# 107248-MEC-14589CDEG-E-2003

Mechanical Expert

Holds B. Sc., M. Sc. and PhD in Mechanical Power Engineering and has about 17 years hands-on experience working as Mechanical Expert, Assistant Professor, Technical Support and Site Engineer.

## PERSONAL DATA

Nationality : Egyptian Birth Date : 06/01/1981

Gender : Male
Marital Status : Married
Residence : Cairo

## **EDUCATION**

B. Sc. in Mechanical Power Engineering, Benha University, 2003
M. Sc. in Mechanical Power Engineering, Benha University, 2007
PhD in Mechanical Power Engineering, Benha University, 2011

## LANGUAGES

Arabic : Native Language

English : Fluent

# **COMPUTER SKILLS**

: Windows, MS Office, Internet

: AUTOCAD Drawing

: Ansys-Fluent CFD Computational fluid dynamic

### CHRONOLOGICAL EXPERIENCE RECORD

**Dates** : From 2017 till 2020

Employer : <u>EGYPTROL</u>

Job title : Mechanical Expert

**Employer**: Faculty of Engineering Shoubra, Benha University

Job title : Assistant Professor, Mechanical Power Engineering Dept.

**Dates** : From 2009 till 2011

**Employer** : KSP Pumps

Job title : Technical Support

**Dates** : From 2007 till 2009

**Employer** : PACO Pumps **Job title** : Technical Support

Dates : From 2003 till 2005 Employer : FLOWTEX Egypt

**Project** : Oil and Gas pipe lines "HHD Horizontal directional drilling"

Job title : Site Engineer

#### Field of experience:

- Provide the appropriate technical guidance and support in preparation of all "mechanical process" projects deliverables including calculation reports, design drawings, BOQ's, technical specifications, shop drawings and as built drawings.
- Review and approve "mechanical process" current projects deliverables including calculation reports, design drawings, BOQ's, technical specifications, shop drawings and as built drawings.
- Prepare, schedule, coordinate and monitor the assigned engineering projects.
- Monitor compliance to applicable codes, practices, QA/QC policies, performance standards and specifications.
- Interact daily with the clients to interpret their needs and requirements.
- Perform overall quality control of the work (schedule, plans, and personnel's performance) and report regularly on project status.
- Assign responsibilities and mentor project team.
- Cooperate and communicate effectively with project team and other project participants to provide assistance and technical support.
- Review engineering deliverables and initiate appropriate corrective actions.
- Familiar with codes for design and construction of mechanical systems (ASME, ANSI, ...etc.).
- Experienced in using CFD software programs like ANSYS, and knowledge in various computer programs.
- Projects participated in:
  - 30MW Genset PP at Cement Factory, Sokoto, Nigeria.
  - Gabal Elzeit site fire fieghting System Eastern Desert.
  - Meseda oil Field Expansion Project "10,000 bpd to 20,000 bpd".
  - New Skid Mounted Generators "Gas Engines" at BED-1, Wepco.
  - CHP Biogas Genset Power Plant 12MW Alexandria East Waste Water Treatment Digestion.
  - DORC 14.5MW Genset PP Lagos, Nigeria.
  - Baiji (Iraq) Fast Track Power Project.
  - Assiut 1x650MW Supercritical PP CP-118 Package.
  - 400KV Substation at Tobruk Libya.
  - West Assuit 1500MW Conversion PP New H2 Plant.
  - Saint Gobain Airliquide Sokhna Steel Structure Design & Supervision Storage room.
  - ANRPC New CCR Platforming unit Steam Blow Scope.
  - Petrokareem PPF Area East Zeit Field.

- Petronefertiti Abu Redies South Sinai.
- Engineering for Installation of 2 Gas Compressors (2 x 5 MMSCFD)
  - Petrosannan.
- Teaching experience:

I taught the following courses for Under graduate (from 2005 till 2012):

- Turbo Machines.
- Hydraulic Machines.
- Fluid Mechanics Fluid Dynamics.
- Fluid Power.
- Heat Transfer.
- Trainer for CFD course (FLUENT Software) .
- Engineering Drawing.
- Axial and Centrifugal compressors (Post graduate 2012).
- Training experience:

I taught the following training courses for Kuwait Oil Company KOC Field Engineers:

- Pumps maintenance and troubleshooting.
- Gas compressors operation and maintenance.
- Oil Field Water Treatment Course.
- Maintaining pumps course.
- Protection relay maintenance application & testing.
- Failure Analysis Methodologies for Mechanical Engineers.
- Gas Lift Management.
- Purging procedures in Booster Stations.
- Construction Management.
- Valves (Selection, Maintenance and repair).

#### CFD Skills:

- Good experience with Ansys-fluent CFD package in simulating:
  - Fluid flow problems.
  - Heat Transfer, Multi phase flow models and Combustion models.
  - Turbo machines (Unsteady Rotor Stator Interaction RSI).
  - Combustion.
- Good experience with Design, Drawing and Grid generation software:
  - Gambit Software.
  - ❖ ICEM CFD.
  - Blade generator.
  - Turbo-Grid.
  - CF Turbo (Centrifugal turbo machine design software).

### Consultation Projects:

- CFD simulation for a turbo-prop gas turbine engine components (compressor, combustor, turbine and free turbine).
- Improving the performance for multistage centrifugal pumps for IMPOAS pump company, using FLUENT for predict pump performance curve.
- Using FLUENT software for predict the cause of erosion Problem in a T spool, KARONE Petroleum Company.
- CFD analysis for medium volt electric cable surface temperature in

- an Underground duct bank raceway for Suez Steel factory.
- Using FLUENT software for predicting and enhancing air and CO2 distribution in underground car park, SHAKER consultant.