

Holds a B. Sc. in Mechanical Power Engineering and has over 10 years hands-on experience working in construction, commissioning and design. Expertise of rotating equipment.

PERSONAL DATA

Nationality : Egyptian
Birth Date : 18/09/1990
Gender : Male
Marital Status : Married
Residence : Future City, Cairo

EDUCATION

: B. Sc. in Mechanical Power Engineering, Mansoura University, 2012

LANGUAGES

Arabic : Native Language
English : Very Good

COMPUTER SKILLS

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

TRAINING COURSES AND CERTIFICATIONS

- : TURBOMACHINERY (Sep. 2016):
 - Basic concepts of pumps including impeller, mechanical seal, bearing.
 - Basic concepts of steam turbines, gas turbines and compressors.
 - Basic concepts of bearing, sealing and coupling.
 - Basic concepts of shaft alignment.
 - Basic types and construction of heat exchangers.
 - Basic concepts of piping, flanges, gaskets and valves.
- : ASPEN HYSYS (Sep. 2015):
 - Simulate and analyze process plants in order to optimize existing plants and design.
 - Develop heat and material balances.
 - Design and rate process equipment such as pumps, turbines, compressors and valves.
- : AIRCRAFT TURBO FAN ENGINE (Sep. 2015):
 - Basic concepts of turbofan engine and operation principles.
 - Principles of turbo fan engine systems such as air, fuel, lubrication and cooling systems.

- Study some engine troubleshooting such as compressor surge and engine overheat.
- : Korean Center for Automotive Engine Training (Jul./Aug. 2011):
 - Technical training on the basics of Petrol and diesel engine including assembly and disassembly of them.
 - Technical training on all engines systems such as fuel, cooling, lubricating, etc. and their main troubleshooting.
 - Technical training on automotive manual transmission.
- : Egypt Air (Aug./Sep. 2010):
 - Training on many of turbo fan engines such as (V2500, CFM56).
 - Attend the disassembly of V2500 turbofan engines and check bearing condition.
 - Principles of turbo fan engine systems such as air, fuel, lubrication and cooling systems.
- : UNITED GAS DERIVATIVE COMPANY (UGDC) (Sep. 2011):
 - Training on the principles of rotary machines such as gas turbines, pumps and compressors.
 - Training on the principles of gas processing.
- : Training on the principles of many process equipment such as pumps, gas turbines, compressors and diesel engines, Suez Oil Co. (SUCO) (Jul. 2010).

CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Aug. 2022 till now
- Employer** : ENERDYN GLOBAL
- Job title** : Senior Mechanical Engineer
- Job Description** :
- Lead Technical Office team in multiple discipline including mechanical, electrical, civil, tendering, planning, cost control, and document control in order to prepare, review and submit required drawing and documents for the project.
 - Study project documents, drawings, specifications and bill of quantities (BOQ) to coordinate the technical aspects of the project and support the operation manager in all technical and commercial issues to the benefit of the organization.
 - Preparing and follow up technical and material submittals till obtaining approvals from the Engineering consultant.
 - Prepare engineering calculations, designs and value engineering proposals and follow up with the client till obtaining approvals.
 - Prepare workshop drawings, technical proposals, and construction method statements with construction personnel for piping system, mechanical equipment (storage tanks, pumps, diesel engine, and firefighting equipment), civil foundation, steel structure, and electrical devices till obtaining approvals from the client.
 - Prepare quantity survey reports and material takeoff and coordinate with the procurement team the delivery of relative items in a timely proper manner.
 - Coordinate with the suppliers all technical data and information preparing subcontractor tender packages including drawings BOQs and related specifications and discuss technical proposals in coordination with the procurement department.
 - Preparation of As-built packages for the project according to site

condition including all required documentations and acquiring approval from the client.

- Perform site visit at intermittent intervals to maintain project quality plan is running as per procedures.
- Support the operation manager in selection process of subcontractors and suppliers for projects and prepare subcontractors payments based on the site progress.
- Coordinate and liaise with the document control team and ensure maintaining organized and detailed records and documents of all projects (i.e. working drawings, quantity surveying, purchase orders etc.) and coordinating with different teams to get these documents issued.

Dates : From Nov. 2020 till Dec. 2021
Employer : Doosan Heavy Industries & Construction
Project : Cairo West Supercritical Power Plant 1x650MW
Job title : Mechanical Engineer
Job Description :

- Lead subcontractor to finalize installation of 650MW DOOSAN steam turbine (DST-S20) and generator (DGen-W) until turning gear operation.
- Prepare valves and auxiliary systems for steam blowing phase and reinstatement after steam condition acceptance through target plate.
- Participate with commissioning team to commission turbine generator BOP systems including lube oil, seal oil, gland steam, Hydraulic oil, Exhaust hood spray, H2 & CO2 and Stator winding cooling system.
- Participate with commissioning team to test, pre-commission, cold and hot commission and start-up DOOSAN steam turbine and generator.
- Provide technical support, troubleshooting and routine maintenance for turbine, generator, and auxiliary systems to ensure smooth operation.
- Perform on-site installation of systems and equipment and ongoing preventive maintenance, repair after installation for emergency repairs and services to troublesome equipment.
- Prepare timely and accurate technical reports for customer records and a reference for future outages.
- Drive customer satisfaction through commitment to quality.
- Start-up and operate all necessary equipment in safe and reliable conditions through local operation.
- Maintain strong safety mindset to assure the executed work reflects the technical requirements within site safety standards.

Dates : From Nov. 2018 till Nov. 2020
Employer : MISR COMPANY FOR MECHANICAL AND ELECTRICAL PROJECTS
Project : Cairo West Supercritical Power Plant 1x650MW
Job title : Mechanical Engineer
Job Description :

- Lead mechanical team to install steam power block overhead crane with capacity 125/30 Ton including railings, girders, link beams, and carriage assembly.
- Lead mechanical team to install 650MW DOOSAN steam turbine (DST-S20) and generator (DGen-W) from green field site till turning gear installation.
- Install and align all turbine main parts including turbine base plates, HIP pedestals, HIP module, LP outer casing, LP inner casing, LP

diaphragms, LP rotor, journal bearings, thrust bearing, gland steam packings, and cross over pipe.

- Install and align generator main parts including base plates, stator frame, H2 coolers, high voltage bushings, end shield, rotor insertion, bearing, H2 sealing, and exciter.
- Inspect generator H2 coolers through hydrotest on site.
- Extensive hands-on expertise in mechanical and alignment tools such as micrometers, mechanical level and dial gauges.
- Install and align turbine main steam stop control valves (MSV) and combined reheat valve (CRV) and attached hydraulic actuators.
- Perform coupling alignment and bolts tightening for turbine generator turboset and multiple pumps using mechanical measuring tools.
- Follow turbine, generator installation manuals and mechanical drawings to ensure correct installation.
- Participate with commissioning team for lube oil, seal oil, hydraulic oil, stator cooling systems flushing and H2 & CO2 air blowing.
- Arrange with quality control engineers to inspect and issue erection measurement data through inspection test plan (ITP) and check sheets.
- Arrange with technical office engineers to create, modify, and follow the erection drawings and activities as per schedule.
- Participate in meetings as a key person to discuss various erection activities and make decisions.
- Perform assigned duties in accordance to the HSE system.

Dates : From Nov. 2016 till Nov. 2018

Employer : ORASCOM CONSTRUCTION INDUSTRIES

Project : EL-BURULLUS 4800MW COMBINED CYCLE POWER PLANT

Job title : Mechanical Engineer

Job Description :

- Lead subcontractors to install SIEMENS gas turbines (SGT5-8000H), steam turbine (SST5-5000), generators (SGEN5-2000H) from green field site to erection clearance certificate (ECC) and normal operation.
- Install and align gas turbine main parts including compressor support, turbine support, gas turbine skid, burners, intermediate shaft and exhaust diffuser.
- Install and align generator main parts including base plates, generator skid, high voltage bushings, exciter and bearing.
- Install auxiliary skids such as gas fuel, gas metering, lube oil, fuel oil pump, hydraulic, seal oil and H2 skids.
- Install gas turbine insulation for the main casing and exhaust diffuser.
- Install and align steam turbine main parts including pedestals, HIP module, bearing, LP outer casing, LP inner casing, LP rotor and cross over pipe.
- Install and align HP steam valve and IP steam valve.
- Perform coupling alignment and bolts tightening for turbine generator turboset.
- Install steam turbine insulation including HIP module, LP turbine and cross over pipe.
- Arrange with quality control engineers to inspect and issue erection measurement data through field quality plan (FQP) and assembly records.
- Participate with commissioning team for gas turbine, steam turbine and

generator lube oil, seal oil, HCO systems flushing.

- Participate in meetings to discuss various erection activities with subcontractors and make decisions.
- Review subcontractors daily progress report and follow up erection activities to proceed according to the planned schedule.
- Follow up the punch list to hand over the operating units to the owner.

Dates : From May 2016 till Nov. 2016
Employer : EL MASRIA CONSTRUCTION CONTRACT
Project : BENI SUEF 4800MW COMBINED CYCLE POWER PLANT
Job title : Mechanical Engineer
Job Description :

- Lead mechanical team to install SIEMENS gas turbine (SGT5-8000H), generator (SGEN5-2000H) from green field site to erection clearance certificate (ECC).
- Install and align gas turbine main parts including compressor support, turbine support, turbine skid, intermediate shaft and exhaust diffuser.
- Install and align generator main parts including base plates, generator skid, high voltage bushings, exciter and bearing.
- Perform coupling alignment and bolts tightening for turbine generator turboset.
- Arrange with quality control engineers to inspect and issue erection measurement data through field quality plan (FQP) and assembly records.

Dates : From May 2014 till May 2016
Employer : Tripple P Engineering Solutions, Maadi – Cairo
Projects :

- APSCO NEW GREASE PLANT
- SHELL 6th OF OCTOBER LOBP MASTER PLAN 2015
- CO-OP (DEPOT MOSTOROD) DEVELOPMENT
- HELICOPTERS PROJECT JET FUEL STORAGE FACILITY 4

Job title : Mechanical Engineer
Job Description :

- Design, review and develop P&ID drawings, piping systems and pipe supports for many process plants according to ASME B31.3.
- Process plants 3D modeling Including plant layout, equipment modeling, piping routing, steel structure modeling, arrange piping specs to generate GA, isometric drawings and MTO using AutoCAD plant 3D.
- Design and sizing piping network using applied flow technology (AFT) software.
- Design steam system as a process utility system (Steam and condensate system) Including all calculations of heat loads and hydraulic calculations.
- Design and rating of some process equipment such as heat exchangers, steam coil heater, pumps and valves.
- Design shell and tube suction heater according to TEMA standard using HTRI software and produce process data sheet.
- Review and follow fabrication of many static equipment according to drawings such as fixed roof atmospheric storage tanks and heat exchangers.
- Review and check pumps data sheets required for many projects.
- Follow up construction execution for many projects and modify drawings

according to site situation.

- Arrange and review project documents in order to handover package to the owner.

Dates : From Sep. 2012 till May 2014
Employer : Engineering Company for mold design, Mansoura
Job title : Mold Design Engineer
Job Description : Design melamine and plastic molds using CATIA v5.

Engineering Software Skills:

- CATIA v5:
 - Design mechanical parts using PART DESIGN, SURFACE DESIGN, HEALING ASSISTANT, SKETCH TRACER AND FREE STYLE.
 - Assemble mechanical parts using ASSEMBLY DESIGN.
 - Simulate mechanical mechanisms by using DMU KINEMATICS.
 - Produce mechanical drawings using DRAFTING.
 - Design molds using CORE AND CAVITY.
- AutoCAD Plant 3D:
 - Modeling 3D process plants including piping systems and pipe supports.
 - Modeling 3D of mechanical equipment and Steel structure.
 - Insert piping specs in plant using AUTOCAD SPEC EDITOR.
 - Generate PFD and P&ID drawings using AUTOCAD P&ID.
 - Generate piping isometric drawings (ISO).
 - Generate plant and piping general arrangement drawings (GA).
 - Generate piping and steel structure material take off (MTO).
- HTRI:
 - Design & rating shell and tube heat exchangers according to TEMA standard.
 - Develop initial mechanical drawings of heat exchangers.
- AFT (APPLIED FLOW TECHNOLOGY):
 - Develop high quality fluid flow analysis, calculate pressure drop and flow distribution in liquid and low velocity gas piping using AFT FATHOM.
 - Model, analyze and simulate pipes, valves and pumps systems in order to evaluate the performance of designs and assure all design requirements are met.
- NAVISWORKS: Visualize and review the designed industrial projects to minimize potential problems before construction begins, helping to reduce expensive delays and rework.
- ASPEN HYSYS:
 - Simulate steady state different kinds of processes specially oil & gas.
 - Sizing and rating of various process equipment such as pumps, compressors, tanks, heat exchangers and valves.
 - Evaluate process performance at different conditions.

Field of experience :

- Experience in turbines erection since May 2016.
- Experience in the erection of DOOSAN 650MW steam turbine (DST-S20).

- Experience in the erection of DOOSAN 650MW generator (DGen-W).
- Experience in the erection of SIEMENS 400MW gas turbine SGT5-8000H.
- Experience in the erection of SIEMENS 400MW steam turbine SST5-5000.
- Experience in the erection of SIEMENS 400MW generator SGEN5-2000H.
- Very good knowledge of the turbines and generators mechanical construction drawings.
- Experience with the turbines mechanical measuring tools.
- Experience with turbine generator alignment.
- Experience in insulation installation for both gas and steam turbines.
- Execute flushing process of lube oil piping systems for both gas and steam turbines.
- Support commissioning team from starting the turbines and generators operation until steady operation.
- Follow the punch list and make hand over with the owner.
- Experience in 2D & 3D mechanical drawings design using CATIA V5.
- 2 years' experience in process plants design including front end engineering design (FEED) and detailed engineering design.
- Experience with design, develop and review process P&ID and PFD.
- Conversant with the process simulation and design software (ASPEN HYSYS V8.8).
- Sizing & Rating of Process Equipment (Pumps, Tanks, Heat exchangers, Air coolers, Compressors, Control Valves, etc.).
- Perform piping hydraulic calculations (pump sizing, pressure drop and piping sizing) using AFT software (APPLIED FLOW TECHNOLOGY).
- Design & rating shell and tube heat exchangers according to TEMA standard using HTRI software.
- Design & rating air coolers using HTRI software.
- A small experience with the atmospheric fixed roof storage tanks design according to API 650 standard using AMETANK software.
- Design process plants layout using AUTOCAD PLANT 3D software.
- Modeling and routing piping according to P&ID and piping standards using AUTOCAD PLANT 3D software.
- Generate Piping general arrangement (GA) and isometric drawings using AUTOCAD PLANT 3D software.