, Cairo University, 2014-2016 (Studied courses: protection devices (relays), circuit breakers, short circuit analysis, power flow analysis, power quality analysis, harmonics analysis, and transient analysis, grounding systems, protection of transmission and distribution power system, protection and maintenance of power system substations, power system protection, high voltage, energy management system, intelligent instrumentation, data communication)

LANGUAGES

Arabic : Native Language
English : Very Good

COMPUTER SKILLS

- : Windows, MS Office (Word, Excel, Power Point), Internet
- : MS Visio
- : AutoCAD, Dialux, Powerex, Ecodial and Matlab

TRAINING COURSES AND CERTIFICATIONS

- : On-shore training of high and medium voltage (500KV/220KV/6.3KV/400V) switchyard and switchgear, Nubaria.
- : On-shore training of gas turbine Siemens v94.3A each one produces 250MW, Nubaria.
- : On-shore training of steam turbine operation each one produces 250MW, Nubaria.

- : On-shore training of heat recovery steam generation (HRSG) operation, Nubaria.
- : Training on PLC at Niscom Company.
- : Training at Kom Hamada Textiles Company.
- : Summer holiday training in Faculty of Engineering, Electrical Power Stations and Factories.

CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Apr. 2010 till now
- Employer** : Middle Delta Electricity Production Company (MDEPCO)
- Project** : Nubaria Power Station I & II – 2x750MW Combined Cycle:
- Two modules, each module consists of the following:
 - Two Siemens Gas Turbines of 250MW type V94.3A.
 - Two horizontal Alstom boilers (HRSG).
 - One Mitsubishi STG 250MW.
 - 220KV switchyard.
 - 500KV switchyard.
 - Four tie transformers 500/220KV.
 - Medium and Low Voltage Switchgear.
 - Two outgoing circuits 500KV.
 - Eight outgoing circuits 220KV.
- Job title** : Combined Cycle Operation Engineer
- Job Description** :
- Gas Turbine Operation:
 - Commissioning of gas turbine after overhauling including valves, pumps and auxiliaries, gas turbine start-up, increasing the load and Shutdown.
 - Check and observe the protection of auxiliaries such as vibration, temperature, pressures, hot and cold spots of blades.
 - Perform as witness of 4 hot gas pass inspection, 4 minor inspection and 5 major inspection of V94.3A Siemens gas turbine.
 - Estimate starting time for the ideal generation units and follows prescribed startup procedures to bring units on line at a specific time.
 - Change the loading of turbine / generator as required from the board or through the electronic control system.
 - Read meters and records data at specified interval in appropriate logs and computers.
 - Immediately reports mail functioning equipment of abnormal meter readings / equipment performance.
 - Perform trouble shooting and documentation and assists in the resolution of problem discovered during the shift.
 - Work with the teams of other operations employees on shift to insure successful startup, operation and shut down of units.
 - Start-up and shut down the equipment during testing.
 - Check and tighten the connection of fuel lines including leakage test before start.
 - Observe the power supplies (s.g) during the shift.
 - Connect and disconnect the power plant transformers of switchgears.
 - Commissioning of inlet cooling of compressor (wet compression).

- Observe the work permit during the shift.
- Check and observe the electrical equipment in plant before start.
- Boiler Operation:
 - Check and observe the valves (pneumatic, motorize, manual and hydraulic) before operation.
 - Preparing the water intake and adjusting bay water level in pump house.
 - Preparing and operation of auxiliaries as circulate, service, closed cooling and demi water pumps.
 - Preparing the boiler auxiliary pumps (feed, recirculation and condensate).
 - Preparing the boiler lines and filling the drums and the deareator.
 - Preparing the vents and drains.
 - Preparing the service and control compressed air.
 - Starting and operation of the boiler (cold, warm, hot) and generation of the steam.
 - Monitoring the boiler during operation within protection limits.
 - Shutdown the boiler (warm, cold).
- Steam Turbine Operation:
 - Preparing the steam surface Condenser.
 - Preparing condenser water box vacuum pump.
 - Preparing the sealing of turbine Glands.
 - Preparing and operation condenser vacuum pump and establishing the vacuum.
 - Preparing lube oil cooler pumps and lube oil cleaning system.
 - Observing turbine governing system.
 - Starting and operation of steam turbine.
 - Familiar with DEH control, ATS control, Turbine Inter Lock, Turbine control system and Auxiliary Equipment Control.
 - Operation for generator and generator auxiliary systems.
 - Familiar with generator protection & control systems.
 - Familiar with generator auxiliary systems.
 - Familiar with generator excitation systems.
- Operation Engineer in Control Room & Switch Yard 500/220KV:
 - Conventional Air Insulated Switchyard (AIS).
 - Sumitomo Corporation CONISYS (Tokyo & Cairo) 500KV.
 - ABB Corporation (Cairo) 220KV.
- Local Area and Equipments:
 - 500KV switchyard:
 - 9 Main Power Transformers (ZTR & Hyundai).
 - 4 TFRs ZTR of CTG Turbines 16.5KV/500KV & 2 TFRs ZTR of STG Turbine 15KV/500KV.
 - 2 TFRs Hyundai of CTG Turbines 15.75KV/500KV & 1 TFR Hyundai of STG Turbine 19KV/ 500KV.
 - 2 Bus bars 500KV, 3000 A (Double Bus bars Double Breaker).
 - 15 Bays consists of (6 CTGs C.Bs) & (3 STGs C.Bs), 4 ZTR Tie Transformers (each 3 Single Phase Auto TFR) 500/220/11KV and 2 OHTL 500KV.
 - 12 Bays of "Sumitomo Japan" Dead Tank C.Bs.
 - 3 Bays of "Areva" Live Tank C.Bs.
 - CONISYS Live Line Insulator Washing (LLIW) System.
 - Capacitive and Inductive V.Ts and Wave Traps.
 - 220KV switchyard:

- 2 Bus bars 220KV, 3000 A (Double Bus bar Single Breaker).
- 220KV Bus Coupler.
- 4 OHTL 220KV (Double Circuit).
- 12 Bays of "ABB" Live Tank C.Bs.
- CONISYS Live Line Insulator Washing (LLIW) System.
- Capacitive & Inductive V.Ts, ABB C.Ts, Wave Traps.
- Control Room:
To Control the System using:
 - AREVA Protection, Automation and Control Integrated System (PACIS).
 - MICOM Bay Control Unit by AREVA (BCU) Ver.C264 for Control.
 - MICOM by ALSTOM for Protection as follows:
 - P742, P741 for Bus bar Protection.
 - P437, P442 for Distance Protection.
 - P143 for Breaker failure.
 - P126 for Backup Protection.
 - P632 for Differential Protection.
 - ABB Protection Relays as follows:
 - REB 500 for Bus bar Protection.
 - Reel 316, Reel 531 for Distance Protection.
 - Auto Recluse System.
 - CONISYS Live Line Scada Control Unit.
 - CONISYS & ABB Chargers, UPS System, Batteries and Inverters (400V AC, 220V DC, 48V DC).

Dates : From Jun. 2015 till Oct. 2015
Employer : PSP with ANSALDO ENERGIA
Project : New Mahmoudia Power Station - 2x170MW ANSALDO GAS TURBINE AE94.2
Job title : Commissioning & Operation Engineer
Job Description : Commissioning and start-up for the gas turbine and all its auxiliary systems as lube oil, turning gear, closed cooling, hydraulic oil, pneumatic, fuel gas, fuel oil, fuel oil purifier, HCO, MV & LV switchgear and GIS.

Dates : From Jul. 2009 till Mar. 2010
Employer : Kahromika under scope ALSTOM and INITEC
Project : Nubaria Power Station III – 1x750MW Combined Cycle
Job title : Electrical & I/C Construction Engineer
Job Description :

- Cable trays and Conduits installation.
- Follow up cable works (pulling and termination), Cable tests (continuity, megger and high voltage).
- LV motors installation, testing and operation.
- Supervise the installation of Pneumatic and motorized valves.
- Calibration of instruments as pressure (indicators, switches, transmitters), level transmitters, flow transmitters, temperature (indicators, transmitters, thermocouples, RTD).
- Erection of the instrumentations in the field for steam pipes and water pipes.
- Supervise the installation and calibration for ultrasonic level transmitters (Rosemount 3100) and setting of universal control.

- Ability to use hart communicator (375).
- Familiar with contactor technical specification and P&ID.
- Follow up HVAC works.

Dates : From Jan. 2009 till Jul. 2009
Employer : Kahromika Co. under scope ALSTOM and INITEC Co.
Project : Nubaria Power Station III – 1x750MW Combined Cycle
Job title : Technical Office Engineer
Job Description :

- Doing all documentary works with the computer aid.
- Complete control on all project documents and drawings.
- Preparing the daily progress report.