

100620-MEC-1OSY-E-1999

Lead Mechanical Commissioning Engineer

Holds a B. Sc. in Mechanical Engineering and a Diploma of pipe lines, pumps and turbines design. Has over 18 years hands-on experience in fossil power generating stations (steam power plant and combined cycle). Assist in all activities which required supervision coordination and follow up, review and comment on all mechanical constructions documents and drawing. Monitor and report any mechanical defect/deficiency in the plant. Knowledge of operation, pre-commissioning and commissioning related to thermal and combined power plant with steam turbine. Attend site mechanical commissioning. Assist in reviewing start-up schedules submitted by contractors.

PERSONAL DATA

Nationality : Egyptian
Birth Date : 05/03/1975
Gender : Male
Marital Status : Married
Residence : Giza, Cairo

EDUCATION

: B. Sc. in Mechanical Engineering, Cairo University, 1999
: Diploma of pipe lines, pumps and turbines design, Cairo University, 2002

LANGUAGES

Arabic : Native Language
English : Good

COMPUTER SKILLS

: Windows, MS Office, Internet

TRAINING COURSES AND CERTIFICATIONS

: Study basic and site-specific training courses constituting a program of concentration study of power plant equipment systems theory and application, Fossil Consulting Services Inc. site training (Apr. 2001).
: Steam turbine fundamental, speedtronic Mark V and control system technicians, GE Site Training EI-Kureimat 2x650MW (May 2001).
: Software user course DCS operation, Westinghouse WDPF Site Training (May 2001).
: Operation course GE 627MW turbine tandem compound, Boiler Babcock and Wilcox ELPASO boiler, Consulting Raytheon Ebasco Site Training EI-Kureimat 2x650MW, one month (Mar. 2001).

CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Nov. 2017 till now
- Employer** : [EGYPTROL](#), AC Boilers Subcontractor
- Project** : South Helwan Supercritical Thermal Power Plant 3x650MW:
- ANSALDO 2043 T/Hr SH flow, 1667 T/Hr RH flow, front & rear burners (32) low NO_x burner TEA-BA dual fired (N.G./HFO), reheat boiler with 2 x 50% FD/GR fans, air heater, Soot blowers, CEMS, DESP and ASH handling unit etc.
 - MHI STG with HP, IP and LP cylinders, H2 cooled Generator and see water cooled Condenser with HP, LP Steam Bypass systems.
 - BOP including 8 Stage regenerator feed water heaters, Circulating water, 2x 50% TFWP and 1x 30% MFWP for start-up, Closed cooling water, Compressed air, EDG, Fuel handling, Ball cleaning and H2 production Systems.
- Job title** : Lead Mechanical Commissioning Engineer
- Job Description** :
- Review of the final issue of PID's from point of view of commissioning and start-up, issuing of PID's modification according with project standards and regulations.
 - Preparation of pre-commissioning & commissioning manuals.
 - Site inspection and punch list issuance.
 - Technical review of P&ID, control philosophy, process logic, data sheets, etc.
 - Technical coordination with engineering section and client for issues related to commissioning works.
 - Follow construction progress and participates in solving construction and installation problems.
 - Supervise and perform flushing, chemical cleaning and pass water of piping.
 - Study the engineering / technical documents / vendor information and prepare procedure for systematic and sequential pre-commissioning / commissioning / start-up of plant.
- Dates** : From May 2016 till Nov. 2017
- Employer** : [EGYPTROL](#), AC Boilers Subcontractor
- Project** : Suez Thermal Power Plant 650MW:
- ANSALDO 2067 T/Hr SH flow, 1729 T/Hr RH flow, front & rear burners low NO_x burner TEA-BA dual fired (N.G./HFO) drum type, natural water circulation, reheat boiler with 2 x 50% FD/GR fans, air heater, Soot blowers, CEMS, etc.
 - Alstom STG with HP, IP and LP cylinders, H2 cooled Generator and see water cooled Condenser with HP, LP Steam Bypass systems.
 - BOP including 8 Stage regenerator feed water heaters, Circulating water, 2x 50% TFWP and 1x 30% MFWP for start-up, Closed cooling water, Compressed air, EDG, Fuel handling, Ball cleaning and H2 production Systems.
- Job title** : Lead Mechanical Pre-commissioning / Commissioning Engineer
- Job Description** :
- Review of the final issue of PID's from point of view of commissioning and start-up, issuing of PID's modification according with project standards and regulations.

- Preparation of pre-commissioning & commissioning manuals.
- Development of safety procedures to be used during pre-commissioning & commissioning activities such as tagging, vessels entry for inspections, isolation & blind installation procedures and work permit procedures in collaboration with HSE dep.
- Development and review with vendors of lube oil and control oil systems flushing/cleaning procedures for fans etc.
- Development, review of pre-commissioning scenarios and material list for pre-commissioning and commissioning such as sacrificial valves, quick opening valves, temporary spools, temporary silencers, temporary strainers, etc.
- Development of scope of work for chemical cleaning of steam boilers.
- Executing cold and hot commissioning of thermal power plant located in Suez.
- Site inspection and punch list issuance.
- Technical review of P&ID, control philosophy, process logic, data sheets, etc.
- Technical coordination with engineering section and client for issues related to commissioning works.
- Prepare pre-commissioning / commissioning procedure for air and flue gas system, fuel oil system, fuel gas system, feed-water and steam system, soot blower system and auxiliary steam system.
- Ensure all construction activities are completed prior to taking up the system for commissioning.
- Follow construction progress and participates in solving construction and installation problems.
- Supervise and perform flushing, chemical cleaning and pass water of piping.
- Study the engineering / technical documents / vendor information and prepare procedure for systematic and sequential pre-commissioning / commissioning / start-up of plant.

Dates	:	From May 2015 till May 2016
Employer	:	GE Power & Water
Project	:	Assiut Simple Cycle (8x120MW), Egypt (8 GE gas turbines frame 9E)
Job title	:	Senior Mechanical Commissioning & Operation Engineer
Job Description	:	<ul style="list-style-type: none"> • Lube oil system Flushing and test and pressure Adjustment. • Closed cooling system flushing and test. • 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. • 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 Apr. 2015
Employer	:	EGYPTROL , SAMSUNG C&T Subcontractor
Project	:	Qurayyah Independent Power Project (6x750MW) – Combined Cycle, KSA
Job title	:	Senior Mechanical Commissioning / Start-up Engineer
Job Description	:	<ul style="list-style-type: none"> • Review of design/engineering documentation. • Review contractor prepared specification, procedure, data sheet. • Report periodically progress status to the line. • Ability to assist in performing various activities related to pre-commissioning, commissioning and start-up of process systems such as chemical cleaning, leak testing, steam blowing, package unit start-up and operation, plant start-up operation and stabilization. • Maintain a high level focus on safety and the environmental. • Active participation in work permit to ensure a safe environment for all employees during commissioning tasks. • Ability to assist in DCS operations such alarm trips, logic, interlocks, permissive, overrides, etc. • Pre-commissioning (air blowing & flushing) for sub systems of Siemens gas turbine (SGT6-PAC 5000F) such as fuel gas & oil, lube oil, hydraulic oil, water injection • Pre-commissioning for cooling system (closed, auxiliary, main cooling pumps). • Pre-commissioning for sea water intake (CW pumps, travelling screen, racked bar screen). • Pre-commissioning for water & steam cycle (condensate, feed water pumps, vacuum pumps...). • Pre-commissioning for sub-systems of Siemens steam turbine (SST6-4000) such as lube oil, hydraulic oil, steam seal lines, vacuum system • Provide written technical reports including Root Cause Analysis on system failures. • Prepare method statements, risk assessments and write permits following the commissioning permit to work system. • Commissioning: <ul style="list-style-type: none"> - Commissioning for sub systems of Siemens steam turbine (SST6-4000) such as lube oil, hydraulic oil, steam seal lines, vacuum system - Fuel oil system to gas turbine. - Commissioning for water & steam cycle. - Commissioning for cooling system. - Commissioning for sea water intake. - Supervising the operation of BOP.

- Preparation for first fire.
- Preparation & follow up steam blowout.
- Follow up reliability test run.
- Prepare commissioning completion certificate (CCC).

Dates : From Jun. 2012 till May 2013

Employer : [EGYPTROL](#), AC Boilers Subcontractor

Project : Abu Qir Thermal Power Plant (2x650MW):
Each unit consists of:

- ANSALDO 2067 T/Hr SH flow, 1729 T/Hr RH flow, front & rear burners low NO_x burner TEA-BA dual fired (N.G./HFO) drum type, natural water circulation, reheat boiler with 2 x 50% FD/GR fans, air heater, Soot blowers, CEMS, etc.
- MITSUBISHI STG with HP, IP and LP cylinders, H2 cooled Generator and see water cooled Condenser with HP, LP Steam Bypass systems.
- BOP including 8 Stage regenerator feed water heaters, Circulating water, 2x 50% TFWP and 1x 30% MFWP for start-up, Closed cooling water, Compressed air, EDG, Fuel handling, Ball cleaning and H2 production systems.

Job title : Mechanical Commissioning / Shift Charge Engineer

Job Description :

- Responsible for the safe and efficient tests commissioning & operation of 2 boilers (2 x 2100 ton/hr) and auxiliary system such as: lube oil for forced draft fans, gas recirculation fans, closed cooling water system for lube oil, fire fighting system. Including also responsible for the fuel oil and fuel gas systems, atomizing steam to heavy oil, and atomizing air for light oil.
- Employed as Commissioning Mech. Engineer. I have performed pre-commissioning and commissioning activities: walk down inspection, punch list, prepare boiler for chemical cleaning, all dampers mechanical adjustment, burner mechanical adjustment nozzle for gas and heavy oil fuel, prepare boiler for first fire and steam blowout, work request sheet, data sheet preparing; commissioning check list site, pre-start-up, conformity check and static tests execution.
- Coordination mechanical commissioning team to carry out all jobs according to Ansaldo Caldaie recommended procedures: Blowing up air line, filling up to boiler, and leak test for fuel gas lines, closed cooling lines, boiler preservation, flushing lube oil line for forced draft & gas recirculation fans.
- Implementing start-up, normal, shut down operations and emergency handling at plant field as per operation manual.

Dates : From Jun. 2011 till May 2012

Employer : Kharafi National

Project : West Damietta Project 4x125MW (4 GT gas turbines frame 9E)

Job title : Commissioning & Start-up Engineer

Job Description :

- 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.
- 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. 2009 till May 2011

Employer : Saudi Electricity Company

Project : Ghazlan #2 Thermal Power Plant 4x680MW:
Each unit consists of:

- MHI 680MW turbine tandem compound: reheat unit with four flows, low pressure Stages DCIS control system. HP/LP by pass system.
- MHI boiler: Forced draft/forced circulation, tilting burner, corner furnace, radiant reheat type Using either gas or Oil fired. DCIS control system.

Job title : Shift Charge Engineer

Job Description :

- Responsible to all station emergencies such as black out, load rejection, frequency disturbance and fire.
- Responsible to direct and supervise the operational activities related to 2700MW steam power plant provided with latest information of:
 - MHI 680MW turbine tandem compound: reheat unit with four flows, low pressure Stages DCIS control system. HP/LP by pass system.
 - MHI boiler. Forced draft/forced circulation, tilting burner, corner furnace, radiant reheat type using either gas or Oil fired. DCIS control system.
- Perform the following after major shutdown:
 - Lube oil system flushing.
 - Seal oil system flushing.
 - Generator purge by Co2-air-H2.
 - Heat rate test.
 - Turbine over speed test.
 - Turbine steam valves tightness test.
 - Boiler hydro test.
 - Water consumption test.
 - Deal with electrical system 380/13.8/4.16KV and 480V.

Dates : From Aug. 2004 till May 2009
Project : El-Kureimat 2x650MW Thermal Power Plant:
Each unit consists of: GE 627MW turbine tandem compound: reheat unit with four flows, low pressure stages speedtronic Mark V control system.
Job title : Shift Charge Engineer
Job Description :

- Responsible to direct and supervise the operational activities related to 1300MW steam power plant provided with latest information and control technologies.
- Core duties involve reliable and efficient power generation, supervision and direction of shift staff, supervision of computerized work permit system, coordination of maintenance activities, produce incident and generation reports, provide technical expertise in equipment and procedure modifications and provide leadership in emergency.

Dates : From Aug. 2001 till Jul. 2004
Employer : Upper Egypt Electricity Production Company
Project : El-Kureimat Power Plant 2x650MW:
Each unit consists of:

- GE 627MW turbine tandem compound: reheat unit with four flows, low pressure Stages speedtronic Mark V control system and fisher HP/LP by pass system.
- Boiler Babcock and Wilcox ELPASO boiler: Forced draft/natural circulation using either gas or oil fired or combination. Howden fans.
 - Westinghouse WDPF II DCS.
 - Substation: 500/220/11KV Mitsubishi Electric.
 - Auxiliary boiler FM boiler.
 - Lurgi Bamag water treatment.
 - Ingersoll Dresser pumps and Ingersoll Rand air compressors.

Job title : Control Room Operator
Job Description :

- Operation of power generation unit to ensure reliable and efficient power generation.
- Performing the unit start-up and shut downs assigned targets.
- Troubleshooting.
- Effective response to emergency conditions and appliance to safety procedure supervisory duties require supervision.
- Training and direction to field operators performing their jobs.