

## Mohamed El-Sayed Baz, C.E, LEED GA , HFDP, VMA

Project Role: Senior Mechanical Engineer

### Nationality:

Egyptian

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### Career Profile:

Mr. Baz is a Consultant Mechanical Engineer (C.E.) specialized in the field of design /design review for the mechanical systems and oversaw the execution activities related to HVAC, plumbing, fire-protection, and medical gases systems in compliance with the recognized national and international standards and codes for Buildings and infrastructure with emphasize on Health care facilities for almost 21 years.

Mr. Baz is a Certified ASHRAE Healthcare Facility Design Professional (HFDP) ,LEED GA from USGBC , Professional Engineer(Consultant mechanical engineer)from Saudi Council of Engineers and Egyptian syndicate of engineers, membership in ASHRAE-USA, PMI-USA and Egyptian society of Mechanical Engineers, Certified VMA from SAVE international.

Mr. Baz has intensive knowledge about most of popular codes /standards such as : HTM, Saudi Aramco Desktop Standards, ASME,NFPA,UPC,MSS,ASHRAE in addition to the most popular calculation programs like :ELITE,HAP ,Block Load,...etc , and good experience in Material Procurement, and Pricing

Good command in Windows, Word, Excel, PowerPoint, AutoCAD, Access, MS Project, Internet, E-Mails &Outlook. Elite software, HAP, Block Load, Pipe Flow Expert

### Keys responsibilities and detailed qualifications:

- Healthcare facilities (Operation Theatres, isolation rooms, CSSD,ICU's),research labs (including Bio safety Laboratories (BSL-3,BSL-2-and clean rooms)in accordance with NIH guide lines , VA guidelines and BMBL.
- Pressure relationship between different spaces for healthcare facilities, filtration (HEPA, ULPA), Water quality, indoor air quality, infection prevention and control procedures.
- District cooling/heating plants as per ASHRAE.
- Steam boilers, hot water generators, steam and hot water networks.
- Commercial laundries networks (including soiled and clean areas for hospitals).
- Water pumps, water tanks, cold and hot water networks, swimming pools and water treatment.
- Submersible pumps, drainage, ventilation and waste water networks.
- Medical air compressors, vacuum pumps, and Medical gases systems as per HTM standards(2020-2022 and 02-01),
- Chillers, Chilled water networks, Refrigeration, air handling units, fans, duct work, filtration and insulation.
- Sewage treatment plants (RBC: rotating Biological contacts) and RO plants.
- Fire pumps, fire fighting networks, evacuation plans, sprinklers, clean agents systems in accordance with NFPA standards.
- Diesel fuel oil distribution systems & hydraulic oil systems as per ASME B31.3 and B31.4. Compressed air system (Air compressors, dryer, after cooler, filters, traps...etc).
- Water based Fire Protection Systems as per NFPA Codes (fire standpipes, fire pumps, fire hoses, sprinklers and stair pressurization system ...etc).
- Automatic CO2 System as Per NFPA12.and Clean agents systems: FM200 / NOVEC as per NFPA 2001.

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Project Role: Senior Mechanical Engineer

### **Academic Qualifications:**

- Higher Diploma. Mechanical Engineering (Air Conditioning and Refrigeration), Mansoura University, Egypt, 2000 .
- BSc. Mechanical Engineering, Mansoura University, Egypt, 1997.

### **Courses / Seminars / Trainings / Workshops / Professional Memberships**

- Professional Engineer (P.E.) – HFDP – Certified from USA.
- Saudi Council for Engineers (C.E).
- Egyptian Engineers Syndicate, Cairo, Egypt (C.E) Refrigeration and air conditioning
- Egyptian Society of Mechanical Engineers, Cairo.
- ASHRAE(American Society of Heating, Refrigerating and Air Conditioning Engineers)-USA, Member # 8226253 ,
- Certified VMA , SAVE International
- "Project Management Professional Preparation course (PMP)",HRD, Riyadh, Saudi Arabia (under the technical and Vocational Training Corporation) (36 Hours).
- HVAC design courses (Chilled water, Air distribution, Refrigeration), @ Carrier Training Centre – Dammam, Saudi Arabia.
- Computer courses in: MS- Access®, MS- Office® -AutoCAD
- Elite Software, Carrier HAP Programs.

### **Summary Professional Experience:**

- From August 2007 – Present(15 years and 7 monthes): With HMG Dr. Sulaiman Al-Habib Medical Group (DBO) , Riyadh , Saudi Arabia-MEP Executive Director-Technical Services-Design , Build and Operate for Projects with Healthcare Facilities projects- Medical City, Hospitals , Laboratories, Residential and Clinics -Riyadh, KSA.
- From June., 2006 till June 2007 ( 1 year ) : with Kafaa Komyabe Saudi Arabia –Riyadh -Senior Mechanical Engineer-Team Leader (DBO) for Al Sadhan Hypermarkets
- From June 2005 till June 2006 (1 Year ) with Al-Majaz Consulting Engineering Office- Senior Mechanical Design Engineer – for Healthcare Facilities Project for Government and Private Sector , Educational projects and residential buildings. Riyadh, Saudi Arabia .
- From June 2004 till June 2005 (1 year ) with Abdul-Rahman Al-Naim Consulting Engineering Office (ACEO), -Mechanical Design Engineer-Al-Khobar-Saudi Arabia.
- From December 2001 till December 2003( 2 years ) with Imanco Contracting and trading company for –Electromechanical Engineer for the Company MEP Projects execution with Saudi Telecom Company(STC)-Riyadh and Jeddah Saudi Arabia.
- From September 1997 till November 2001 (4 years ) with Red Sea Hotels Company-Mechanical Engineer for Mechanical systems for the hotels-Hurghada-Egypt.

## Work History

Aug 2007 – To date  
Mechanical section head  
Senior Mechanical  
Engineer-Technical  
Services, Consultant and  
Owner representative as

### HMG ,Riyadh, Saudi Arabia

Roles and responsibilities of the position includes following:

- Carry out all mechanical systems design, working shop drawings review, approval and technical reviews for all areas of work covered in Building services.
- Recommend appropriate solutions and proper changes as necessary.
- Prepare specifications and equipment data sheets.
- Contribute to the verifications of building completion and commissioning stages.
- Provide projects with technical content of project development and execution plans including defining design and construction criteria
- Develop Scope of work (SOW), specifications and design criteria for building/facilities to be included in tenders for Engineering Consultancy and/or construction.
- Review technical aspects of bids from companies and construction contractors.
- Support Projects in identifying and assessing capability resources and technical strengths of contractors and vendors in the evaluation of technical bids and take part in evaluation committee meetings.
- Review/approve detailed design specifications and drawings submitted by contractors and suppliers.
- Provide technical service during the early stage of the design and later stages to ensure compliance with the latest international codes, standards, National and company requirements and procedures.
- Review the tender package before bedding to assure compliance with the relevant codes, standards, sope of work, Basis of designs...etc.

### Major Projects :

- Design for Dr.Sulaiman Al Habib East Medical City (500 beds Hospital and Housing) at Al-Khobar, KSA.
- Design and Supervision for Dr.Sulaiman Al Habib Maternity Hospital in Al Riyadh City (100 beds)
- Design and Supervision for Dr.Sulaiman Al Habib General Hospital at Al Qassim City (150 Beds Hospital) (5 Operation Rooms and 1 Cesarean Room)
- Design and Supervision for Dr.Sulaiman Al Habib Al Rayan General Hospital (300 Beds) (8 Operation Rooms and 2 Cesarean Rooms) at Al Riyadh City .
- Design and Supervision for Dr.Sulaiman Al Habib Al Rayed General Hospital (180 Beds) (9 Operation Rooms and 2 Cesarean Rooms) at Al Riyadh City .
- Design and Supervision for Dr.Sulaiman Al Habib Orthopedic and Spinal (100 Beds) (6 Operation Rooms) at Al Riyadh City .
- Supervision for Dr.Sulaiman Al Habib IVF Building at Al Riyadh City (Construction completed and in operation)
- Design for Dr.Sulaiman Al Habib Al Suwaidi General Hospital (250 Beds) (8 Operation Rooms, 2 Cesarean Rooms and 2 Cath Labs) at Al Riyadh City .
- Design for Al Jawhra building in Bahrain City
- Design for Dr.Sulaiman Al Habib Hospital (150 Beds) in Dubai

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June 2006 – June 2007

Senior Mechanical Engineer (Team Leader)-Consultant and Owner Representative role.

### With Kafa Company & Industry Dept.

Mechanical team leader responsible to lead a professional team comprises mechanical engineers and inspectors to complete the work successfully.

Responsible for the mechanical design review and approval, review and approval of shop drawing and material submittals, oversight of site mechanical installations, including coordination with other disciplines, ensuring compliance of site installations with approved specifications and quality plan, preparation of work progress reports, for the following project(s):

#### Major Projects :

- Design, contracting, managing and work Supervision for Shobra, Solamania, Sahafa, and Khurais Sadhan Hypermarkets.

Duration June 2005. June 2006 (one year).

Senior Mechanical Design Engineer

### Al-Majaz Consultant Engineering Office. Riyadh, Saudi Arabia

#### Responsibility:

- Calculate building heating and cooling loads manually and with computer modelling programs
- Evaluate different HVAC systems to determine the most cost effective for the building under design,
- Select and laid out the HVAC equipment and units (air cooled chillers, hydronic pumps, AHU's, exhaust system, recovery systems between the exhaust and fresh air, single zone, VAV, multi zone, etc.), ductwork (high and low pressure), hydronic piping systems and central heating and cooling plants with aid of the international standards and codes like: ASHRAE, SMACNA, AMCA, ARI, SASO and ARAMCO..
- Compile mechanical specifications, coordinated with electrical, structural, civil and architectural disciplines, compiled cost estimates and reviewed bids from contractors
- Specify the material to be used, review technical submittals, evaluate and recommend the technical priorities for each submittal.

#### Major Projects:

- Design for all Mechanical systems for Faculty of Medicine at King Fahad Medical City (Construction completed and in operation)
- Design for all Mechanical systems for Training and Maintenance Center at King Abdulaziz Hospital in Jeddah City (Construction completed and in operation)
- Design for Mechanical systems for King Fahd Hospital in Hael City (500 Beds)
- Design for Mechanical systems for King Fahd Hospital in Tabuk City (500 Beds)
- Design for Mechanical systems for North Jeddah Hospital in Jeddah City (500 Beds)
- Design for Mechanical systems for Bin-Jarallah Hospital in Jizan City (1500 Beds)
- Design for Mechanical systems for Al Fayzey Hospital in Riyadh City (70 Beds)
- Design for Mechanical systems for Al Khafgi Hospital (50 Beds)
- Design for Mechanical systems for Al Faihaa Hospital in Riyadh City (150 Beds)
- Design for Mechanical systems for Al Shemery Clinic in Hael City and Al Ali Villas in Riyadh City .

## **Mohamed El-Sayed Baz, C.E, LEED GA , HFDP, VMA**

Project Role: Senior Mechanical Engineer

Dec 2003-May 2005 Mechanical  
Design Engineer. Consultant

### ▪ **Abdul-Rahman Al-Naim Consuling Engineering Office (ACEO)**

#### **Responsibilities:**

- Preparing design documents to the project construction supervision duties.
- Design plumbing, waste disposal systems and fire fighting systems for buildings using the latest international codes and standards such as :National standard Plumbing Code IBC,ASPE,NFPA13,NFPA14,NFPA 20,NFPA 2001,NFPA 99,and ASHRAE
- Classify the building hazards classifications; size the fire pumps, tanks, layout the pumps, risers, zones and sprinklers distribution and performing the hydraulic calculations by Elite software
- Selected and laid out the pumps rooms, risers and fire sprinklers
- Designed the plumbing system for the buildings (Booster, Submersible, hot water circulating pumps, Boilers, Heaters, Cold/Hot Water supply network and hot water return
- Prepare the tender/construction documents drawings, BOQ and specifications. I prepare cost estimation, Bid evaluation and selection of suppliers
- Review shop drawings, and submittals, product data, material samples, method statements and hydraulic calculations to ensure compliance with the contract Documents
- Review design change request/notice, Provide technical recommendation of proposed variations / technical assistance of change orders by preparing of sketches, drawings and specifications

#### **Major projects:**

- Design for Mechanical systems for Al Doha Hospital (50 beds )
- Design for Mechanical systems for the Rehabilitation Building at Dammam City
- Design for Mechanical systems for Rafometry Building at Al Madina City
- Design for Mechanical systems for Chamber of Commerce Building at Dammam City
- Supervision for Mechanical works for Medical Tower (350 Beds) Hospital at Dammam Central (Construction completed and in operation)
- Supervision for Al Rahji Towers at Al-Khobar
- Supervision for Aloula Building at Al Khobar
- Works include preparing design, BOQ, Specification, Review Shopdrawings, and Submittal Approvals

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Project Role: Senior Mechanical Engineer

Dec 2001 – Dec 2003  
Technical Office Engineer

**Imanco for Contracting and Trading Company**

**Responsibilities**

- Preparation the technical documents and supervising the Overhaul of hydraulic, pneumatic and fuel supply circuits components. (Pumps, valves, cylinders, solenoid valves, actuators, tanks,...etc) for aircrafts.

**Major projects:**

- Renovation for Minister Building at STC Riyadh. Upgrading all electromechanical systems for Safa, Sahafa and Mushrifa exchanges at Jeddah City.

1997 – 2001.  
Mechanical Engineer

**Red Sea Hotels Company- Hurghada - Egypt**

**Responsibilities**

- Mechanical supervision Engineer for Mechanical systems for the hotels and resorts

**Major projects:**

- Grand Resort Hurghada- Egypt
- CLEOPATRA Safaga- Egypt