100091-MEC-1CMOSY-E-2001

Mechanical Maintenance Deputy Manager

Holds a B. Sc. in Mechanical Power Engineering and has over 19 years hands-on experience working in maintenance, operation, commissioning and start-up at several Power Plants.

PERSONAL DATA

Nationality : Egyptian
Birth Date : 26/10/1975

Gender : Male
Marital Status : Married
Residence : El-Behira

EDUCATION

B. Sc. in Mechanical Power Engineering, Menoufia University, 2001

LANGUAGES

Arabic : Native Language

English : Very Good

COMPUTER SKILLS

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

TRAINING COURSES AND CERTIFICATIONS

- : Lead Auditor Training (ISO 45001) ISO 19001, SIEMENS / DNV (Dec. 2022).
- : IMS internal auditor course (Integrated management system- safety, health, Environment, Quality) ISO 9001 ISO 14001 ISO 45001, SIEMENS / DNV (Jun. 2022).
- : IMS awareness course (Integrated management system safety, health, Environment, Quality) ISO 9001 ISO 14001 ISO 45001, SIEMENS / DNV (Jul. 2021).
- : Operation and Maintenance of Combined Cycle Stations, Damanhour Power Station (Feb./Mar. 2004).
- : Basic Operation Training of Gas Turbine SIEMENS V94-3A (Introduction to the plant, Mechanical, Electrical and I&C the parts of gas turbine), Damanhour Power Station (Apr. 2004).
- : Basic Operation Training of Gas Turbine SIEMENS V94-3A (Introduction to the plant, Mechanical, Electrical and I&C the parts of gas turbine), Lubbenau GERMANY (Jul./Aug. 2004).

- : I&C Operator course (SIEMENS V94-3A): automation system AS 620, System overview TELEPERM XP, OM 650 function packages, dynamic function diagrams, operation with operating terminals (OTs) process, GT operation, operating point displays and logs.
- : Mechanical Maintenance training of Gas Turbine (SIEMENS V94-3A): Turbine (GT) Manufacturing, GT Maintenance, GT Service Plant Operation, Berlin GERMANY (Dec. 2005).
- : Operation and Maintenance Training Alstom Power Plant Control System (DCS) Alspa p320 Distributed Control System, MDEPC (15 days).

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Oct. 2019 till now

Employer : SIEMENS O&M

Project : BURULLUS POWER PLANT IN EGYPT CCPP 4800MW

Job title : Mechanical Maintenance Deputy Manager

Job Description : • Carry out all Mechanical Maintenance activities.

• Lead and coordinate Mechanical Maintenance activities.

• Lead, manage and coordinate Fault Notification meeting (mechanical side).

- Planning, Coordination and execution of all activities under the O&M contract in a combined cycle power plant.
- Perform all O&M Services Using SPPA-M3000 Plant Management System at Web BFS.
- Lead and coordinate the Preventive & Corrective Maintenance Activities for: G.T (SGT5-8000H) and its auxiliaries, S.T (SST5-4000) and its auxiliaries. Generator (SGen5-2000H) and its auxiliaries.
- Lead and coordinate the Preventive & Corrective Maintenance Activities for B.O.P.
- Troubleshooting and rectifying in field problems for all the systems in the power plant.
- Manage Reactive and Planned Maintenance Process.
- Review PTW and Follow Technical / HSE international Standards in Performing the Tasks at Workplace.
- Reviewing drawings and specifications to ensure a thorough understanding of plant operational and safety related issues.
- Lead, manage and coordinate the vendor service specialists at site and office.
- Meetings with the vendors to resolve any equipment related problems.
- Analyze and address critical areas of progress/delays in testing and commissioning.
- Ensuring that all safety and precautionary requirements and procedures are followed during the maintenance process schedule.
- Reporting to the O&M station manager.

Dates : From Nov. 2016 till Aug. 2019

Employer : <u>EGYPTROL</u>, SIEMENS Subcontractor

Project : BURULLUS POWER PLANT IN EGYPT CCPP 4800MW

Job title : Mechanical Commissioning & Start-up Engineer

Job Description

- Carry out all commissioning and pre-commissioning activities of fuel gas system from gas reducing system to gas compressor and gas turbine filter skid included pressure test, blow out, purge by nitrogen and nitrogen container generation commissioning.
- Carry out all commissioning and pre-commissioning activities of forced cooling system (generator cooling and seal oil cooling), co2 system, water firefighting system, cooling tower, circulating system, service water system and closed cooling system.
- Reviewing drawings and specifications to ensure a thorough understanding of plant operational and safety related issues.
- Applying the project Commissioning Plan in the execution of the work.
- Lead and coordinate BOP commissioning activities.
- Lead, manage and coordinate Operation activities and vendor service specialists at site and office.
- Reporting to the SIEMENS Commissioning Manager.
- Conduct meeting with commissioning manager to review testing, commissioning progress and HSE conformance on daily and occasionally more frequent basis as well as meetings with the vendors to resolve any equipment related problems.
- Analyze and address critical areas of progress/delays in testing and commissioning.
- Organizing a commissioning team, incorporating the training and helping recruiting the required staff and operation team.
- Ensuring that all safety and precautionary requirements and procedures are followed during the commissioning process in line with the commissioning schedule.
- Conduct commission ability reviews of project documents.
- Ensure all construction activities are completed prior to taking up the system for commissioning.
- Coordinate Mechanical commissioning activities.
- Lead, manage and coordinate Fault Notification meeting (mechanical side).
- Reporting to commissioning manager.

Dates

: From Mar. 2016 till Jul. 2016

Employer

: SHANAHAN ENGINEERING LTD

Project

PP12 (2175MW) POWER PLANT IN KSA:

PP12 Electric Power Company 2175MW Project is EPC project and approximately 150 km away of Riyadh city in Saudi Arabia. The facility is a 4 x 4 x 1 combined cycle configuration consisting of:

- 4 GE (Frame 7FA.05) gas turbines
- 4 ALSTOM HRSG triple pressure reheat cycle
- One ALSTOM Steam Turbine 380MW two casing triple pressure reheat
- Direct air-cooled condenser

Job title

STEAM TURBINE & HRSG & BOP LEAD & OPERATION TEAM LEADER

Job Description

- Reviewing drawings and specifications to ensure a thorough understanding of plant operational and safety related issues.
- Applying the project Commissioning Plan in the execution of the work.
- Lead and coordinate HRSG&BOP Commissioning activities.
- Lead, manage and coordinate Operation activities, training, and vendor service specialists at site and office.

- Reporting to the SHANAHAN ENGINEERING LTD Commissioning Manager.
- Conduct meeting with commissioning manager to review testing, commissioning progress and HSE conformance on daily and occasionally more frequent basis as well as meetings with the vendors to resolve any equipment related problems.
- Analyze and address critical areas of progress/delays in testing and commissioning.
- Organizing a commissioning team, incorporating the training and helping recruiting the required staff and operation team.
- Ensuring that all safety and precautionary requirements and procedures are followed during the commissioning process in line with the commissioning schedule.
- Conduct commission ability reviews of project documents.
- Ensure all construction activities are completed prior to taking up the system for commissioning.
- Leading the pre-commissioning the (start-up) Sigma steam blowing.

Dates : From May 2015 till Dec. 2015

Employer : **EGYPTROL**, GE Energy Subcontractor

Project: West Damietta Plant Project (4x125MW), Egypt

Job title : Gas Turbine Commissioning & Start-up Leader Engineer

Job Description

Carry out all commissioning and pre-commissioning activities of gas turbine (GE 9E):

- Lube oil system. Flushing and test and pressure Adjustment.
- Closed cooling system flushing.
- Fuel gas system air blowing and leak test.
- Fuel oil system. Flushing, tests, leak test and flow test.
- Water Injection System (Dry Low NOX Dual Fuel), flushing and tests.
- Control oil system. Flushing, pressure Adjustment for control oil and accumulator N2 pressure.
- Instrument air system. Compressor heat run test, instrumentation air blowing.
- Inlet guide vane IGV adjustment.
- Gas turbine Fire Protection System.
- Turning gear system.
- Air intake system. Pulse air filter self-cleaning system commissioning and puff test.
- PEECC package HVAC commissioning and start-up.
- Cooling Air /Compressor Bleed System Air blowing.
- Compressor Water Wash System. Flushing, orifice adjustment, nozzle check.
- Purge Air System. Air blowing and tests.
- Start-up Tasks: Initial Roll test, Over speed Trip Test, Start-up Sequence: Pre-synchronous.
- Turbine Check at 3000 rpm, Start-up tasks Full Speed No Load, Start-up Tasks Initial.
- Synchronization (Base Load), Start-up Tasks Performance Test.

Dates : From Jun. 2013 till Feb. 2015

Employer : **EGYPTROL**, SAMSUNG C&T Subcontractor

Project: Qurayyah Independent Power Project (6x750MW) – Combined Cycle, KSA

Job title : Gas Turbine Commissioning & Start-up Leader Engineer

Job Description : • The Qurayyah IPP project is approximately 100 km

- The Qurayyah IPP project is approximately 100 km south of the port of Dammam on the coast in the Eastern province of the kingdom of Saudi Arabia. The facility is a 2 on 1 combined cycle configuration consisting of twelve (12) Siemens SGT6-PAC 5000F gas turbine generating units (GTGS), twelve (12) heat recovery steam generators (HRSGs), six (6) Siemens SST6-4000 steam turbine generators (STGs), and six (6) sea water condensers.
- The Siemens Energy, Inc. SGT6-5000F (5) Gas Turbine includes a 13-stage high efficiency axial flow compressor with variable inlet guide vanes (IGVs) and three rows of variable guide vanes (VGVs). It also includes a combustion system featuring advanced cooling and multi-fuel capability. Within this system is an installed combustion chamber, which houses 16 individual combustors. These combustors are arranged in a circular pattern around the circumference of the turbine assembly. The four-stage reaction-type turbine incorporates an advanced cooling design. Corrosion resistant coatings and thermal barrier coatings are also integrated into the SGT6-5000F (5) turbine design in order to improve part longevity.
- Carry out all commissioning activities of gas turbine (SIEMENS SGT6-PAC 5000F) for:
 - Fuel gas system air blowing and leak test.
 - Fuel oil system. Flushing, nozzle test, bucket test, flow test, leak test and flow divider skid Test.
 - Water Injection System (Dry Low NOX- Dual Fuel). Flushing and tests.
 - Lube oil system. Flushing and test and pressure Adjustment.
 - Control oil system. Flushing, pressure Adjustment for control oil and accumulator N2 pressure.
 - Inlet guide vane IGV and variable guide vanes VGVs adjustment.
 - Instrument air system. Compressor heat run test, instrumentation air blowing.
 - Gas turbine Fire Protection System.
 - Turning gear system. Low speed, high speed turning gear motor solo test and heat run test.
 - Air intake system. Pulse air filter self-cleaning system commissioning and puff test.
 - Generator and collector blower. Commissioning.
 - PCC package and SFC package HVAC commissioning and start-up.
 - Kettle Boiler and Rotor Cooling System. Air blowing by startup frequency convertor (SFC) at speed 850 RPM.
 - Cooling Air / Compressor Bleed System and Disc Cavity Cooling System. Air blowing by start-up.
 - Frequency convertor (SFC) at speed 850 RPM.
 - Compressor Water Wash System. Flushing and tests.
 - High load Purge Air System. Air blowing and tests.
 - Pre-start Simulations (SFC/Gas).
 - Start-up Tasks: Initial Roll test, Over speed Trip Test, Start-up Sequence: Pre-synchronous.

 Turbine Check at 3600 rpm, Start-up tasks Full Speed No Load, Start-up Tasks Initial.

- Synchronization (Base Load), Start-up Tasks – Performance Test.

Operate the gas turbine SiemensSGT6-5000F (5) from DCS using SPPA T3000 Control System.

Dates : From May 2011 till Jun. 2013

Employer: <u>EGYPTROL</u>, TOSHIBA Subcontractor

Project : Sidi Krir Combined Cycle Power Station 750MW (2x2x1)

Job titles : Commissioning & Start-up Engineer & Warranty Engineer

Job Description : • Carry out all commissioning and start-up activities as per manufacture

recommendation for GTG, HRSG and STG.

Commissioning and start-up activities for all BOP systems.

Warranty Engineer.

Dates : From Feb. 2010 till May 2011

Employer: EGYPTROL, NEM Subcontractor a Dutch Boiler Fabricating Company

Project: Sidi Krir Power Plant 750MW, 2 HRSG modules

Job title : Commissioning & Operation Engineer

Job Description : • Carry out all commissioning activities cold, hot commissioning and

troubleshooting.

Start-up / shutdown sequence procedure for two heat recovery steam

generators with (HP, IP, LP) drums.

 HRSGs DCS Operation Engineer on daily basis to achieve the optimum operating conditions and keep the power station in the highest available

Level of performance and operating conditions.

Dates : From Nov. 2009 till Feb. 2010

Employer : <u>EGYPTROL</u>, TOSHIBA/TOYOTA Subcontractor Project : EI-Atf Combined Cycle Power Plant 750MW

Job title : Commissioning & Start-up Engineer

Job Description : Installation, testing, commissioning and start-up for the following BOP

systems:

• Instrument air compressors & Service air compressors & Air Dryer.

• Steam Blow for HP Line, IP Line, LP Line.

Horizontal Pumps & Vertical Sump Pumps.

High pressure feed water pumps.

Low pressure feed water pumps.

Circulating pumps.

Condensate pumps.

Service water pumps.

 Participate in chemical cleaning for HP Line, IP Line, LP Line & Condensate Lines systems.

Firefighting system.

Electrical Emergency Diesel Engine.

Service Gas System (CO2, H2 & N2).

Control Valves.

Operate the System of Plant (B.O.P.) from DCS.

Using YOKOGAWA System (CENTUM CS3000).

• Operate the System of Plant (B.O.P.) from Local Control Panels (LCP).

Dates : From Dec. 2004 till Nov. 2009

Employer : Middle Delta Electricity Production Company
Project : Nubaria Power Station I & II (2x750MW):

Two modules, each module consists of:

Two Gas Turbines CTG 500MW SIEMENS V94-3A.

 Two horizontal HRSGs ALSTOM with one deaerator storage tank and three drums (HP, IP, LP).

One Steam turbine generation STG 250MW MITSUBISHI.

• 220KV switchyard, 500KV switchyard, four tie transformers 500/220KV.

Medium and Low Voltage switchgears.

Job title : Control Room Operator, then Shift Charge Engineer

Job Description : • Participated at commissioning and start-up of four Siemens CTGs

250MW.

Participated at commissioning and start up of four harizontal HPSCs

Participated at commissioning and start-up of four horizontal HRSGs.

 Participated at commissioning and start-up of two Mitsubishi STGs 250MW.

 Safe operation for GTG Siemens 250MW x 4 UNITs and all auxiliaries during the reliability period.

Energizing of 500KV and 220KV substation.

• Switchgear 6.3KV and MCC 400 v for all plant auxiliaries.

 Responsible for the operation of three (3) generation blocks which included but not limited to the following:

- Four (4x250MW) Siemens GTG.

- Four (4) Alstom HRSG.

Two (2x250MW) Mitsubishi STG.

- Two (2x250MW) GE GTG.

- Two NEM HRSG.

- One (1x250MW) Alstom STG.

- 220/500KV Substation.

Attending first fire to gas turbine with Siemens operator engineers.

• Standing-up as Operator Shift Engineer during commission and generator protection tests.

 Responsible to estimating efficiency of SIEMENS gas turbine in load rejection test.

Dates : From Jun. 2003 till Dec. 2004

Employer: West Delta Electricity Production Company

Project : Damanhour Combined Cycle (160MW) Power Station

Job title : Control Room Operator

Job Description: Responsible for safe operation of:

• 4 Hitachi gas turbines (25MW).

• 4 Vertical HRSGs.

1 GE steam turbine (60MW).

Field of experience:

Solid experience in different facets of Power Plant industry.

 Strong understanding with different EPC philosophies in power generations and transmissions.

- Well-exposed and experienced in Commissioning and Start-up of the following different types of units:
 - Siemens Gas Turbine SCC5- 8000H (400MW).
 - Siemens Gas turbine SGT6-PAC 5000F (230MW).
 - Siemens Gas Turbine V94.3A 4000F (250MW).
 - Mitsubishi Gas Turbine (250MW).
 - Hitachi Gas Turbine (25MW).
 - Mitsubishi Steam Turbine (250MW).
 - Siemens SST6-4000 steam (230MW).
 - Ansaldo Steam Turbine (250MW).
 - Alstom Steam Turbine (360MW).
 - NEM Horizontal HRSG.
 - Alstom Horizontal HRSG.
 - BHI Horizontal HRSG.
- Possess strong leadership and dynamic interface in a team environment and working with others to achieve the best possible output from all functional viewpoints.
- Actively display initiative in the development and modification of existing design with the responsibility for meeting customer requirements and company internal requirements for mechanical scope.
- Support the technical development of the Mechanical Engineering and Design functions through the evaluation and introduction of new design and analysis capabilities.
- Demonstrated ability to work independently or to lead a team to complete projects within required timeframes.
- Demonstrated abilities and passion for providing technical advice to staff members, and embracing a culture that values team work.
- Control Systems Experience:
 - Xp teleperm (TXP).
 - SPPA-T3000.
 - Yokogawa Centum CS 3000.
 - Alspa 6.2.4.0.
 - Alspa p320.
 - Tosbac7/40E.
 - Mark VI.