

Holds a B. Sc. in Electrical Engineering and has over 11 years experience working as Commissioning / Installation Engineer in large EPC Projects (Power Plants & Oil and Gas) included fast track project. Also, led E&I Maintenance team in seventeen (17) Complete Outages / Inspections such as Hot Gas Path Inspection (HGPI) and Combustion Inspection (CI) in the Middle East.

PERSONAL DATA

Nationality : Egyptian
Gender : Male
Residence : Damietta

EDUCATION

: B. Sc. in Electrical Engineering, Port Said University, 2011

LANGUAGES

Arabic : Native Language
English : Excellent
French : Fair

COMPUTER SKILLS

: Windows, MS Office (Word, Excel, Power Point), Internet
: ToolBox ST Software for EX2100e and MARK VIe
: Electrical AutoCAD, Dialux (Lux Design and Estimation)
: Enervista for GE Protection Relays
: SFT2841 for Schneider Electric Protection Relays (SEPAM)
: DIGSI - SIEMENS software: Version 8.9, 9.0
: MICOM STUDIO - ALSTOM software for MICOM Protection Relays
: Test Universe 3.10 – Used for Omicron Test set for testing relays
: eTCSS (e Turbine Control System) Version V04.04.00C for Ex2100 Controller
: GE Communicator Software for Energy Meters
: Schneider Electric Easergy Studio

TRAINING COURSES AND CERTIFICATIONS

: EX2100 Excitation System and GPP Training, General Electric (GE).
: Advanced MARK VIe Gas turbine control system, General Electric (GE).
: OSHA 010 certificate from American University in Cairo (AUC).

- : HRSG training program in Milan, Italy, AC Boiler S.p.A. (formerly ANSALDO CALDAIE).
- : Power oil transformer maintenance, Hyundai Heavy Industry (HHI).
- : EX2100e Excitation System and GPP Training, General Electric (GE).
- : Motors drive pumps and compressors, Kharafi National (KN).
- : Gas Turbine Generator Operation, General Electric (GE).
- : Protection Classroom Training (MICOM P141, P632, P143, P444 and P746) in 220KV substations, Schneider Electric.
- : Substation automation system (SAS) called (PACIS system) and how these numerical relays communicate with each other, with protection numerical relays and with HMI interface (MICOM C264).
- : Construction, Operation and maintenance of 245KV GIS, how to operate and repair circuit breaker, disconnect switch and local control cubicles (LCCs), Hyundai Heavy Industries (HHI).
- : FOXBORO-EVO DCS system, Milan, Italy, Schneider Electric.
- : Protection Relays Principles, ALSTOM.
- : Technical Description of the High and Medium Voltage Breakers, E.A.T.G.
- : Motor operated valves, BIFFI.
- : Theoretical Training of Telecommunication Systems between substations (DPLC 2021D), PLC international Inc.
- : Programmable logic controller (PLC).

CHRONOLOGICAL EXPERIENCE RECORD

- Dates** : From Sep. 2021 till May 2023
- Employer** : Baker Huges
- Project** : Oman LNG, Sur – Oman
(Train 1, Train 2 and Train 3, Major Shutdown, DBN, GE Gas Turbine Frame 7 and Frame 6B)
- Job title** : E&I Field Service Engineer
- Job Description** :
- Replace MV Induction Helper Motor 18MW, 3600 R.P.M (Installation, Pre-commissioning and commissioning).
 - Install RTDs and Vibration Sensors for New 2BCL Compressor.
 - Install / Commissioning E-house / Medium Voltage VFD.
 - Install / Commissioning of Oil Power Transformer 33KV/2400 V.
 - Install / Commissioning of LV MCC, 400 V AC.
 - MKVe Panel wiring Modification.
 - Install New Pressure Differential Transmitters PDT in Filter House.
 - Replace Air Bleed Valve 33CB1/2 and its Solenoid 20CB.
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- Dates** : From Nov. 2020 till Feb. 2021
- Employer** : Baker Huges
- Project** : Lekhwair Power Plant, Oman
- Job title** : Lead Electrical TFA
- Job Description** :
- Generator Protection Panel (GPP) Relay Testing ALSTOM P345, Siemens 7UM622.
 - GPP Functional Check / Synchronization circuits function checks.

- Excitation AVR Panel Testing and Functional check (Brush A3100 Controller).
- AC/DC Motor Testing.
- Functional check Start/Stop Soft starter Panel of Turning Gear Motor.
- Functional check DC Emergency lube oil Motor Panel.
- Polarization Index Test of 11.5KV Generator.
- Follow up BHGE site Quality Commissioning check list.

Dates : From Mar. 2020 till Jun. 2020

Employer : Ansaldo Thomassen BV

Project : El-Shabab Power Plant

Job title : Lead Electrical / Generator TFA

Job Description : Major Inspection Outage of GE Gas Turbine Frame 9E:

- Testing and commissioning duties – Generators Type (Elin 9A5 & Brush BDAX):
 - RTD / Bridge Diodes Testing.
 - Perform exciter Stator/Rotor DC Winding resistance.
 - Recurrent Surge Oscillograph (RSO).
 - Generator Wedge Mapping.
 - Electromagnetic Core Imperfection Detection (EL CID) Testing.
 - Generator Dissipation factor (tan delta) Testing.
 - Generator Partial Discharge (PD) test.
 - Perform DC Winding Resistance of Generator Stator / Rotor.
 - AVR Panel Protection Function and control Test.
 - AVR Simulation testing.
- Installation duties:
 - Install Exciter Heater.
 - Install Exciter hub and Diodes wheel.
 - Connect Exciter hub component with Generator Rotor / Exciter Rotor.
 - Install Rotor Earth Fault Receiver/ Transmitter and do its Electrical connections.
- Start-up duties:
 - Generator Initial Rollup Test and offline checks.
 - AVR Auto Startup Test.
 - Data Gathering from Generator Protection Relays and create AVR Trends.

Dates : From Jan. 2020 till Feb. 2020

Employer : Baker Huges

Project : Uthmaniyah Gas Plant, Dammam – KSA

Job title : Lead Electrical / Excitation Engineer

Job Description : 3 x Units Sales Gas Compressors – Motor Driven, Client (ARAMCO):

- Verify all Inputs / Outputs Signals for Excitation Panel (GE RX3i) / Hot restart Block.
- Synchronous Motor SOLO run Test.
- Verify Trips (Field Over current, Loss of Field, Motor Stall, Incomplete Sequence, Slip guard).
- Synchronous Motor SOLO run Test.

- ESP-1 Current Test Verifications / Verify Healthiness of internal Current Circuit.
- Excitation Panel Modifications.
- Testing of Excitation transformer.
- Alarm Simulation (Loss of Excitation, Exciter Over Current, Motor Stall).
- Establish Modbus R485 Communication Between AVR (GE RX3I) and DCS.
- Test and Simulate Modbus Signals (Alarms / Trips).
- Follow Site Quality Commissioning Check List for AVR (RX3i) / Motor.
- Follow Site Quality Loop Check List.
- Support on Start-up and Mechanical Run Test (MRT).

Dates : From Oct. 2019 till Nov. 2019

Employer : GE

Project : Amandi Combined Cycle Power Plant (CCPP) 192MW, Takoradi – Ghana

Job title : Excitation Field Service Engineer

Job Description :

- Installation / Commissioning and Start-up Generator Excitation System AVR (EX2100e):
 - Cabling / Connections to be matched with schematic drawing.
 - Grounding, Hardware / Jumpers Check.
 - Insulation resistance / Megger Test.
 - Initial Commissioning (Checking Fans of Power Conversion Module (PCM) / Verifying Control Power).
 - Controller Startup (Build / Download Parameters and Clear Trip signals/Alarms).
 - Startup of Touch Screen Keypad.
 - Simulation Test (Limits Verifications, PT Failure Detection Verification).
 - Temporary Load Checks (Dummy Load) + Zeroing VCO Offsets + Verifying Ground detection Alarm/Trip.
- Generator Offline testing (Electrical Open circuit, AVR Step Test, Over excitation Limit).
- Generator Online tests (Under excitation Limit, Transfer between M1, M2).
- Power System Stabilizer PSS Tuning:
 - PSS Gain margin Test.
 - AVR Step Test 2% with PSS Disarmed.
 - AVR Step Test with PSS armed.
 - PSS Open Loop Test.
 - PSS Closed Loop test.

Dates : From Jul. 2019 till Aug. 2019

Employer : GE

Project : Block 10, TOTAL Power Plant, Hadramout, Yemen

Job title : Electrical / Excitation Technical Advisor

Job Description :

- Outage of 3 x Units GE (Aero) GT LM2500:
 - Replace Generator Protection Relay Beckwith M-3425A.
 - Secondary Injection Test of Protection Relay Beckwith M-3425A.
 - Function Test of Generator Control Panel (GCP).

- Primary Stability Test of the CT Loops.
- Full testing of Current Transformers CTs (Turns Ratio, Polarity, Insulation Resistance, Winding resistance, Burden and Saturation Tests).
- Update Exciter AVR Software Version.
- EX2100e AVR Simulation Test / Limits Verification.
- Troubleshooting the communication issue between Exciter (EX2100e) and Turbine control System (TCP).
- Replace and configure battery charger 125V DC, 24V DC.
- Functional test for control Cabinet of (400V AC MCC).

Dates : From Mar. 2019 till Apr. 2019
Employer : GE
Project : Jomel Power Plant, Jubail – KSA
Job title : Electrical Field Service Engineer
Job Description : Outage of 2 x Units GT GE 7FA:

- GPP functional test, Energy Meter calibration and Power transducers testing.
- Tan Delta, Insulation Resistance IR, Polarization Index PI tests for Atomizing air motor rated 4000 Volt.
- Battery load testing NiCd Km600P (Fully Battery discharging Test) using TOR KEL 980.

Dates : From Dec. 2018 till Mar. 2019
Employer : GE
Project : Sohar III IPP (Combined Cycle Power Plant CCPP), Oman
Job title : Electrical / Generator Technical Field Advisor
Job Description : 2 x Units ST ALSTOM KA26:

- Relays secondary injection Testing:
 - Generator protection Relay G60 (GE).
 - Transformer protection Relays T60, T60U (GE).
 - Calibration / Adjustment of Generator meters (Camille Bauer).
- Generator Protection Panel (GPP) functional test.
- Generator Air Cleaning Test.
- Generator Coolers inspection.
- Air Pressure Test for the Generator.
- CO2 Purging / H2 Filling.
- Generator Brush gear arrangement.
- Familiar with PID Schematic / system troubleshooting.
- Electrical Offline/Online Tests According to ITP of GE.

Dates : From Nov. 2018 till Dec. 2018
Employer : GE
Project : New West Damietta Power Plants
Job title : Electrical / Excitation Engineer
Job Description : Outage of 2 x Units GE 9EA:

- Relays secondary injection Testing:
 - Multilin Generator protection Relay G60 (GE).

- Multilin Transformer protection Relays T60, T60U (GE).
- GPP functional test, Energy Meter calibration and Power transducers testing.
- MCC panel bucket testing, functional check & Cleaning.
- DC Panel Testing and functional check and cleaning.
- AVR (EX2100) testing and functional (Simulation Test and Limits Verifications).
- Full testing of Current Transformers CTs (Turns Ratio, Polarity, Insulation Resistance, Winding resistance, Burden and Saturation Tests).
- Full Testing of Voltage Transformers VTs (Turns Ratio, Polarity, Insulation Resistance and Winding Resistance).

Dates : From Oct. 2018 till Nov. 2018

Employer : GE

Project : JUAYMAH Power Plant, Dammam – KSA

Job title : Electrical Maintenance Engineer

Job Description : Outage of 2 x Units GE 7FA:

- Relays secondary injection Testing:
 - Multilin Generator protection Relay G60 (GE).
 - Multilin Transformer protection Relays T60, T60U (GE).
 - Multilin Breaker Management relay C60 (GE).
- GPP functional test, Energy Meter calibration and Power transducers testing.
- MCC panel bucket testing, functional check & Cleaning.
- DC Panel Testing and functional check and cleaning.
- Battery load testing NiCd Km600P (Fully Battery discharging Test) and cleaning.
- AVR (EX2100) testing and functional (Simulation Test and Limits Verifications).
- Full testing of Current Transformers CTs (Turns Ratio, Polarity, Insulation Resistance, Winding resistance, Burden and Saturation Tests).
- Full Testing of Voltage Transformers VTs (Turns Ratio, Polarity, Insulation Resistance and Winding Resistance).

Dates : From Jul. 2017 till Sep. 2018

Project : New West Damietta Add-On Steam Turbine CCGT 250MW (GE D202)

Job title : Electrical / Excitation Engineer

Job Description : • Installation / Commissioning and Start-up Generator Excitation System AVR EX2100e):

- Cabling/Connections to be matched with schematic drawing.
- Grounding, Hardware/Jumpers Check.
- Insulation resistance / Megger Test.
- Initial Commissioning (Checking Fans of Power Conversion Module (PCM) / Verifying Control Power).
- Controller Startup (Build / Download Parameters and Clear Trip signals/Alarms).
- Startup of Touch Screen Keypad.
- Simulation Test (Limits Verifications, PT Failure Detection

Verification).

- Temporary Load Checks (Dummy Load) + Zeroing VCO Offsets + Verifying Ground detection Alarm/Trip.
- Commissioning & Startup of STG and its auxiliaries (Turning Gear Motor, Lubrication System).
- Commissioning of Generator Protection Panel (GPP 2100e) and its interface Signals.
- Commissioning of Transformer Protection Multilin Devices (T60, T60U).
- Ensure the commitment of the contractors to the EPC contract specification.
- Ensure that the commissioning obligations of the project are carried out in accordance with the terms of EPC contract, quality and schedule in conformance with good practice of commissioning standards.
- Installation / Electrical Testing of Generator Terminal Enclosure.
- Document all electrical engineering activities and report on any contractual non-conformances.
- Provide expert technical advice on all electrical engineering activities.

Dates	:	From Apr. 2016 till Jul. 2017
Project	:	West Damietta Combined Cycle Power Gas Turbine Plant CCGT 750MW
Job title	:	Electrical Commissioning & Start-up Engineer
Job Description	:	<p>Ansaldo Energia 1x250MW Steam Turbine MT20:</p> <ul style="list-style-type: none">• Commissioning / Testing of Synchronization panel with SIPROTEC 7VE632 & 7VE611 Relays (Siemens).• Commissioning / Testing of Generator protection Panels with SIPROTEC 7UM622 relay (Siemens).• Transformer protection Panels with SIPROTEC 7UT relay (Siemens).• Commissioning & Startup of STG and its auxiliaries (Turning Gear Motor, Lubrication System and signals interfacing with DCS).• Commissioning of 220KV Substation including Circuit Breakers, CTs, LCC (Hyundai).• Commissioning/Testing of Protection Relays (MICOM P141, P143, P632 and C264).• Execute Site Acceptance Tests (SATs) of Generator Circuit Breaker FKG (ALSTOM).• Installation and Commissioning of power transformers 165 MVA and 8MVA:<ul style="list-style-type: none">- Mechanical Protection Check (Oil Level, Sudden Pressure, Buchholz relay, Temperature indication, OLTC interlock, Alarms function check).- Commissioning / Start-up tests (Turns Ratio, DC Winding Resistance, Vector Group Check, Tan delta/PF, NO load / Excitation Current test, Winding IR, Core IR).- OLTC and Local Control Panel (LCP) Function test.• Ensure that the commissioning obligations of the project are carried out in accordance with the terms of EPC contract, quality and schedule in conformance with good practice of commissioning standards.• Commissioning of LV Switchgear and MV Switchgear (Schneider, ABB).• On site, power transformer investigation and overhaul according to IEEE C57.152 Standard.

- Construction and Commissioning of Solar PV system with Total Capacity 105 KW.
- Closely monitor the schedule and quality of all commissioning activities.
- Document all electrical engineering activities and report on any contractual non-conformances.
- Provide expert technical advice on all electrical engineering activities.

Dates : From Jan. 2016 till Apr. 2016
Project : West Damietta Power Plant phase I - 4x125MW
Job title : Electrical Maintenance Engineer / Excitation TFA
Job Description : Four (4) Combustion inspection (CI) + DLN Upgrade Outages duties as following:

- Relays secondary injection Testing:
 - Generator protection Relay G60 (GE).
 - Transformer protection Relays T60, T60U (GE).
- MCC panel bucket testing, functional check & Cleaning.
- DC Panel Testing and functional check and cleaning.
- Testing Energy Power Meter (GE EPM 9650).
- Battery load testing (Fully Battery discharging Test) and cleaning.
- Exciter compartment testings' and functional (Simulation Test and Limits Verifications).

Dates : From Dec. 2014 till Dec. 2015
Project : New Damietta Power Plant 500MW
Job title : E&I Engineer / Excitation TA
Job Description : Fast track Project with 4x125MW GE Gas turbines Frame 9E:

- Document all electrical engineering activities and report on any contractual non-conformances.
- Construction, pre-commissioning, commissioning and energizing of 245KV GIS Substation (Alstom Grid).
- Synchronizing the Units with the national Grid.
- Testing Energy Power Meter (GE EPM 9650).
- Commissioning of Protection Relays G60, T60, T35, Miff (II).
- Commissioning of Generator excitation system / AVR EX2100 (Pre-commissioning, Simulation).
- Commissioning of 6.6/0.4KV Transformers (ABB, Eltas).
- Cold/Hot Loop Checks of (Turbine control system MARK VIe, Motor Control Center MCC, Excitation/AVR and Generator protection Panel).
- Commissioning of Generators (Elin 9A5, Brush BDAX) and KRM-100 and PRISMIC R10.

Dates : From Apr. 2013 till Dec. 2014
Project : West Damietta Power Plant phase I (500MW GE frame 9E)
Job title : Lead Electrical Maintenance Engineer
Job Description :

- Responsible for managing all aspects of the maintenance of the power plant electrical equipment by advising and coordinating the electrical maintenance works to ensure safe, reliable and efficient plant operations.
- Carry out routine maintenance on generation plant and associated

equipment and provide supervision for Electrical Technician(s) as required with field experience of Maintenance.

- Troubleshoot and repair of generation electrical plant and associated equipment to maintain the highest level of availability and reliability.
- Carry out and supervise new installations, modifications, and upgrades to electrical generation plant equipment as required.
- Accurate & timely completion of all documentation associated with maintenance work.
- Develop site specific preventive and predictive maintenance program and advice for planned and unplanned maintenance activities of the plant electrical equipment.
- Co-ordinate with Warehouse team for adequate inventory management by using CMMS.
- Advise for control of all maintenance documents as outlined in site Quality Management System.
- Ensure compliance with requirements for environmental, health and safety requirements in applicable plant operation advisory activities.
- Ensure implementation of Log-Out/Tag Out (LOTO) System.
- Support optimization of plant maintenance strategies with the aim of achieving lower cost operation and/or increased efficiency and output.
- Troubleshooting using Toolbox ST software (MARK VIe).
- Maintenance Planning and execute Tasks using CMMS Program.
- Four (4) Hot Gas Path inspection (HGPI) Outages duties as following:
 - Relays secondary injection Testing.
 - Generator protection Relay G60 (GE).
 - Transformer protection Relays T60, T60U (GE).
 - MCC panel bucket testing, functional check & Cleaning.
 - Testing Energy Power Meter (GE EPM 9650).
 - DC Panel Testing and functional check and cleaning.
 - Battery load testing (Fully Battery discharging Test) and cleaning.
 - AVR (EX2100) testing and functional (Simulation Test and Limits Verifications).

- Dates** : From Dec. 2011 till Apr. 2013
- Project** : West Damietta Power Plant phase I (500MW GE frame 9E)
- Job title** : Electrical Engineer / Excitation TA
- Job Description** :
- Commissioning and installation Generation Circuit Breaker (Alstom).
 - Commissioning of 400V AC MCCs (INABENSA, IMSAT).
 - Commissioning of EX2100 and GPP2100.
 - Commissioning of Generators (Elin 9A5, Brush BDAX) and KRM-100 and PRISMIC R10.
 - Supervise the Electrical Installations Works of the PEECC, Turbine, Generator and Auxiliaries Skid.
 - Commissioning of protection Relays (MICOM P141, P143, P632, P437 and P444).
 - Commissioning the incoming and outgoing MV cells and SEPAM protection devices.
 - Installation and Commissioning of power transformers 310 MVA (TAMINI):
 - Mechanical Protection Check (Oil Level, Sudden Pressure,

Buchholz relay, Temperature indication, OLTC interlock, Alarms function check).

- Commissioning / Start-up tests (Turns Ratio, DC Winding Resistance, Vector Group Check, Tan delta/PF, NO load / Excitation Current test, Winding IR, Core IR).
- OLTC and Local Control Panel (LCP) Function test.
- Supervise the Cable Routing through Pulling Chambers and erection of the cable Trays / ducts.
- Commissioning of DC System (GFS, Borri and SAFT Chargers).
- Cold/Hot Loop Checks of (Turbine control system MARK VIe, Motor Control Center MCC, Excitation/AVR and Generator protection Panel).