102534-MEC-CMOS-E-2002

Senior Mechanical Engineer

Holds a B. Sc. in Mechanical Engineering and has over 14 years hands-on experience working mainly in maintenance, commissioning and start-up.

PERSONAL DATA

Nationality : Egyptian
Birth Date : 11/05/1976
Gender : Male
Marital Status : Married

Residence : Damanhour

EDUCATION

: B. Sc. in Mechanical Engineering, Alexandria University, 2002

LANGUAGES

Arabic : Native Language

English : Fluent French : Fair

COMPUTER SKILLS

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

: Engineering Equation Solver

: MS Project : CMMS

TRAINING COURSES AND CERTIFICATIONS

- : ALSTOM HRSG 160 hours operation training program, Surabaya Indonesia.
- : ALSPA p320 (DCS) distributed control systems operator on-shore training, Nubaria.
- : Basic operation and maintenance on GT (V94.3A) by SIEMENS Company, Nubaria.
- Basic operation and maintenance on combined cycle by WDEPC, Damanhour.
- : Attended all Jebel Ali Power and Desalination Station "M" Training, which has been organized by DOOSAN Heavy Industries & Constructions, DUBAI UAE.
- : Attended all Jebel Ali Power and Desalination Station "M" Training, which has been organized by FISIA Co. for MSF Desalination, DUBAI UAE.

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Apr. 2012 till now

Employer : MDEPC (Middle Delta Electricity Production Company)

Project: Nubaria Combined Cycle Power Plant 2250MW

(consists of 4 gas turbines Siemens V94.3A2, two Mitsubishi TC2F-35.4",

2 GE gas turbines GE MS9001FA and one ALSTOM steam turbine)

Job title : Senior Mechanical Engineer (Maintenance Dept.)

Job Description : • SIEMENS GAS TURBINE:

- Involved in minor inspection to four units Siemens gas turbine model SGT5-4000F 250MW: Minor inspection is the Programmed schedule maintenance inspection every 8,000 EOH. I worked in chemical cleaning for burners, changing of ceramic tiles of combustion chamber, visual inspection of turbine & compressor blades, preparing for the spare parts requiring during the minor inspection period.
- Involved in overhaul Maintenance to two units Siemens gas turbine model SGT5-4000F 250MW: Overhaul inspection outage is the Programmed schedule maintenance inspection outage @ 50,000 EOH. I work with Siemens group opening the entire machine to perform the inspection, repair, refurbishment and overhaul work lifting the gas turbine rotor out of the machine and upending the rotor to vertical position and destalking all rotor desks for inspection and removing blades / vans for refurbishment / replacement the parts as stated in the LTMC -1.
- Involved in overhaul Maintenance to one unit Siemens gas turbine model SGT5-4000F 250MW: Unscheduled outage due to the compressor surge incident which happened to the gas turbine.
 I work with Siemens group in Open the entire machine to perform inspection, repair, replacement the parts damage as per finding and overhaul work.
- Involved in extended hot gas path inspection to four units Siemens gas turbine model SGT5-4000F 250MW: EHGPI is the Programmed schedule maintenance inspection outage @ 75,000 EOH. I work with Siemens group opening the entire machine to perform the inspection, repair, refurbishment and overhaul work lifting the gas turbine rotor out of the machine for inspection and removing blades / vans for refurbishment / replacement the parts as stated in the LTMC -1 without destalking the rotor disks.
- Involved in the LTE the program inspection outage to two units Siemens gas turbine model SGT5-4000F, LTE is the Programmed schedule maintenance inspection @ 100,000 EOH or LTE (life time inspection) under the LTMC-2.
- Lead the customer maintenance team during executes the LTE inspection outage for two units Siemens gas turbine model SGT5-4000F. I work with Siemens group to perform the Major Inspection (MO) + LTE Measures Opening of entire machine, including compressor section; visual, NDE inspections and perform the following:
 - Repair, refurbishment or replacement of components.
 - Rotor Swapped by new and de-stacking/refurbishment of old rotor.

- LTE specific NDT scope (e.g. ultrasonic testing).
- 11MIC / 33MAC upgrade.
- Use of refurbished B&V and burners.
- Compressor B&V and Burners are Program Parts. 33 MAC / 11 MIC Upgrade.
- New designed for insulation matrix.
- Performed the required maintenance for lube oil system (lube oil tank cleaning, pumps inspection, 3-way valve, filter...etc.) in addition exchange oil by new/fresh oil as pear chemical analysis.
- Performed the required maintenance and inspection for hydraulic skid.
- Performed the required maintenance activities for gas valves including gas valves testing
- Full aware by SIEMENS GPC (global spare part catalogue).
- Also responsible for preparation of the following:
 - Tools, bridge crane, laydown area, scaffolding, requirements for rotor destocking, Waste management and security.
 - Responsible for provide the consumables and expendable materials.
 - Responsible for provide the qualified manpower and labors to implement quick and successful outage.
 - Responsible for arranging the spare parts and follow up the delivery of all spare parts and costume clearance responsible as well to assist in quick and successful outage.
 - It's my responsible to follow up the commissioning and tuning activates after the outage.
 - It's my responsibility to make the outage report and present to my directors.

• MITSUBISHI STEAM TURBINE:

- Involved in overhaul Maintenance to the LP Turbine for Mitsubishi steam turbine TC2F-35.4 (Unscheduled work due to steam turbine vacuum problem).
 - Remove the cross over pipe, remove the bearing and take all bearing clearance measurements.
 - Lifting the LP cover and the LP outer casing.
 - Lifting the LP upper blade ring and take all LP rotor blade clearance.
 - Lifting the LP rotor and lower blade ring.
 - Inspect for the crakes by make NDT and repair the crakes by welding.
 - Assembly for all parts and makes the alignment between LP/HIP and between LP and Generator.
 - Assembly the coupling HIP side and GEN side.
 - Assembly the cross over pipe, then start up the steam turbine.
- Involved in overhaul Maintenance for two Mitsubishi steam Turbine model TC2F-35.4
 - Plan and prepare for Tools, spare parts and manpower before start the overhaul work.
 - Removing upper casing for HIP &LP turbine, removing all blade rings, removing all bearing and make NDT, lifting off the rotor, inspection for internal prates & check the axial & radial clearance for blades, check the gland, sealing clearance &

- check the all bearing clearance.
- Make the shaft alignment between LP/HIP and between LP and Generator.
- Removing the (MSV-LH & RH, GCV-LH & RH, RSV-LH & RH, ICV-LH & RH, LPSV, and LPCV) for checking and inspection internal parts, take the internal clearance; check the all contact leak check, etc.
- Inspection for the lube oil system (transfers the oil, clean the lines, inspect the main and auxiliary oil pump, refill the oil tank and do the flashing for all system).
- Follow up the unit commissioning and startup (shaft balancing, adding or remove the balance weights as per vibration analysis record, the mechanical and electrical over speed trip test.....etc.).
- Follow up the commissioning for the steam turbine valves (check and adjusting the all valve stroke and full closed and full opening position, ...etc.).

• GE GAS TURBINE (3 months):

- Worked as a Senior Mechanical Engineer a construction and commissioning in Port Said 2 GE gas turbine frame LM 6000 (Fast track project). Do the following:
 - Follow up all gas Turbine mechanical construction activities.
 - Follow up all gas turbine mechanical pre-commissioning & start-up activities.
 - Follow up all gas Turbine piping installation activities (on base & off base).
 - Drawing studding, Lifting activities, Alignment process.
 - All auxiliary skids erection, Air inlet erection, Exhaust system erection.
 - All pre-commissioning activities as flushing (Oil, LF, WI ...etc.) and air blowing for on & off base systems.
- Involved in Combustion inspection (CI) for GE MS9001FA gas turbine unit (250MW). Inspection of fuel burners, fuel check valves, atomizing air connectors, spark plugs, flam detector, cross fire Tube, combustor flow sleeve, liner & transition pieces.

• OTHERS:

- Follow up all the preventive maintenance activities for Gas turbine auxiliaries (lube oil and hydraulic oil system, cooling and seal air system, pneumatic system, gas and liquid fuel skiedetc.).
- Follow up the entire daily; weekly, monthly preventive maintenance activities for steam turbine auxiliaries' (lube oil system, hydraulic oil system, sealing &gland steam, condensate and vacuum system...etc.
- Read, understand & discuss the (LTMC1 & LTMC2) between my company as a customer and Siemens Company as the contract and rise reports for head manager for final signature.
- Involved with finance department in preparing the annually budget for Siemens gas turbine and MHI steam turbine related to all maintenance activates in the power plant.
- Involved with finance department for final dissection with Siemens side for closing the LTMC-1 (long term maintenance contract one) and rise reports for head manager for final signature.
- Read, understood & discuss the LTMC-2 (long term maintenance

- contract -2) between my company as a customer and Siemens Company as the contract and rise reports for head manager for final signature.
- Overhaul Maintenance for major pumps (service, closed cooling, raw, back wash) & travel screen.
- Follow up the preventive maintenance activities for the steam and gas turbine (2x750MW) Work orders for the site in accordance with the specifications and standards required for the plant.
- Organize the material receiving storage and handling procedure.
- Planning and controlling of material which includes receiving, storage, issuing, stocking, and disposal of material.
- Forecasting of material availability and arranging of replacement for storage – damage materials.
- Provide the plant management with the required material reports.
- Controlling issuing process of document and drawing number.
- Troubleshooting and Assistance for corrective action.

Dates : From Apr. 2008 till Mar. 2012

Employer : DEWA (Dubai Electricity and Water Authority) – UAE

Project: Jebel Ali Power and Desalination Station 'M' 2000MW & 140 MIGD – UAE

Jebel Ali Power and Desalination Station 'M' is a new project started from year 2008 and it has the capacity of 2,000MW total gross power output &

140 MIGD water productions and calcified as below:

• GT SIEMENS (SGT5-4000F) 6x250MW with evaporative cooler.

- STG ALSTOM (HDC200/2AS-NE33AU) 2x221MW, with adaptive stage.
- HRSG (DOOSAN) with supplementary NG firing.
- MSF (FISIA) desalination units: 8 x 17.5 MIGD, @ sea water temperature 30 °C and 105 °C TBT.
- Aux. Boiler (STF) 2 x Steam flow 370 T/Hr. @ 19 bara & 235 °C.

Job title Job Description

Mechanical Commissioning & Start-up Engineer

- Study of the mechanical systems and the related Electrical System in the power plant.
- Follow up all pre-commissioning activities as flushing (Oil, LF, WI, CCW...etc.) and air blowing for on & off base systems.
- Follow up Mech. Commissioning for exhaust system (HPU skid, diverter damper & blanking plate), ventilation system and all auxiliary skids.
- Follow up Commissioning Siemens SGT5-4000F and Steam Turbine by ALSTOM, Germany, Combined Cycle Power Plant capacity of 2000MW (DEWA) under DOOSAN Engineering and Construction Co. Jebel Ali, Dubai.
- Follow the steam blowing and Commissioning of 6 HRSG with supplementary firing DOOSAN Company.
- Control board operation of Gas Turbines, Steam Turbines, Desalination Plants, Water Treatment Plant, Emergency DG, Natural Gas Pressure Reducing Station, Sea Water Pump House, and Chlorination Plant & Demineralization Plant using SIEMENS (SPPA- T3000) Process control system.
- Making Work Requests and issue Safety Permits through Computerized Maintenance Management Systems (CMMS) for corrective, preventive and annual maintenance programs.
- Follow up the Work orders for the site in accordance with the

- specifications and standards required for the plant.
- Lock out tag out for Electrical & Mechanical Equipment's before & after Work orders.
- Securing the field and safety of the Equipment's after shutdown.
- Supervising the Equipment's after operating, change over or maintenance.
- Reporting about my disorder and any unusual sound or smile (like fire).
- Making report about disorder before shutdown of maintenance.
- Tie between operator in main control room and technician in the field.
- Make the daily report of all activates and the calculation report for generation and fuel gas or DFO consumption, and Distillate water production.
- Training for the newly joined operators is part of my job.

Dates : From May 2003 till Apr. 200

Employer : MDEPC (Middle Delta Electricity Production Company)

Project : Nubaria Combined Cycle Power Plant (2250MW)

Job title : Mechanical Maintenance Engineer

Job Description

- Involved in minor inspection to four units Siemens gas turbine model SGT5-4000F 250MW: Minor inspection is the Programmed schedule maintenance inspection every 8,000 EOH: I worked in chemical cleaning for burners, changing of ceramic tiles of combustion chamber, visual inspection of turbine & compressor blades, preparing for the spare parts requiring during the minor inspection period. I worked in chemical cleaning for burners, changing of ceramic tiles of combustion chamber, visual inspection of turbine & compressor blades, preparing for the spare parts requiring during the minor inspection period.
- Involved in hot gas path inspection Maintenance outage to four units Siemens gas turbine model SGT5-4000F 250MW: HGPI is the Programmed schedule maintenance inspection outage @ 25,000 EOH: I worked with Siemens group of that inspection, removing the outer casing in the turbine section, lifting off upper sections of the turbine stationary blades carrier and turning out the lower section of the turbine stationary blades carrier and removing blades / vans for refurbishment / replacement, chemical cleaning for burners, changing of ceramic tiles of combustion chamber, visual inspection of turbine & compressor blades. Check the axial & radial clearance for blades.
- Involved in warranty major inspection for one steam turbine 250MW with supervisor Mitsubishi Company: moving upper casing for HP - IP turbine, removing the stationary blades, removing all bearing and make NDT, lifting off the rotor, inspection for internal prates & check the axial & radial clearance for blades, make alignment for HP-IP & LP and generator shaft, removing the control valves & stop valves and check for internal parts.
- Follow up the maintenance activities for the steam and gas turbine (2x750MW) Work orders for the site in accordance with the specifications and standards required for the plant.
- Follow up all the maintenance activities for steam turbine auxiliaries' (lube oil system, hydraulic oil system, sealing, gland steam...etc.) and gas turbine auxiliaries (lube oil and hydraulic oil system, cooling and seal air system, pneumatic system, gas and liquid fuel......etc.).

Main Achievements:

- Involved in minor inspection to four units Siemens gas turbine SGT5-4000F 250MW the Programmed schedule maintenance inspection every 8,000 EOH.
- Involved in HGPI inspection to four units Siemens gas turbine SGT5-4000F 250MW the Programmed schedule maintenance inspection at 25.000 EOH.
- Involved in major overhaul inspection to two units Siemens gas turbine SGT5-4000F 250MW the Programmed schedule maintenance inspection at 50.000 EOH...
- Involved in major overhaul inspection to one units Siemens gas turbine SGT5-4000F 250MW the unscheduled maintenance inspection due to surge accident.
- Involved in EHGPI to four units Siemens gas turbine SGT5-4000F 250MW the Programmed schedule maintenance inspection at 75,000 FOH
- Lead the customer maintenance team during executes the LTE inspection outage for two units Siemens gas turbine model SGT5-4000F.
- Involved in overhaul maintenance for two Mitsubishi steam Turbine model TC2F-35.4 250MW.
- Planning and controlling of material which includes receiving, storage, issuing, stocking, and disposal of material.
- Involved with finance department in preparing the annually budget for Siemens gas turbine and MHI steam turbine related to all maintenance activates in the power plant.
- Making Work Requests and issue Safety Permits through Computerized Maintenance Management Systems (SAB) for corrective, preventive and annual maintenance programs.
- Involved with finance department for final dissection with Siemens side for closing the LTMC-1(long term maintenance contract one) and rise reports for head manager for final signature.
- Read, understood & discuss the LTMC-2 (long term maintenance contract -2) between my company as a customer and Siemens Company as the contract and rise reports for head manager for final signature.
- Finishing the pre-commissioning and commissioning for 4 SIEMENS gas turbine SGT5-4000F in Nubaria Power Plant Egypt.
- Finishing the pre-commissioning and commissioning for 6SIEMENS gas turbine SGT5-4000F Jebel Ali Power and Desalination Station 'M' DEWA UAE.
- Finishing the Construction and pre-commissioning for Port Said 2 GE gas turbine frame LM 6000.
- Control board operation of Gas Turbines, Steam Turbines, Desalination Plants, Water Treatment Plant, Emergency DG, Natural Gas Pressure Reducing Station, Sea Water Pump House, and Chlorination Plant & Demineralization Plant using SIEMENS (SPPA- T3000) Process control system.

Field of experience:

- Able to work in a shift and under sever conditions.
- Ability to work in teamwork and ability to manage a staff group.
- Good understanding of integrating multicultural staff into one team.
- Ability to create climate of open communication.
- Good problem solving skills & Risk assessment skills.

- Awareness of Quality, Occupational Health & Safety.
- Very good experience in power plants component especially in GAS TURBINE (construction, commissioning, operation and maintenance).
- Good knowledge of codes as (ASME, ASTM, DIN ...etc.).
- Good knowledge of various types in Materials of piping and fitting types, pressure schedule, pressure rating and welding types.
- Good knowledge of safety rules during construction activities.