

Holds a B. Sc. in Mechanical Production Engineering and has about 14 years hands-on experience in installation, maintenance and commissioning of thermal power plants.

PERSONAL DATA

Nationality : Egyptian
Birth Date : 17/10/1976
Gender : Male
Marital Status : Married
Residence : Damanhour

EDUCATION

: B. Sc. in Mechanical Production Engineering, Alexandria University, 1999

LANGUAGES

Arabic : Native Language
English : Good

COMPUTER SKILLS

: Windows, MS Office, Internet
: AutoCAD

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Nov. 2010 till now
Employer : SIEMENS
Job title : Gas Turbine Field Service Engineer
Job Description : Doing all maintenance work for Siemens machines (V94.3A2, V94.2 & V84.2), which include:

- Major overhaul for the rotor and this include:
 - Run out check for the rotor at major inspections.
 - Putting rotor in turning device then turning it.
 - Performing DE-tension of the rotor.
 - Performing DE-stacking of the rotor.
 - Removing TLa blades from the wheels.
 - Removing VLa blades from the wheels.
 - Replacement of the damping cones.
 - Installing TLa blades on the wheels.
 - Installing VLa blades on the wheels.
 - Grinding compressor moving blades for radial measurements.

- Single adaptation for compressor moving blades.
- Debarring & blending of compressor & turbine blades.
- Disassembly and assembly of rotor shaft cover.
- Perform rotor stacking.
- Perform rotor tension.
- Perform documentation necessary for the rotor according to Siemens policy.
- Machines overhauls and this include:
 - Disassembly of fuel oil supply & purge water lines.
 - Opening man holes.
 - Measuring blade tips clearance before uncovering GT.
 - Disassembly of combustion chamber frame.
 - Putting supporting for the gas turbine.
 - Opening of coupling and dimensional data recording as per check list.
 - Dis-assembly of outer casing.
 - Dis-assembly of compressor stator up.
 - Dis-assembly of turbine stator up.
 - Taking open radial and axial blade clearance measurements.
 - Preparing GT rotor for dis-assembly.
 - Pulling of turbine bearing star from the rotor.
 - Removing lower parts of compressor and turbine stator.
 - Removing of lower parts for compressor and turbine bearings.
 - Dimensional data recording for bolts elongation.
 - Major inspection as per check list for compressor and turbine bearings.
 - Preliminary work for fact finding.
 - Preparation GT for re-assembly.
 - Inserting lower parts of compressor and turbine in to outer casing & aligning them to machine center line.
 - Inserting lower part of turbine and compressor bearing.
 - Pulling turbine bearing star on to GT rotor.
 - Moving GT rotor inside the unit.
 - Taking open radial and axial blade clearance measurements.
 - Putting upper parts of compressor and turbine stators.
 - Measuring blade tips clearance after covering GT.
 - Coupling check and if necessary alignment of GT to generator.
 - Assistance for commissioning of gas turbine.

| | | |
|------------------------|---|---|
| Dates | : | From Apr. 2009 till Oct. 2010 |
| Employer | : | PGESCO Consultant |
| Project | : | El-Atf Combined Cycle Power Station (750MW): Includes a Power Block consisting of two 250MW combustion Turbine generators (CTGs), each feeding exhaust Gases to its respective unfired heat recovery steam generator (HRSG). Steam from the two HRSGs will be fed to one 250MW single reheat, condensing Steam Turbine Generator (STG). 2 Mitsubishi gas turbine frame M701F (2x250MW), 1 Ansaldo steam turbine (250MW) and its auxiliaries. |
| Job title | : | Commissioning Engineer for gas & steam turbine (Mitsubishi & Ansaldo) |
| Job Description | : | <ul style="list-style-type: none"> • Participate in commissioning and start-up for two Mitsubishi gas turbines frame (701F) 250MW each, which include: <ul style="list-style-type: none"> - Pre-commissioning and commissioning & start-up activities for |

- 2 gas turbines (lube oil flushing, control oil flushing, and seal oil Flushing, air blowing, etc.).
- Commissioning & start-up for GT Auxiliary (Motor test, Heat run Test, etc.).
- Participate in chemical cleaning and steam blow for the HRSG and Steam line pipes.
- Participate in pre-commissioning, commissioning and start-up for:
 - Condensate system & condensate pumps.
 - Feed water system (LP, HP/IP) & FWP's.
 - Circulating water system.
 - Sump pumps.
- Review P&ID's and engineering documents (Data sheets, etc.).
- Interface with constructor, owner and vendors to support testing activities.
- Perform system walk downs and prepare punch lists, coordinate Punch list completion activities.
- Direct, coordinate and supervise the actions of client Operational staff during the pre-commissioning, commissioning, start-up and operational phases of project execution.
- Troubleshoot plant operational issues and coordinates corrective action with required discipline to ensure proper operation of all Systems and equipment.
- Coordinate work activities between contractors, owner and Consultant (PGESCO).
- Direct, instruct and train owner operations personal in proper Operation of facility equipment.
- Review all reading sheets taken by owner operations personnel.
- Preparation of field operating instructions.
- Record data as per operating & maintenance instructions.
- Supervise field operator & maintenance staff during operation.
- Prepare shift instructions as required.
- Assistance in preparation of permits & LOTO execution and in plant acceptance test.

Dates : From Oct. 2007 till Mar. 2009

Employer : Al Toukhi Co. (KSA)

Project : JAZAN Power Plant Extension Project (525MW)

Job title : Construction & Commissioning Gas Turbine Engineer

Job Description :

- Construction Gas Turbine Engineer:
 - Manage crews of skilled and unskilled workers at construction site.
 - Responsible for the efficient use of labor, machines and materials by the crews.
 - Plan and schedule work and keep records of the materials used and the progress made on a job.
 - Installation of 7 GE gas turbine frame 7EA with auxiliaries, including alignment work between accessory compartment and turbine compartment and alignment work between generators, compartments and turbine compartment (alignment work here include both preliminary alignment and final alignment).
 - Auxiliaries alignment in accessory compartment which include alignment of lube oil pumps, alignment between starting motor and

torque convertor, alignment between torque convertor and accessory gear drive and alignment between fuel oil pump and accessory gear drive.

- Alignment work for fuel oil pumps which supply fuel from tanks area to the G.T. units.
- Installation of cooling water module for each G.T. unit.
- Alignment work for cooling water pumps.
- Installation of air pressurizing duct for each G.T. unit.
- Installation of air filter house for each G.T. unit.
- Installation of stack exhaust for each G.T. unit.
- Installation of fuel oil pipe lines between G.T area and fuel tank area.
- Flushing for fuel oil pipe from tanks area up to G.T. units.
- Installation of lube oil pipes inside the G.T. units.
- Flushing for lube oil pipes inside G.T. units.
- Installation of three fuel oil tanks 25,000 m³ and two Alva Laval fuel separators (supervision as Acting Site Manager of JAZAN Site).
- Installation, testing & commissioning of Fire fighting Protection System inside each G.T. unit.
- All previous work under supervision of GE technical advisors.
- Commissioning Gas Turbine Engineer:
 - Overseeing the contractors' commissioning which will need coordinating with mechanical, instrumentation and control systems disciplines within the Contractors' start-up organization and between Contractors to complete all required testing from component level through integrated operation with the rest of the facility.
 - Review and provide input to contractors' preparation of system testing and turnover documentation including scoped documents. Test records, test procedures and other similar required documents.
 - Witness pre-commissioning & commissioning tests.
 - Supervise and direct contractor personnel as required supporting commissioning activities.
 - Report and document subcontractor work activities on a daily basis. Coordinate with supplier technical assistants to complete commissioning of vendor supplied equipment.
 - Participate in system turnover walk downs for both constructions and Client turnovers, initiate; track and resolve punch list items for assigned areas of responsibility.
 - Work hours as required, including shift-work, overtime, weekends and holidays as necessary to support the project.

Dates : From 2002 till Oct. 2007
Employer : West Delta Company for Energy Production
Job title : Gas & Steam Turbine Maintenance Engineer
Job Description : Doing all kind of maintenance inspection of gas turbines such as the following:

- Stand by inspection which is performed during off-peak periods when the unit is not operating and includes routinely servicing of accessory systems such as changing filters, checking oil and water levels.
- Running inspection which is consists of the general and continued observation made while a unit is operating. In this kind of inspection data is taken at regular intervals and is recorded to permit an evaluation

of the turbine performance. This operating inspection data such as:

- Load versus exhaust temperature, vibration level, fuel flow and pressure, bearing metal temperature, lube oil pressure, exhaust temperature spread variation.... inc.
- Disassembly inspection which requires opening the turbine for inspection of internal components.
- Disassembly inspection progress from Combustion inspection to the hot gas path inspection to the major overhaul inspection.
- Combustion inspection which is short disassembly shut down inspection of fuel nozzles, combustion liners, transition pieces, cross fire tubes and retainers.
- Hot gas path inspection which includes the full scope of the combustion inspection and in addition a detailed inspection of turbine nozzles, stator shrouds and turbine buckets.
- Major overhaul inspection which is made to examine all of the internal rotating and stationary components from the inlet of the machine through the exhaust.
- This inspection includes previous elements of the combustion and hot gas path inspection, in addition bearing inspection, accessory inspection, inlet air inspection; check alignment - gas turbine to generator / gas turbine to accessory gear...inc.
- Doing all kind of maintenance for the rotary equipments in the plant.
- Receiving inspections of gas turbine assembly parts, making reports and material requisition as per material planning.
- Responsible for preventive, corrective and breakdown maintenance of wide range of equipments.
- Participate in pre-commissioning and commissioning checks and preparation of the gas turbine start-up after regular maintenance or overhaul work.
- Abilities to analyze turbine data to calculate the efficiency of the turbine after the maintenance work.
- Support to spares inventory control and preparation of parts packages to cover work programs of preventive, predictive and breakdown maintenance.
- Maintenance of G.E. steam turbine and its auxiliaries.

| | | |
|------------------------|---|---|
| Dates | : | From Aug. 2000 till 2002 |
| Employer | : | West Delta Company for Energy Production |
| Job title | : | Shift Engineer |
| Job Description | : | <ul style="list-style-type: none">• DCS control system supervision of:<ul style="list-style-type: none">- 4 HRSG (Manufacturer: NEM) Single pressure heat recovery, 4 Heat exchangers, feed water tank, high pressure drum, steam Lines, high and low pressure circulation pumps and feed water Pumps.- Steam Turbine Auxiliaries: Cooling Water Pumps, Hydraulic and Lubrication Oil Circuits, Condenser, Air Ejectors, Dump System and Compressed Air systems.- Operation and supervision of:<ul style="list-style-type: none">▪ Steam turbine Manufacturer: GE, Controls: MARK IV.▪ Gas turbines Manufacturer: GE frame 5.• Supervision of local operation, following up and troubleshooting of pumps, valves (electrical, Hydraulic and Pneumatic) and Tanks. |

- All electrical settings, Generators / grid including all Transformers, breakers and batteries Operation.
- Electrical Maneuvers including in the Switchyard 220KV, Gas turbine Switchgear and Combined Cycle switchgear. Maneuvers include connecting and disconnecting circuits, Isolating of bus bars, changeovers and Cleaning up for Isolators.
- Supervision of local operation of the Fire Fighting System for the entire plant: Deluge System for Transformers, Foam Suppression System for fuel tanks.
- Supervision of local operation of natural gas receiving tank, filters, pipelines and valves.
- Preparation and supervision of Work Permits including revising working cautions, dangers Analysis and Safety cautions.

- Field of experience** :
- Senior Shift Engineer in M.W. Production Power Plants.
 - Construction & Commissioning Mechanical Engineer.
 - Construction & Commissioning Gas & Steam Turbine Engineer.
 - Rotating Equipment Maintenance Engineer.
 - Gas & Steam Turbine Maintenance Engineer.
 - Field Service Engineer.
 - Technical Office Support Engineer.