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SIEMENS Gas Turbine Operation Engineer (V94.3A)

Holds a B. Sc. in Electrical Engineering and has over 17 years' experience working as Operation Engineer at Nubaria Power Plant.

PERSONAL DATA

Nationality	:	Egyptian
Birth Date	:	27/01/1981
Gender	:	Male
Marital Status	:	Married
Residence	:	El-Behira

EDUCATION

: B. Sc. in Electrical Engineering, Alexandria University, 2003

LANGUAGES

Arabic	:	Native Language
English	:	Fluent

COMPUTER SKILLS

: Windows, MS Office, Internet

TRAINING COURSES AND CERTIFICATIONS

: On-shore training of steam turbine operation by Mitsubishi Heavy Industries Company, Nubaria.
: On-shore training of gas turbine operation (Siemens v94.3A) each one produces 250MW, Nubaria.
: On-shore training of ALSTOM HRSG operation, Nubaria.
: On-shore training of high and medium voltage (500KV / 220KV / 6.3KV), Nubaria.

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From May 2006 till now
Employer : Middle Delta Electricity Production Co. (MDEPC)
Project : Nubaria Combined Cycle Power Station (2x750MW)
Job Description :

- SIEMENS Gas Turbine Operation Engineer (V94.3A) (from Jan. 2016 till now):
  - Start-up, normal operation and shut-down for gas turbine.
  - Full knowledge of the unit and its components (lube oil, hydraulic,

pneumatic, pulse compressors, diverter dumper, air inlet filters, compressor, turbine, generator, combustion chamber), how to deal with it, operate it, stop it, and discover its faults if any.
- Preparing the unit for start-up and operation.
- Full control of the unit through the control room and also through the site.
- Starting up the turbine engine and controlling its speed.
- Monitoring the working of the gas turbines and energy production.
- Checking the components for any leakages, malfunctioning, and defects damages, etc.
- Perform emergency operations during unit trips and abnormal operating conditions to place plant equipment in a safe operating condition.
- Making efforts to reduce unnecessary use or wastage of energy.
- Complying with safety standards as specified for gas turbine operations.
- Operate and monitor auxiliary equipment and systems which support the safe, efficient and reliable.
- Recognize safety hazards and follows safety guidelines for personal protection, protection of fellow workers and the protection of the public.
- Understand and execute the equipment clearance procedures.
- Assist maintenance personnel in performance of maintenance activities to include use of tools, equipment, and company vehicle.
- Troubleshoot plant equipment to resolve operational problems.
- Implement plant emergency procedures as needed.
- Operate / monitor the equipment and make minor adjustments as necessary.
- Recording changes in operation that can lead to possible problems.
- Able to operate various mechanical and electrical systems which include combustion air systems, plant and control air systems, fuel systems, filter house, cooling water systems, and other auxiliary systems.
- Able to identify equipment problems, report abnormal conditions and document properly using logs, records, and our work request system.
- Assist maintenance when necessary to support overall maintenance of unit.

- Mitsubishi Steam Turbine (tc2f-35.4") & ALSTOM HRSG Operation Engineer (Jan. 2010 – Jan. 2016):
  - Start-up, normal operation and shut-down for steam turbine.
  - Commissioning, start-up, reliability, performance and tests for steam turbine.
  - Full knowledge of the steam turbine and boiler and their components how to deal with it, operate it, stop it, and discover its faults if any.
  - Start or stop generator, auxiliary pumping equipment, turbine, or any other equipment as necessary.
  - Control or maintain auxiliary equipment, such as pumps, fans, compressors, feedwater heaters, filters, supply water, or auxiliary power.
  - Open and close valves and switches in sequence to start or shut down auxiliary units.

- Monitor power plant equipment and indicators to detect evidence of operating problems.
- Perform emergency operations during unit trips and abnormal operating conditions to place unit equipment in a safe operating condition.
- Identify equipment problems, report abnormal conditions and document properly using logs, records, and our work request system.
- Troubleshoot problems and make necessary repairs.
- Perform necessary repairs and replacements.
- Operate and maintain high and low-pressure boilers
- Adjusting boiler controls.
- Maintain systems by scheduling regular inspections, cleanings, filter replacement and all other tasks necessary to keep all components performing optimally, identify and repair or replace malfunctioning components.
- Assist maintenance when necessary to support overall maintenance of unit.
- Record and compile operational data by completing and maintaining forms, logs, or reports.
- Perform emergency operations during unit trips and abnormal operating conditions to place plant equipment in a safe operating condition.

- Control Room & Switchyard 500/220KV Engineer (May 2006 – Jan. 2010):
  - Commissioning & Maintenance Engineer:
    - ❖ 500KV/220KV Substation Commissioning.
    - ❖ Electrical Instructor & Trainer.
    - ❖ Site Electrical Maintenance.
    - ❖ 500KV Substation Maintenance.
    - ❖ 220KV Substation Maintenance.
    - ❖ Transformers Maintenance.
    - ❖ HV, LV Maintenance.
    - ❖ Transformers maintenance.
    - ❖ Batteries Maintenance.
    - ❖ Monitoring and operating the system.
  - Operation Engineer:
    - ❖ 500KV/220KV Substation Operation.
    - ❖ Coordinating between the Power Station, Substation and National Electricity Control Center (NECC).
    - ❖ Operating and washing switchyard with (LLIW) system automatically and manually.
    - ❖ Alternating control system to DCS, NECC, control room or local area.
    - ❖ Alternating between bus bars when needed.
    - ❖ Alternating between chargers and emergency when needed.
    - ❖ Fixing light failure of operating system if happened.
    - ❖ Doing daily technical report about loads status.
    - ❖ Isolating and connecting in service of any duty.
    - ❖ Energizing transformers while commissioning.
    - ❖ Discovering failure of any duty and coordinate with maintenance dept for fixing local area and equipments.
  - 500KV Switch Yard:

- 9 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 Busbars 500KV, 3000 A (Double Busbar 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.
- 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 & Inductive V.Ts.

- 220KV Switch Yard:
  - 2 Busbars 220KV, 3000 A (Double Busbar 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 Busbar protection.
    - P437, P442 for Distance protection.
    - P143 for Breaker Fail.
    - P126 for Backup protection.
    - P632 for differential protection.
  - ABB Protection relays as follows:
    - REB 500 for busbar protection.
    - Rel 316, Rel 531 for distance protection.
    - Auto recloser system.
    - CONISYS live line Scada control unit.
    - CONISYS & ABB Chargers, Rectifiers, Batteries and Inverters 400v ac>> 220, 48v dc room (UPS system).

Skills:

- Professional experience in operating Siemens gas turbines (v94.3A).
- Professional experience in steam turbines, and heat recovery steam generators operation.
- Professional experience in high voltage and medium voltage operation.
- Considerable knowledge of power plants and power substations, electrical systems, power generation, power transmission and distribution system.
- Good knowledge of relaying and the zones of protection and function of each type relay.

- Over 17 years' experience at Power Station as an Operation Engineer.
- Monitor and provide routine inspections of all equipments to ensure its smooth and safe operation.