

Holds a B. Sc. in Electrical Power & Machines Engineering and has more than 12 years of professional experience in Electrical, Instrumentation and Control engineering with a successful record of accomplishment in Engineering Design and Project management of Water Treatment in Middle East (Egypt / Qatar / UAE).

PERSONAL DATA

Nationality : Egyptian
Birth Date : 19/04/1986
Gender : Male
Residence : Currently Qatar

EDUCATION

: B. Sc. in Electrical Power & Machines Engineering, El-Shorouk Academy, 2008

LANGUAGES

Arabic : Native Language
English : Very Good

COMPUTER SKILLS

: Windows, MS Office, Internet

TRAINING COURSES AND CERTIFICATIONS

: Professional Certification – Chartered Engineer (CEng), IET (Oct. 2021).
: Radar Level Transmitters and Pressure Transmitters, E+H (Jun. 2021).
: ETAP 114 - Power System Analysis, Etap (Dec. 2019).
: ETAP 101 Design, Analysis & Operation of Power Systems, Etap (Sep. 2018).
: FE Electrical and Computer, Engineering Tracks, NCEES (Mar./Apr. 2018).
: Certification from Ministry of Municipality and Environment, Qatar (Jul. 2014).
: ABB AC500 PLC, ABB (Mar. 2014).
: Power Distribution level 1, Jeilecom (Apr./May 2011).
: Power Distribution level 2, Jeilecom (May/Jun. 2011).
: SCADA & DCS Advanced, Jeilecom (May/Jun. 2011).
: ABB LVSG MNS Inspection, ABB Factory (Jun./Jul. 2010).
: Programmable logic Controllers level 2, Jeilecom (Feb./Mar. 2009).

- : Programmable logic Controllers level 1, Jelecom (Dec. 2008 – Jan. 2009).
- : Cathodic Protection, Petroleum Pipelines Company (Aug. 2008).
- : Electricity for Civil Installation, SALESIAN Institute "DON BOSCO" (Aug. 2007 – Oct. 2007).

CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Feb. 2013 till now
- Employer** : Metito Overseas, Doha – Qatart
- Job title** : Senior E&I Design Engineer
- Job Description** :
- My current employer's primary role and responsibilities as an electrical, Instrument, and control design engineer in the employer's engineering department are not limited as I start the project from the feed stage and design the necessary documents to clarify the project's concept.
 - The proposal stage is advanced comparing to the feed design stage because I developed the design in more detail to help me in costing and deeply break down all the Electrical, Instrument, and control items, so by this, we will be able to identify the project bill of Quantities, manufacturer and makes in line with the project nature's approved vendor list. The previous stages are coming in different contracts and bidding. If the project is an award, then the proposal and sales team are handing over the project to the project team, and the project team initiates a design request to the engineering department, which I'm one of that team.
 - After received and acknowledged the engineering request, the project manager launching the Kick-off meeting and start working on the documents register, then submit it to the client along with the estimated and recommended working hours.
 - Then start assigning tasks to my junior engineers and draftsman, and myself by using the Microsoft to-do list.
 - Then starting the long journey of engineering design covering and not limited to the following:
 - Prepare electrical design, including preparing all related drawings and equipment lists; coordinate delivery to the site.
 - Liaise with the process and project engineers to obtain the input required and ensure smooth implementation of the approved design.
 - Supervise installation and on-site electrical works.
 - Participate in commissioning and troubleshooting as required; carry out any other duties related to my area of expertise as assigned by the Team Leader.
 - Comply with all applicable legal and HSE requirements/procedures.
 - Design LVSG, including upstream and downstream, with all support calculations.
 - Design Electrical layouts including (routing, earthing, lighting, shop drawing).
 - Design complete Power, Control, and Instrument cable schedules.
 - Design Junction boxes schedule, interconnection diagram, and control loop diagram.
 - Design IOs, Modbus list, and PLC sizing and configuration.
 - Prepare Instrument datasheets and all associated documents such as (wiring, sampling conditioning system general arrangement

drawing) for (Pressure, Flow, and level, temperature, pH, and DO, ORP, Conductivity, Turbidity and Hydrocarbon analyzers).

- Prepare all Materials submission for all E&IC items as per project requirements.
- Prepare all technical bid evaluations for all E&IC documents as per project requirements.
- Interdisciplinary check with process department for (P&ID, process description, control philosophy, cause and effect matrix, alarm setpoint).
- Inter discipline check with the mechanical department for all associated datasheets, documents, and drawings.
- Work with Process Engineers and P&ID department in the development of P&ID drawings to ensure the correct application of instrumentation, and the same will reflect on the Piping and Instrument diagram drawings.
- Calculate sizes and specify flow elements, control valves, and pressure relief valves for liquid, gas, and steam.
- Determine the best technology and materials to use for the application.
- Verify all Instrument ranges and calibrated ranges meet process requirements.
- Work with the purchasing department to develop RFQ bid packages and construction packages.
- Liaise, monitor, and review all the technical quotations with the vendors.

Dates : From Feb. 2012 till Jan. 2013
Employer : Turnkey Group (TKG), Cairo
Project : Rehabilitation of Al-Salam International Hospital substation while it is in full operation - It was one of six challenging projects in Egypt in 2012
Job title : Senior Electrical Design Engineer
Job Description :

- Acting as an E&IC Team Leader to coordinate other fully competent engineers or other technical personnel on more complex or significant engineering projects and studies.
- Conduct and take full responsibility for complex engineering studies that require advanced knowledge within the assigned discipline.
- Perform field analysis, performance tests, designs, costs estimate, the layout of drafting work, and the correlation/compilation of complex data. May direct or coordinate the work of other engineers, technicians, craft workers, or others.
- Conduct tests of instruments, materials, equipment, and controls to determine operating characteristics.
- The project has been accomplished on time successfully, and the owner of the Al-Salam Hospital assigned the same team same company for a new Hospital located in the new city.

Dates : From May 2009 till Feb. 2011
Employer : Metito Overseas, Cairo
Job title : Electrical Design Engineer

Job Description :

- It was such a great experience to start the water solution break-in with one of the lead companies in this field and understand the different water solutions such as reverse osmosis, sewage treatment plants, pumping stations, and sequencing batch reactor, and more.
- Prepare electrical design, including preparing all related drawings and equipment lists; coordinates delivery to the site.
- Liaise with the process and project engineers to obtain the input required and ensure smooth implementation of the approved design.
- Supervise installation and on-site electrical works.
- Participate in commissioning and troubleshooting as required; carry out any other duties related to my area of expertise as assigned by the Team Leader.
- Comply with all applicable legal and HSE requirements/procedures.
- Besides that, my manager has assigned me to be responsible for the company electrical workshop because of my strong knowledge of the electrical components and electrical panel builders. It was responsible for producing most of the electrical panels required at the plants based on the approved design.

Dates : From Feb. 2009 till May 2009

Employer : GILA – Al Tawakol Electric, Cairo

Job title : Electrical Engineer

Job Description : It was a significant added value to my electrical career to work with one of the most prominent electrical panel builders for Schneider Electric in Egypt. My role and responsibilities were as follows:

- The contractor sends requirements by email by attaching the Electrical single line diagram and project specification. Then, I start working on the project cost, preparing the techno-commercial offer, and then sending it to the customer.
- Then, I start to follow up with the contractor and clarify any technical points. After the approval and placing the purchase order, start working on the manufacturer drawing, coordinating with the factory, and submitting the contractor's drawings.
- Hence, submitting it to the consultant and me attendant the technical meeting if the contractor needs to assist the consultant in getting the manufacturer drawing clear from any disagreements points and then revising the drawing if necessary after the approval.
- Initiate a manufacturing request to the factory and following up with the factory on the materials and manufacturing stages and feedback the contractor accordingly.
- Finally, I invite the contractor and the consultant to attend the FAT and do the inspection based on the order and rectify any comments raised by the contractor or consultant and then get the FAT report signed by the witness and initiate a delivery request to the factory to deliver the order to the agreed location as per the P.O.
- Once the electrical panels are well delivered to the site, I coordinate with the contractor to prepare the SAT, conduct the SAT, rectify the comments, and get the witness's SAT report.

- Dates** : From Jul. 2008 till Dec. 2008
- Employer** : International Company for Electronic and Electrical System, Cairo
- Job title** : Electrical Engineer
- Job Description** :
- My role and responsibilities were receiving the customer's inquiry, starting working on the UPS sizing calculations, checking the required backup time based on the application and specification, and preparing the technical offer based on the product range and sending it to the customer.
 - After the approval process and placing the order, I start communicating with the factory in Italy and putting an internal directive to create the UPS manufacturer based on the customer P.O. After the manufacturing period and the UPS are well delivered to the company warehouse, I invite the customer to do the FAT test by preparing an electrical load bank and inspecting. After the inspection is well finished, I initiate a request to deliver the UPS to the agreed location as per the P.O.
 - Then I coordinate with the customer for installation and cable termination.
 - Then I send a request to the commissioning team to check and run the startup and acknowledge that the UPS is in healthy operation and hence generate a handover report signed by the customer.

Projects:

- Qatar Steel (Jan. 2018 – Dec. 2021) - The project is to supply near Zero Liquid Discharge Plant (nZLD), treating process wastewater through Ultra-Filtration (UF) and Reverse Osmosis (RO) with a capacity of 100 m3/h. Process Layout: Equalization Tank Lime Dosing - Chemical Reaction Tank - Coagulant & Polymer Dosing - High Rate Solid Contact Clarifier - Cooling System - UF Feed Pumps - Self Cleaning Filters - UF Units - Sodium Hypochlorite Dosing - RO Low Pressure Pumps - SMBS, Acid & Anti Scalant Dosing - RO Cartridge Filters - RO High Pressure Pumps + RO Units - Caustic Soda Dosing + Permeate Water Tank + Permeate Water Transfer Pumps.
- Qatar Gas - Wastewater Recycle and Reduction for QG2 and QG3/4 (Jan. 2015 – Dec. 2020):
 - While my current company has been awarded one of the iconic projects with Qatargas Client as an Engineering, Procurement, Fabrication, and Delivery of Wastewater Recycle and Reduction plants (QG2 + QG3/4), each plant contain 7 Packages as follows: LP Sour Oily Water Deoiler - Oily Water Deoiler - MMF Deoiler - Sand filter - MBR (NSF) - RO (ACF) - Sludge.
 - I have been assigned to lead the project design and based on that, I identified the required recourse to the management based on amount of the deliverable and time frame of three years.
 - I led a team contain from 4 Engineers and 2 Draftsmen's to successfully executed the following deliverable: 228 Engineering documents deliverable - 130 Vendor documents deliverable – 50 Purchase Orders + Material Requisitions + Technical Bid Evaluations.
 - I successfully carried out to lead the factory to assemble Electrical and Instruments items for the 79 Skids at the Company workshop Factory and a very complicated a factory acceptance test for

- 5 numbers of Hydrocarbon Analyzers and Chiller Pkgs; in addition, led the site team for all installation and commissioning activities till the execution of the project and last not least generate the 3D Modelling for all E&IC items.
- United Development Company (UDC) - Potable water pump station-2 (Jan. 2016 – Dec. 2016):
 - KAHRAMAA is supplying potable water to existing PWPS-01 located in the pearl Qatar Island and PWPS-01 feeding potable water to the existing potable water network.
 - In PWPS-01 currently 4nos. pumps of 55KW, 3PH rating are installed (3- working mode & 1- Standby Mode) with 18000 m3 daily capacity.
 - Another plant SWRO (Sea Water Reverse Osmosis) is also ready and currently in operation.
 - The design intention of building PWPS-02 is purely to support PWPS-01 by pumping potable water from the SWRO plant to PWPS-01 to maintain uninterrupted water services to the pearl Qatar end users.
 - Pump no. P-101 (Duty), Pump no. P-102 (Assist), Pump no. P-103 (Standby).
 - Existing tank TK-200 (Two Compartments), Existing tank PWPS-01.
 - Chemical System Sodium Hypochlorite dosing system (DT-301, DP-301A/B).
 - Measuring instrumentation (FIT and PIT) and Analytical Systems (pH, Conductivity, Chlorine & Turbidity).
 - Ashghal PWA - Musaimer Graveyard pump station (Jan. 2017 – Dec. 2017):
 - Installing 2 nos. of submersible pumps (one duty, one standby) in the new wet well.
 - Both the pumps will be operated with a soft starter.
 - All pumps shall discharge into a common discharge outfall which will lead to an open lagoon.
 - Overall operation & monitoring of the pumping station is achieved by RTU panel installed at MCC container.
 - The automatic Pump control is performed using the PLC Control System installed within the MCC Panel.
 - The Pump station Equipment list: Qty 2 nos. Submersible Pumps (1 Duty / 1 Standby) - those pumps are used to pump the stormwater from the tunnel to the lagoon - Qty 1 no. Ultrasonic Level Transmitter Tags (Monitor & Control) - Qty 4 lot of Level switches (Monitor & Control) - Qty 2 Pressure Transmitter (Monitor): One on each discharge pump - Qty 1 Electromagnetic Flow Meter (Monitor): One on the common header line.
 - Ashghal PWA - Al-Khor Sewage Treatment Plant – Phase II total capacity 11,000 m3/day (Feb. 2013 – Dec. 2015):
 - Al-Khor STP combined operation of Phase I and Phase II a new phase II will be added to the existing phase I to increase the STP capacity up to 11K m3/day.
 - The used technology for sewage treatment plant is Sequencing batch reactors (SBR).
 - The STP Equipment list: Inlet chamber - Fine Screen - Grit removal - SBR (1 Duty / 1 Standby) - Chlorine contact tank - Sludge Sump

- (Centrifuge (Sludge Dewatering)).
- Ashghal PWA - TSE Tanker Filling Station (Jan. 2018 – Dec. 2019):
 - The project areas are located within the existing operational sites of Doha West Sewage Treatment Works (DWSTW) and Lusail Sewage Treatment Works (LSTW) as indicated on location plans overleaf. The main objective of this project is to provide additional tanker filling stations at the above sites for the supply of recycling water (TSE) to various end-users (i.e.: municipalities, industries, etc.), as directed by the Permanent Water Resources Committee under the jurisdiction of the Ministry of Municipalities and the Environment (MME).
 - The outline project scope comprises the Design, Build, Operation, and Maintenance of the treated sewage effluent (TSE) tanker filling stations at the above sites as follows: TSE Tanker Filling Station with Twenty (20) filling points at DWSTW site - TSE Tanker Filling Station with Ten (10) filling points at LSTW site.
 - The project also consists of all other peripheral works associated with TSE filling stations and they include but not limited to; installation of delivery and discharge pipelines, control valves, flowmeters, power supplies, mechanical installations, instrumentation, control, and automation (ICA), construction of internal access roads and tanker traffic routes, tanker traffic management, control gates, guardhouses, etc. and both soft and landscaping within respective sites as required by the Contractor's designs.
 - Ashghal - O&M of Pumping Stations - Supply and Installation Works at Various Pumping Stations (Jun. 2021):
Upgrade and rehabilitation for fifteen Pump station covering the following:
 - Supply new pumps with 670KW and 450kW along with switchgear.
 - Upgrade SCADA.
 - Supply new UPS.
 - Install new instruments (Vibration sensor and temperature sensor) for Plummer Block.
 - RLOC Oil and Gas - Sanitary Water Treatment Plant (96m³/day) (Jan. 2017 – Dec. 2019):
 - Sanitary water treatment plant.
 - The dissolved air floatation system.
 - Aeration system.
 - Chemical dosing system.
 - Qatar, Private Engineering Office - Salwa Resort (STP 2600m³/d) and TSE (RO) polishing (1850m³/day) (Jan. 2015 – Dec. 2018):
 - A sewage treatment facility, providing advanced wastewater treatment, using Membrane Biological Reactor (MBR) technology, with a design capacity of 2,600 cubic meters per day average daily flow.
 - The system must be capable of producing treated effluent (TSE) with quality that allows irrigation use per the Public Works Authority (PWA) standards: Fine Screen - Aerated Balancing Tank - Balancing tank pumps - Compact Inlet Headworks (screening/grit/grease removal) - Biological Treatment (Anaerobic / Anoxic / Aeration) - MBR (Membrane Bioreactor) - UV Disinfection -

Chlorine Contact Tank / using Chlorination - TSE Storage tanks - Sludge Handling System - Odour Control Units.

- Field of experience :**
- Experienced in Design, Installation, Testing and commissioning of Electrical and Instrumentation & Control systems for utilities as follows:
 - Oil and Gas.
 - Waste Water Treatment.
 - Sewage Water.
 - Reverse osmosis.
 - Hydrocarbons.
 - Zero and Near Zero Liquid Discharge.
 - Sanitary Water.
 - Deep Wet Well.
 - Power:
 - Transformer & Generator Sizing and selection.
 - UPS Sizing and selection.
 - Electrical Induction Motors.
 - Complete Design of Electrical load list.
 - Complete Design of Electrical Power Factor Correction.
 - Complete Design of LVSG SLD, MDB, MCC, DBs, LCPs.
 - Complete Design Power Cables Sizing and selection.
 - Complete Design Earthing and Lightning.
 - Complete Design Electrical Raceways, Trenches.
 - Complete Design Electrical Installation, Shop drawing.
 - ETAP study.
 - Indoor, Outdoor and Street lighting complete software design and study.
 - Control:
 - Control Philosophy.
 - Control interlock for P&ID.
 - Control Cable Schedule.
 - Field Junction Boxes sizing.
 - Conventional/Classic Control Circuit Design for field Control Panels.
 - PLC System architecture and configuration.
 - PLC programming (ladder diagram and FB).
 - PLC Graphics.
 - Communication Protocols Selection and Design.
 - Instruments:
 - Select the suitable measurement instrument over P&ID.
 - Prepare Instruments/Analyzers list.
 - Prepare Instruments/ATs Index and Alarm Setpoint.
 - Prepare Instruments/ATs Cable Schedules.
 - Prepare Instruments/Analyzers Datasheets.
 - Prepare Instruments Hookup Drawing and MTO.
 - Prepare Analyzers Sample conditioning systems.
 - Review Vendors Sizing Calculation such as follows:
 - ❖ Electromagnetic flowmeters.
 - ❖ Orifice plates for DPFT.
 - ❖ Wake frequency calculation for temperature thermowell.
 - Design and Sizing the Analogue Junction Boxes.
 - Prepare and Design Cause and Effect Matrix.