**101731-MEC-CM-E-2003**
Mechanical Engineer

Holds a B. Sc. in Mechanical Power Engineering and a Diploma in Power Plant. Has over 10 years hands-on experience, including 8 years working in maintenance and construction of Power Stations.

## PERSONAL DATA

| | | |
|---|---|---|
| Nationality | : | Egyptian |
| Birth Date | : | 14/07/1978 |
| Gender | : | Male |
| Marital Status | : | Engaged |
| Residence | : | Giza, Cairo |

## EDUCATION

: B. Sc. in Mechanical Power Engineering, Al-Azhar University, 2003
: Diploma in Power Plant, Cairo University, 2010

## LANGUAGES

| | | |
|---|---|---|
| Arabic | : | Native Language |
| English | : | Good |

## COMPUTER SKILLS

: Windows, MS Office (Word, Excel, Power Point), Internet
: AutoCAD 2D

## TRAINING COURSES AND CERTIFICATIONS

: Gas Turbine Maintenance (Frame M701F Mitsubishi 250MW), 2007.
: Condenser Tube Cleaning System and Debris Filter (2007).
: Operation and Maintenance of Taprogge (2007).
: Steam Turbine Generator & Auxiliaries (ALSTOM 250MW), 2008.
: Gas Turbine – Combined Cycle Power Plant (2008).
: Off-shore training courses at Ansaldo Energia Company, Genoa – Italy:
- Assembly and disassembly of the gas turbine parts.
- Assembly and disassembly of the generator parts.
- Gas turbine maintenance.
- Lube oil system maintenance.
- Lube oil Coolers & Generator coolers maintenance.
- Maintenance of centrifugal and submerged pumps.

# CHRONOLOGICAL EXPERIENCE RECORD

**Dates** : From Jul. 2011 till now
**Employer** : Cairo Electricity Production Company (CEPC)
**Project** : 6th October Power Station (600MW): Four Units Simple Cycle Project (4x150MW)
**Job title** : Mechanical Project & Construction & Commissioning Engineer for gas turbine model "AE94.2" supplied by ANSALDO Company
**Job Description** :

- Review the contractor Technical Submittals according to standards and contract specifications.
- Mechanical Construction Inspection for installing 4x150MW gas turbines (AE94.2) and its Auxiliaries.
- Receipt and the introduction of parts of the store.
- GT Air Inlet Filter Replacement:
  - GE (800 Filter conical + 800 Filter cylindrical) and Alignment Shut down at ∆P= 200 mm water = 20 m bar.
- Central air condition and ventilation systems:
  - Executing the predictive maintenance for all type of air conditioners which include 12 central air conditions.
  - Installations of any air conditioners units may be required.
- GT#1 S/N: (0490 – G1) & GT#2 S/N: (0490 – G2) & GT#3 S/N: (0490 – G3) & GT#4 S/N: (0490 – G4) Minor Inspection Ansaldo Energia Frame "AE94.2".
- M.I. after operation = 8000 Hr.
- GT#3 S/N: (0490 – G3) Ansaldo Energia Frame "AE94.2" Warranty Inspection.
- Replaced with new some 4th stage - turbine stator vane.

**Dates** : From Jan. 2006 till Jul. 2011
**Employer** : Cairo Electricity Production Company (CEPC)
**Project** : Cairo North Power Station (1500MW): Two Modules Combined Cycle Power Plant (2x750MW)
**Job title** : Mechanical Maintenance Engineer
**Job Description** :

- Responsible of Gas turbine maintenance.
- Predictive, protective & corrective maintenance for:
  - 2x250MW GE Gas Turbine Frame MS 9001 FA+e (with DLN-2+) (Dual Fuel). GT#3 S/N: (0298463) & GT#4 S/N: (0298464).
  - Gas Compressor Atlas Copco, GMBH single stage 35 bars.
  - 2x250MW MHI Gas Turbine M701F (Dual Fuel). GT#1 & GT#2.
  - Gas Compressor Mitsubishi, 3V-2G Two Stage 42 bar.
  - 4x150MW ANSALDO ENERGIA Gas Turbine Frame AE 94.2 (Dual Fuel). GT#1 S/N: (0490 – G1) & GT#2 S/N: (0490 – G2) & GT#3 S/N: (0490– G3) & GT#4 S/N: (0490 – G4).
- GT#2 Turbine Inspection (MHI) Type 701F (Apr. 2006):
  - Just present & support.
- GT#4 S/N: (0298464) Combustor Inspection (GE) Frame 9FA (Jan. 2007):
  - First (1st) C.I. after operation = 8000 Hr.
  - Remove (Flame Detectors & Spark Plugs & Gas Fuel Flex Hoses The Flex Hoses and All fuel nozzles piping & (replaced with new or repaired Fuel nozzle, Combustion Liners, Crossfire Tubes,

Retainer) & (replaced With new packing) & Flow Sleeves & Outer Crossfire& Aft Combustion Casings (Cans # 4, 14) & replaced with new or repaired Transition Pieces, liner cap) after that install.

- KSB Major Overhaul for closed cooling pump (3 pumps), Feb. 2007.
- GT#3 S/N: (0298463) Combustor Inspection (GE) Frame 9FA (Mar. 2007).
- Major Overhaul for Gas Compressor Mitsubishi (No. A), Apr. 2007:
  - Replacement (impeller, IGV, mechanical seal, cooler) and making some of modification (install flow switch for closed cooling water Suction line & temperature switch for gas discharge line} for gas Compressors (A, B and C) (Mitsubishi Company).
- GT#2 Warranty Inspection (MHI) Type 701F (May 2007):
  - Inspection (turbine blades, turbine diaphragms, compressor blades, compressor diaphragms, combustors, journal bearing, and thrust bearing and diverter damper) for gas turbine.
- GT#1 Combustor Inspection (MHI) Type 701F (Jun. 2007).
- Inspection Natural Gas Compressor (No. a, b, c) (Atlas Copco), Nov. 2007:
  - Change dry gas seal and air seal (shaft seals) and cleaning the gas coolers (heat exchanger) water &gas sides.
- GT#4 S/N: (0298464) Mine Combustor Inspection (GE) Frame 9FA (Jan. 2008):
  - Because increase exhaust temperature inspection and change two (fuel nozzle and Combustion Liners and liner cap) & all Combustion Liners & all Cross fire tube inner & packing.
- GT#3 Warranty Inspection (GE) Frame 9FA (Mar. 2008):
  - Consider Major overhaul ($2^{nd}$) Combustor Inspection.
  - After operation = 16000 Hr & remove turbine compartment roof Section, atomizing purge air, upper-half cooling, sealing air, & install mechanical jack under unit casing & remove turbine Casing bolt, first-stage nozzle top key, clamp & take Ellipticity 1st stage nozzle & remove upper and lower half and ring support & take turbine Clearance & take inlet guide vans clearance & oil tank clean & oil flush & remove and replacement lube and seal oil pump [AC, DC] anther new modified design.
  - Generator remove and replacement end shield, outer oil deflector, bearing of generator, $H_2$ seal, inner oil deflector & pumped fresh Sealant in the end shield sealing groove, after that install.
- GT#4 Warranty Inspection (GE) Frame 9FA (May 2008):
  - The same operations GT#3 and addition some extra operations for GT#4.
  - Remove casing compressor & remove turbine rotor & remove and replacement R15 blades of axial compressor & change bearing of turbine & remove shaft generator & inspection turning gear & Pressurizing fan modified coupling, after that install.
  - Install balance Wight.
- Alva Laval GT#4 Clean lube oil Cooler (plate heat exchanger), Oct. 2008.
- GT#2 Turbine Inspection (MHI) Type 701F (Jan. 2009).
- GT#4 Change R0 blades of Axial Compressor (Jun. 2009).
- GT#3 Hot Gas Path Inspection (GE) Frame 9FA (Aug. 2009):
  - HGP after operation = 24000 Hr.

  - CI & replaced with new first stage nozzle upper and lower half and second stage nozzle (24 segments) & remove third stage nozzle & replaced with new first stage bucket (92) and second stage bucket (92) and pin Plateform and Shank seal and lock wire and pin dowel and 1st stage shroud (40) and Seal Braided wire rope and 2nd stage shroud (48) and Pin Shroud and Plug Borescope and Pin Seal Borescope.
  - Change R0 blades of Axial Compressor.
  - Clean tank and change Oil and lube oil flush and cleaning for pipe lines & change AC PUMP for seal oil pump.
  - Flushing liquid fuel.
  - Cleaning lube oil Cooler (plate heat exchanger).
- Major overhaul for Gas Compressor (Atlas Copco) (No. C), Oct. 2009:
  - Replacement (impeller, IGV, dry gas seal and air seal (shaft seals)).
- GT#4 clean bird screen & moisture separator for the main inlet air system & replace filter for Pressurizing Fans (Nov. 2009).
- GT#2 & GT#1 Combustor Inspection (MHI) Type 701F (Jan. 2010).
- GT#4 Hot Gas Path Inspection (GE) Frame 9FA (May 2010).
- Gas Compressor (Atlas Copco) (No. C), Aug. 2010:
  - Because $\Delta P$ seal gas alarm (remove and inspection impeller, IGV, dry Gas seal and air seal (shaft seals)).
- GT#3 S/N: (0298463) Combustor Inspection (GE) Frame 9FA (Nov. 2010):
  - C.I. after operation = 32000 Hr.

**Dates** : From Aug. 2003 till Jul. 2004

**Employer** : Tiba Engineering Industrial Company (Saiver) (LENNOX), Central Air Conditioning, Cairo

**Job title** : Technical Office Engineer

**Job Description** : Technical Submittal & Quotation (Fan Coil Unit, Air Handing Unit, Pump, Water Cooled Package Chillers and Cooling Tower).