# **102137-MEC-18CY-E-2012**Senior Mechanical Engineer

Holds a B. Sc. in Mechanical Power Engineering and has over 6 years hands-on experience working in construction at Power Plants.

#### PERSONAL DATA

Nationality : Egyptian Birth Date : 10/04/1988

Gender : Male

Marital Status : Married

Residence : New Cairo

#### **EDUCATION**

B. Sc. in Mechanical Power Engineering, Tanta University, 2012

#### LANGUAGES

Arabic : Native Language

English : Good

### **COMPUTER SKILLS**

: Windows, MS Office, Internet

: AutoCAD 2D

: Automation Studio

## TRAINING COURSES AND CERTIFICATIONS

: English at British Council (2014).

: Diesel Engines Maintenance at the Industrial Training Council (2011).

: AutoCAD 2D at the Arab Academy for Science, Technology & Maritime Transport (2009).

: Trainings at:

- The Egyptian Company for Electricity, Tanta (2011).
- Bavarian Auto Group (BAG), BMW Assembly Factory (Oct. 2011).
- Mabrouk International Company for Engineering Industries, Tanta (2010).
- Bavarian Auto Group (BAG), BMW Assembly Factory (Oct. 2010).
- Workshops of the Faculty of Engineering, Tanta University (2008).

#### CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Aug. 2018 till now

**Employer** : MEGA

**Project**: Assiut Supercritical Steam Power Station 1x650MW

Job title : Senior Mechanical Engineer

**Job Description**: • Scope of work: All Equipment of CP-118.

Responsible for install Pumps for PF system (Jockey, Diesel, Electrical).

• Responsible for install Deaerator and Storage Tank.

 Responsible for install Air Dryer, Air Receiver and Air Compressor for PI system.

Responsible for install Service Water Pump.

 Responsible for install Raw Water Pump and Bearing Lubrication water pump for WR system.

• Responsible for install pump, heat exchanger and tanks for WB system.

• Follow all Foremen and Labor activity.

• Check supply materials.

Dates : From Mar. 2016 till Aug. 2018

**Employer** : MEGA

**Project**: Burullus Combined Cycle Power Plant (4800MW)

Job title : Senior Mechanical Engineer

Job Description : • Scope of work (from Feb. 2017 till Aug. 2018): Erection of Steam turbine

type SST5-5000 and Condenser.

- Responsible for install foundation beam for generator.

- Responsible for positioning generator.

- Responsible for install LP and HP pedestal bearings.

Responsible for install LP outer and inner casing.

Responsible for install LP shaft.

 Responsible for assembly of all part of steam condenser (hot well, module shell, steam neck, drain tanks, bypass and water box).

- Responsible for install all auxiliary skids for steam turbine, generator and condenser.

Responsible for install HP turbine and aligned to axis.

- Install tearing gear.

- Install HP and IP valves.

Make bump check and drop check for LP and HP.

- Carry out the alignment between GEN and Turbine with minimum vibration.

Carry out all commissioning activities that required for start-up.

Responsible for erection of all BOP skids (Feed water pump, condensate pump......).

- Install insulation of turbine.

Assembly and install of collector for generator.

Install brushes and connectors for generator.

Make honing for turbine shaft and generator rotor.

Follow all Foremen and Labor activity.

Check supply materials.

- Close punch list with consulting and owner.
- Scope of work (from Mar. 2016 till Feb. 2017): Erection 2 units of Gas turbine type SGT5-8000H.
  - Responsible for install compressor and turbine supports.
  - Responsible for positioning two Gas turbines.
  - Aligned turbine to foundation axis.
  - Responsible for install foundation beam for generator.
  - Responsible for positioning two generators.
  - Aligned generator to foundation axis.
  - Responsible for install intermediate shaft.
  - Responsible for install exhaust gas diffuser.
  - Carry out the alignment between GEN and Turbine with minimum vibration.
  - Responsible for erection of all skids (Base module, oil seal tank, oil seal skid...).
  - Install maintenance support.
  - Install supports and manifold and fixable hoses for combustion chamber.
  - Install IGV and VGV support and actuator.
  - Install insulation of turbine.
  - Assembly and install of collector for generator.
  - Install tearing gear.
  - Install brushes and connectors for generator.
  - Make honing for turbine shaft and generator rotor.
  - Follow all Foremen and Labor activity.
  - Check supply materials.
  - Close punch list with consulting and owner.
  - Carry out all commissioning activities that required for start-up.

Dates : From Nov. 2015 till Mar. 2016

**Employer** : INPEC

**Project** : Abu Qir Industrial Water Treatment Plant

Job title : Mechanical Engineer

**Job Description**: • Scope of work: Erection of all component of the Plant.

- Responsible for assembly and erection of two Submersible Mixers.
- Responsible for erection of two Jib Cranes.
- Raw and Treated water Pump station (fix anchor, install pumps and leveling and fixing, alignment of pumps).
- Install chemical Dosing pumps and tanks.
- Install UF skids and pumps.
- Install RO skids and pumps.
- Install (TDS, Caustic soda, Suphoric acid, Neutralization) Tanks.
- Install all system piping at Planet included (HDPE, UPVC, PP, SS, CS).
- Fabrication and fixation of all supports.
- Flushing for piping system.
- Check supply material.
- Close punch list with consulting and owner.

**Dates** : From Jan. 2015 till Nov. 2015

**Employer** : MEGA for Construction and Industries Co.

Project : New West Damietta Simple Cycle 500MW Power Plant

Job title : Mechanical Site Engineer

Job Description : • My experience in GE gas turbines is with the installation and

maintenance of the frame 9E, 125MW gas turbine.

• I was involved heavily with the installation of 4 gas turbine and generators at the West Damietta Project in Egypt. This project gained worldwide recognition because we installed these gas turbines and put them on the electrical grid in less than 6 months.

- After the installation I have been in charge of all warranty work at the West Damietta Power Plant including any gas turbine or generator work, water treatment plant and transformer fire protection systems.
- Scope of work: Erection of 4 Gas Turbine units 9E (4x125MW) General Electric.
- Responsible for positioning of the 4 turbines.
- Responsible for positioning of 4 Generators.
- Responsible for positioning of 4 auxiliary skids.
- Responsible for erection of all skids (Gas module, Water injection, Tk blower, Firefighting, water wash, compressor APU, Oil mist eliminator, Sump tank, Light distillate fuel oil filtering, Vanadium inhibitor, Fuel gas safety shut off valve, Fuel gas duplex filters, GLAC & GNAC).
- Installing all mechanical components (load coupling, inlet plenum, exhaust diffuser, exhaust plenum).
- Adjusted and aligned all Pumps (alignment, no load test, vibration & heat tests).
- Responsible for assembly and erection of fin fan coolers.
- Carry out the alignment between GEN and Turbine Turbine and Auxiliary with minimum vibration.
- Flow up start-up activities as the assistant with GE TA according to his request to troubleshoot the turbine during start-up.
- Air Intake System (steel structure, evap cooler, expansion joint, filter module, filter element, media, inlet transition, sump tank, silencer, elbow).
- Follow all Forman and Labor activity.
- Check supply materials.
- Close punch list with consulting and owner.

Dates : From Mar. 2013 till Dec. 2014

**Employer** : KHARAFI NATIONAL COMPANY

**Project** : Conversion GE Gas Turbine Frame 9E from Standard Combustor to DLN-1:

This FDM modifies 16 GE EPE-Belfort manufactured 91E units from standard combustor dual fuel with water injection (gas/distillate) to DLN-1 dual fuel with water injection configuration. The 16 units are located in three different sites as follows:

- El Shabab QTY 8 x FRAM 91E Units.
- Damietta QTY 4 x FRAM 91E Units.
- West Damietta QTY 4 x FRAM 91E Units.

The Dry LowNOx-1 combustion system reduces NOx emission, without steam or water injection on gas fuel units, through lean-premixed burning in

multi-zone combustion liners, and by new fuel control equipment which directs fuel to the different liner zones depending on the mode of operation. NOx control for gas fuel is via the Dry Low NOx-1 system, while NOx control for distillate fuel oil is by lean combustion augmented with a water injection system. This modification includes new combustion casings, combustion liners, combustion covers and first and second stage fuel nozzles. Several valves and piping arrangements will need to be modified or replaced. In addition, the turbine control system MK Vie software is being modified to reflect the new functionality of the new DLN-1 dual fuel being provided and Tubing arrangements, fuel GAS and Liquid fuel.

Job title : Mechanical Engineer

Job Description

- Follow up all mechanical work.
- Install all components of combustion cans (liner, flow sleeve, fuel nozzle, transition piece, cross fire tube, bull horn, side sell).
- Install and modify piping system.
- Modify Purge air system.
- Modify atomizing air system.
- Modify cooling and sealing air system.
- Modify water injection system.
- Modify gas fuel system.
- Install new manifold and new support for gas line.
- Supports for all system.
- Follow up all Forman and Labor activity.
- Close punch list with consulting and owner.
- Check supply materials.
- Follow up welding.
- Air Blowing and hydro test for all piping system.
- Carry out all commissioning activities that required for start-up.

**Dates** : From Sep. 2012 till Mar. 2013

Project : Banha Power Plant (750MW) + Combined Cycle

Job title : Mechanical Engineer
Job Description : • Contract: CP-101.

- Gas Turbines: Manufacturer GE/9EA.
- Air intake System for units 1A/1B Installation & Testing.
- Responsible for assembly of steel support of air intake.
- Responsible for assembly of filter module (weather hood, yoke, wake way).
- Responsible for eructation of inlet plenum, inlet transition duct, elbow, silencer, evaporator, sump tank and filter module.
- Close punch list with the consulting and owner.
- Piping work for unit 1B:
  - Pre-commissioning Tests.
  - Air Blowing.
  - Hydro Test.
- Followed up leak tests and final reinstatement of the piping.

#### Field of experience:

- Mechanical Engineer with over 6 years experience in power plant field.
- Construction of 2 x GAS TURBINE Frame 9FA in Banha Power Station, Combined Cycle 750MW (design by GE).

- Conversion GE Gas Turbine Frame 9E from Standard Combustor to DLN-1 at:
  - El Shabab QTY 8 x FRAM 9E Units.
  - Damietta QTY 4 x FRAM 9E Units.
  - West Damietta QTY 4 x FRAM 9E Units.
- Construction of 4 x GAS TURBINE Frame 9E in New West Damietta Power Station Fast Track (4x125) simple cycle (design by GE).
- Construction of Water Treatment Plant at Abu Qir Fertilizer Company (AFC).
- Construction of 4 x GAS TURBINE in El-Burullus Combined Cycle Power Plant (4800MW) fast track (design by SIEMENS).
- Construction of Steam TURBINE SST5-5000 type in in El-Burullus Combined Cycle Power Plant (4800MW) fast track (design by SIEMENS).
- Construction of all equipment for CP-118 in Assiut Supercritical 1x650MW Steam Power Station.
- Strong Turbine and Power Station background.