

**100349-MEC-MOS-E-2000**  
**Lead Mechanical Commissioning Engineer**

Holds a B. Sc. in Mechanical Engineering and has 16 years of work experience (10 years in the field of operation and maintenance of steam power plants, 6 years as Mechanical Commissioning Engineer at simple cycle, combined cycle and thermal PP).

## PERSONAL DATA

Nationality : Egyptian  
Birth Date : 14/10/1978  
Gender : Male  
Marital Status : Married  
Residence : Talkha

## EDUCATION

: B. Sc. in Mechanical Engineering, Mansoura University, 2000

## LANGUAGES

Arabic : Native Language  
English : Fluent

## COMPUTER SKILLS

: Windows, MS Office (Word, Excel, Power Point), Internet  
: AutoCAD 2004

## TRAINING COURSES AND CERTIFICATIONS

: Training at Iron & Steel Factory of Helwan (Aug. 1998).  
: Training at Talkha Power Plant (Aug. 1999).  
: Steam turbine operation course (Oct. 2002).  
: Water treatment course (Sep. 2003).  
: Quality control course (Apr. 2010).  
: English course (TOEFL, score: 487).

## CHRONOLOGICAL EXPERIENCE RECORD

**Dates** : From Jun. 2016 till now  
**Employer** : Elsewedy Electric PSP  
**Project** : Beni Suef Combined Cycle Power Plant 4800MW - EGYPT  
Siemens / El-Sewedy PSP consortium to build up Beni Suef 4800MW CCPP for Egyptian Electricity Holding Company, the contract is to erect

eight Siemens gas turbines SGT8000 - H each 400MW combined with eight HRSG (NEM) and four Siemens steam turbines each 400MW, total power 4800MW.

EI-Sewedy PSP scope: erection work for gas station and power block; erection and commissioning of all BOP systems.

- Job title** : Lead Mechanical Commissioning Engineer
- Job Description** :
- Coordinating with Siemens TFA to perform pre-commissioning work of GT systems (oil flushing of lifting & lube oil and Hydraulic oil system), (Pegging and air blowing of fuel gas system) and (flushing of closed cooling system).
  - Managing PSP staff in order to performing all commissioning work of BOP systems (firefighting, service cooling, demi water, Instrument air and service air systems).
  - Performing demineralized water treatment plant performance test.
  - Leading and Following up PSP operation team during reliability test.
  - Currently, preparing for STG pre-commissioning work.
  - Acting as Mechanical Commissioning Manager whenever I am responsible for:
    - Held daily morning meeting to follow up commissioning activities.
    - Arranging day to day activities with PSP staff.
    - Liaison with all departments to finish project goals on time.

**Dates** : From Mar. 2015 till May 2016

**Employer** : Elsewedy Electric PSP

**Project** : Attaqa 650MW Simple Cycle Power Plant (Fast Track Project)

The plant consists of 4 gas turbines SIEMENS SGT2000-E.

**Job title** : Lead Mechanical Commissioning Engineer

- Job Description** :
- Coordinating with Siemens TFA to perform all GT systems commissioning (lifting & lube oil, Hydraulic oil, fuel gas, Blow off, air intake and CO2 FF systems).
  - Managing PSP staff in order to performing all commissioning work of BOP systems (Closed cooling, fin fan coolers, demi water, Instrument air and service air systems).
  - Supervising on GT performance test.
  - Leading and Following up PSP operation team during reliability test.
  - Performing pre-commissioning work of fuel oil system.

**Dates** : From May 2013 till Mar. 2015

**Employer** : Hitachi Power Technologies

**Project** : BANHA 750MW CCGT Power Plant

**Job title** : Mechanical Commissioning Engineer

- Job Description** :
- Working for HPT (Hitachi Power Technologies) CP-118 Contractor at BANHA Combined Cycle Gas Turbine Power Plant (750MW), Two (250MW) GE gas turbines Frame (9FA), Two HRSG Ansaldo Calda, One 250MW Steam Turbine (Ansaldo Energia).
  - Doing commissioning tests & start-up for all auxiliary equipments and systems of the plant.
  - Make sure all the technical documents necessary for commissioning of different units are available with commissioning team.
  - Be aware of commissioning schedule of the site and accordingly divide

the work through comm. team and allocate needed resources such as manpower and tools.

- Make sure that all necessary tools and equipment for comm. are available with the team and calibration is already performed.
- Make sure all systems are completed before taking over by comm. team and following up to remove the remaining open items through punch lists by installation team.
- Commissioning check lists are to be completed and the critical records highlighted.
- Receiving the systems from QC (Quality Control) and Construction, then commissioning of mechanical systems, including: closed cooling water, service water, circulating water, fire fighting, solar fuel, compressed air, condensate water and feed water systems. This requires thorough understanding and exercising of ultimate industrial safety practices.
- Hand over of the commissioned systems with the integrated rules.
- Good knowledge of interfaces between different units by which will provide a correct sequence of commissioning activities.
- Close connection with Health and Safety Executive (HSE) unit to make everybody aware of likely danger potentials of commissioning activities.
- Plan all individual units and overall plant are handed over to client after completion of commissioning, the respective operation manuals and documents handed over and necessary training courses are held for client operation team enabling them to run the plant.
- Supervise all acceptance tests of units.
- Milestones:
  - Accomplish chemical cleaning and flushing of Feed water and condensate system within one week.
  - Accomplish Steam blow of both HRSGs and critical piping including HP & LP steam, Hot and cold reheat within 24 days.
  - Major Overhaul of Fuel oil treatment skid (Alpha Laval).
- I have performed Commissioning for next Systems and Equipment:
  - HP & LP feed water pumps.
  - Closed cooling system.
  - Fuel oil treatment skid.
  - Circulating & service Water pumps.
  - Hydrogen Generators and compressors.
  - Diesel & Electrical Fire Pumps.

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| <b>Dates</b>           | : | From Mar. 2012 till Apr. 2013   |
| <b>Employer</b>        | : | PSP (Power Systems Projects)  |
| <b>Project</b>         | : | Abu Qir Steam Power Plant units 6 & 7 (650MW)   |
| <b>Job title</b>       | : | Commissioning & Operation Engineer  |
| <b>Job Description</b> | : | <ul style="list-style-type: none"><li>• Working for PSP (Power Systems Projects) CP-118 Contractor at Abu Qir Steam Power Plant (2x650MW), doing commissioning tests &amp; start-up for all auxiliary equipments and systems of the plant.</li><li>• Carry out proper operation of all next equipments during performance and reliability tests till commercial operation:<ul style="list-style-type: none"><li>- Feed water pumps (two turbine pumps each carry 60%).</li><li>- Boiler feed pumps type: SULZER (1200 m<sup>3</sup>/hr, 2050 m).</li><li>- Driver steam turbine type: SIEMENS (3256 to 6000 rpm).</li></ul></li></ul> |

- Start-up stand by Boiler Feed pump type: SULZER (one pump carry 25 % of unit load 590 m3/hr).
- Feed water booster pumps type: SULZER (two pumps).
- Circulating pumps type: SULZER two semi-axial pumps press 0.45 barg.
- Service water pumps SULZER (3.6 barg).
- Condensate pumps type: SULZER (three pumps each carry 50 % of unit load Q=340 Kg/s & p=30 barg).
- Compressed air sys. (compressors type: Ingersoll Rand four compressors water cooled and Emergency compressor air cooled).
- Closed cooling sys. (type: SULZER two pumps 6.5 barg).
- Fire fighting sys. (jockey pumps, electrical and emergency diesel F.F pumps, sys press 10:12 barg).
- Potable water system.

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| <b>Dates</b>           | : | From May 2011 till Feb. 2012   |
| <b>Employer</b>        | : | Kharafi National   |
| <b>Project</b>         | : | El-Shabab Simple Cycle Plant 1000MW (8 units x 125MW), Type: GE gas turbine Frame 9FE  |
| <b>Job title</b>       | : | Mechanical Commissioning Engineer  |
| <b>Job Description</b> | : | <ul style="list-style-type: none"> <li>• Doing mechanical commissioning works of the gas turbine and its auxiliaries: <ul style="list-style-type: none"> <li>- Closed cooling water system.</li> <li>- Lube oil system.</li> <li>- Gas fuel system.</li> <li>- Liquid fuel system.</li> <li>- Evaporative cooler.</li> <li>- Atomizing air system.</li> <li>- Air processing unit.</li> <li>- Cooling and sealing air sys.</li> <li>- Co2 system.</li> </ul> </li> <li>• Preparing commissioning procedures.</li> <li>• Performing all pre-commissioning work (oil flushing and water flushing).</li> <li>• Performing all commissioning work and Issue test reports.</li> <li>• Coordinate work activities with QC and construction departments.</li> <li>• Finalize Turn over Package coordinating with QC.</li> <li>• Performing mechanical maintenance work till TOAC.</li> <li>• Carry out operation works during performance and reliability tests from (PEECC).</li> <li>• Familiar with Mark 6E.</li> <li>• Carry out commissioning and testing works of RO and Demi water plant.</li> </ul> |
| <b>Dates</b>           | : | From Jul. 2010 till Apr. 2011  |
| <b>Employer</b>        | : | IBERDROLA Engineering and Construction   |
| <b>Project</b>         | : | El-Kureimat Integrated Solar Combined Cycle 140MW  |

**Job title** : Commissioning & Start-up Engineer

**Job Description** :

- Commissioning of all BoP equipments till first start.
- First start and trial operation of 70MW GE gas turbine frame 6 (Mark VI).
- HRSG steam blow till first start on by passes operation.
- First start and trial operation of SIEMENS steam turbine (70MW).
- Kettle Boilers (oil H.Ex) blow out.
- Solar field integration with the combined cycle for trial operation.
- Performance tests on variable loads (day mode and night mode).
- Keeping the plant running in safe manner during reliability time till turning over to the owner.

**Dates** : From Jun. 2008 till Jun. 2010

**Employer** : Middle Delta Electricity Production Company

**Project** : Talkha Steam Power Plant (2x210MW):  
First unit established in 1993 and the second established in 1996, made by SKODA PRAHA, Czech Republic.

- Boiler: This boiler generates steam with flow rate 670 ton/hr, pressure 165 bar and temperature 535 °C, natural gas is the main fuel used and mazout is stand by.
- Steam turbine: Super heated steam enters high pressure turbine at 535 °C and 165 bar, outlet steam is being reheated at the boiler and enters medium pressure turbine at 535 °C and 2.5:3.9 bar and it leaves to the low pressure turbine. There are seven positions for steam bleeding, two positions at LPT, four positions at MPT and the seventh branched from steam outlet from HPT.
- Generator: Power = 222MW, Voltage = 15.75KV,  $I_{MAX} = 10.173$  KA, Power factor = 0.8, Frequency = 50 Hz.

**Job title** : Steam Turbine Maintenance Engineer

**Job Description** :

- Performing maintenance of steam power plant machinery (steam turbine and its auxiliaries).
- Troubleshooting & day-to-day problems of power plant machinery including:
  - High, intermediate and low pressure steam turbines.
  - First stage condensate pumps (vertical centrifugal pump).
  - Second stage condensate pumps (horizontal multi stage centrifugal pump).
  - Feed water pumps (horizontal 8 stages centrifugal pump).
  - Cooling pumps (axial pumps discharge 3 m<sup>3</sup>/sec).
  - All static equipments:
    - Shell and tube heat exchangers (steam condenser, lubrication oil coolers, secondary demi water coolers).
    - All types of valves (gate, glope, butterfly).
    - Steam traps.
- Supervise shutdown planning activities. This includes receiving and reviewing shutdown/overhaul work lists from Operations and Technical Services or maintenance personnel, consolidating these into one plan, estimating requirements for craft disciplines, man hours, special assistance and tools required. Preparing details of work completed, materials used, up-to-date estimates of projected use of tools and

- equipment and expected date of completion.
- Ensure availability of critical, local & imported spares on time.
- Preparation & implementation of Preventive Maintenance schedules for smooth & efficient operation of plant machinery.
- Maintain and improve efficiency of the Plant by a timely and consistently planning/scheduling to avoid any unforeseen breakdown of Plant Equipment and keep the Plant running in a safe manner.
- Condition Monitoring of rotary equipment using state-of-art PdM Tools like, Vibration Analysis. Worked with SCHENK viprometer.
- Liaison with other departments in related activities.
- Compile various reports: Annual Lubrication Schedules, Lubricant status, Opportunity maintenance etc.
- Recruitment & training of operational & process staff.

**Dates** : From Apr. 2007 till May 2008  
**Employer** : Middle Delta Electricity Production Company  
**Project** : Talkha Steam Power Plant (2x210MW)  
**Job title** : Shift Charge Engineer  
**Job Description** :

- Responsible for proper operation and monitoring of the boiler, turbine and their facilities related to the plant.
- Carry out start-up, shutdown, routine and emergency operation of the plant as required.
- Maintain log of all operation activities.
- Responsible for issuing of job work orders and to record equipment history over CMMS system.
- Compile various reports: daily performance calculations, unit trip analysis.
- Liaison with other departments in related activities.

**Dates** : From Jul. 2003 till Mar. 2007  
**Employer** : Middle Delta Electricity Production Company  
**Project** : Talkha Steam Power Plant (2x210MW)  
**Job title** : Boiler Operator (Control Room Operator)  
**Job Description** :

- Operating the boiler properly regarding:
  - Drum level, steam flow and feed water flow rate.
  - Metal temperature of super-heaters, re-heaters and water drum.
  - Outlet steam properties and inlet feed water properties (temperature, pressure, PH No, conductivity and percentage of silica).
  - Furnace pressure, Inlet air and outlet flue gases properties (temperature, pressure, excess air percent and (CO, CO<sub>2</sub>, O<sub>2</sub>) percent.
  - Keep the previous parameters at the optimum operating values.
- Operating all boiler equipments from DCS such as:
  - Air Heaters, Forced Draft fans, GR Fans, Aux Fans and burners.
  - Mazout pumps, SCAPH in mazout firing and Soot blowers.

**Dates** : From Aug. 2002 till Jul. 2003  
**Employer** : Middle Delta Electricity Production Company  
**Project** : Talkha Steam Power Plant (2x210MW)

- Job title** : Boiler Operator (Field Operator)
- Job Description** :
  - Observe operating conditions of all boiler equipments.
  - Keep readings of equipment parameters (bearing temp, vibration, etc.).
  - Inform the shift supervisor with any field troubles or break downs.
  - Isolate / De-Isolate any equipment manually as required in work orders to hand over to maintenance.
- Dates** : From Nov. 2001 till Aug. 2002
- Employer** : Aqua Treat for Water Treatment
- Job title** : Mechanical Maintenance Engineer
- Job Description** : Doing periodic and preventive maintenance for all equipments at New Damietta water treatment station (1000 lit/sec), including::
  - Raw water pumps (double suction centrifugal pumps each discharges 550 lit/s at 1.6 bar).
  - Clean water pumps (double suction centrifugal pumps each discharges 333 lit/s at 7.5 bar).
  - Water ring vacuum pumps.
  - Aluminum sulphate pumps (reciprocating pumps).
  - Chlorine ejectors.
  - Back wash centrifugal pumps and air blowers.
  - Main water reservoirs and clarifiers.
- Field of experience** :
  - In Energy and Power Generation field, I have 16 years of work experience as I worked in varied power plants (10 years in the field of operation and maintenance of steam power plants, 6 years as Mechanical Commissioning Engineer at simple cycle, combined cycle and thermal PP).
  - I have ability to perform all mechanical commissioning work at simple, combined cycle and thermal power plants including:
    - Preparing commissioning procedures.
    - Performing all pre-commissioning work (oil flushing and water flushing).
    - Performing all commissioning work and Issue test reports.
    - Coordinate work activities with QC and construction departments.
    - Finalize Turn Over Package coordinating with QC.
    - Performing mechanical maintenance work till TOAC.
  - I have ability to do commissioning and startup for any system at Power plants starting from pre-commissioning work (flushing and blowing), preparing commissioning schedule, doing all necessary tests, normal operation, accomplishing turn over package and till TOAC
  - I worked as Mechanical Maintenance Engineer, where I am responsible for performing maintenance of steam power plant machinery (steam turbine and its auxiliaries). Preparing & implementing of Preventive Maintenance schedules for smooth & efficient operation of plant machinery.
  - Also, I have ability to operate steam power plant both boiler and steam turbine with all their facilities and equipment including: Boiler feed water pumps booster pumps, condensate pumps, Circulating pumps, FD fans, GR fans, air heaters, etc.
  - Proven ability to draw, read and interpret blueprints and schematics.