** Engr. Hafiz**

**PERSONAL DETAILS**

**PEC No: ELECTRO + (PEC Supervisory Certificate)**

**Email:** **Hafiz.220072@2freemail.com**

# Experience profile:

Approximately 2.5+years of Professional Experience in Protection **and Testing &Commissioning** of Electrical infrastructure in private industry. I have professional experience of **seven month** as Electrical/Instrument Commissioning Engineer with SEPCOIII at **1230 MW CCPP Haveli Bahadur Shah, Jhang** and **One Year seven Months** as electrical engineer at NEIE(North East International Electric Corporation) AL Hussain Contractor Lahore. Extensive hands on Experience in Electrical Power **Substation** Project.

# Bachelor of Science (B.sc) in Electronic Engineering

Institute : **University College of Engineering & Technology**

 **The Islamia UnSiversity of Bahawalpur, Pakistan**

# Professional Strength:

* Hand on experiences in the all Electrical schemes, Trip Circuit, Closing Circuit, Annunciation & Indication Control Circuit, Event and Fault Recorder Circuits, Synchrocheck and Auxiliary AC&DC supply Schemes.
* Specialized to Commission AIS substation, familiar with electrical system protocols and configuration
* Expertise in Testing and Commissioning of Power Transformers, Circuits breakers, Isolator, CT, CVT Functionality procedure to checks.
* Hands on Experience of Transformer and other Equipments functional testing.
* Execution Experience of Substation including installation and termination of SWITCHTGEAR, Control, Fault Recorder, Event Recorder and Relay panel.
* Execution Experience of 500&220kV Substations and Transmission Lines Construction, Testing and commissioning.
* Entire Electrical installation works such as Switchgear, Transformers, Cable lying and termination, Cable trays and GI Conduits for cable routing, Plant lighting and grounding system.
* Site HSE implementation.

# EXPERIENCE:

**1. Employer:** NEIE (North East China International Electric Power Corporation)

Al-Hussain Traders & Contractors Lahore

**Title: Electrical Engineer**

# Duration: 26 NOV 2015-26 JAN 2017.

**A. Project name:** Design, Manufacture, Supply, Installation, Testing & Commissioning Of

Plant for up gradation of the Existing 220KV Shikarpur Substation to

 500KV level

**B. Project name:** Design, Manufacture, Supply, Installation, Testing & Commissioning Of Plant 220**/**132KV New Chishtian Substation**.**

**Consultant:** BARQAAB CONSULTING SERVICES (PVT) LTD

**Scope:**

* 500kV Switchyard with One and Half Breaker Scheme having three complete diameters comprising of four In/Out Line Bays and Two 500/220kV, 200MVA Autotransformer Bays and one spare Unit.
* Extension of existing 220kV Switchyard by adding two 220kV complete diameters with One and a Half Breaker Scheme comprising of two Line Bays and Two 500/220kV,200MVA Autotransformer Bays.
* Modification/Addition in Existing 220kV Protection System.

**Supervised Activities:** **Perform the following activities:**

* Design of 500kV and 220kV Primary and Secondary System of Substation and Modification in Existing 220kV Bus bar and Breaker Failure Protection.
* Installation of different kinds of instruments and cable tray according to P&ID
* Modification in Remote End by replacing Old Electromechanical to new Numerical relays. Verification of Tele-Protection Schemes.
* Fixing of 500KV & 220KV Relay & Control Panels, AC/DC Distribution panels.
* Control Cable Laying, Glanding, Unshielding, piping and termination of 220KV & 500KV Mk’s, Relay and Control Panels.
* AC/DC Power Cable Laying and termination
* Preparation of wiring as well as cable schedule based on electrical drawing.
* **Also perform circuit verification test, loop test and other like as:**
1. Lockout circuit test.
2. Closing circuit test.
3. Breaker Failure initiation circuit test.
4. Auto recloser Block circuit test.
5. Synchronization circuit test.
6. Multiplication circuit test.
7. Tripping circuit
* Installation of Fire protection system for Transformer.
* Design of AC and DC Auxiliary Supplies of Substation.
* Testing and commissioning of 220 volt Battery Banks performing Capacity Test.
* Testing of Two Banks of 3\*200MVA, 500/220kV Auto Transformer performing Tests Capacitance & dissipation Factor test, Insulation resistance Test, Transformer turns ratio test, Winding resistance test, open Circuit and Short Circuit Test, Zero Sequence and Circuit verification Tests
* Testing of all Control and power cable performing insulation resistance test.
* Testing of 500/220KV Switch yard Current Transformers, Capacitor Voltage Transformer and Transformer Bushing current Transformers performing tests Secondary winding resistance, Primary injection test, Polarity test of each core, Insulation resistance test, Magnetizing characteristics, Measurement of Capacitance & dissipation factor test, CT & CVT circuit verification test.
* Testing of 500/220KV Circuit breaker performing tests contact resistance test, timing test for complete open-close-open Cycle timing of contacts, SF6 gas leakage test, Opening and closing coil resistance test, Dew Point test and SF6 gas Purity test.
* Parallel Operation of Auto Transformer Tap changers.
* Testing of 500/220kV Isolator performing Contact resistance test
* Mesh integrity test and Earth Resistance Test performing on Grounding Gird.
* Testing and commissioning of Emergency Diesel Generator on ATF Mode.
* Electrification of 500/220KV Control House Building and Switchyard.
* Lightening Protection of Control House Building and Generator Room.
* Keeping and maintaining Daily/Monthly progress reports. Test protocols and office correspondence regularly.
* Hipot Test of 220KV &500KV Bus bar, and 11KV Cables
* Relay testing, configuration and marshaling.
* Working on Telecom & SCADA system at 500/220kV Shikarpur(Installation and Fixing of panels, LMU, interconnection of Co-axial and Control cables.
* Testing of HF co-axial cable performing tests characteristics impedance test, measurement of attenuation in frequency range(40 to 500KHZ),conductor resistance, insulation resistance, mutual capacitance, high voltage with stand capacitance.

**2. Employer:** Power China (Power Construction Corporation of China)/SepcoIII

**Title: Electrical Commissioning Engineer**

# Duration: 27 JAN 2017-20 July2017.

**Project: 1230MW CCPP Haveli Bahadur Shah Jhang, Pakistan**

**Consultant:** National Engineering Services Pakistan (Pvt.) Limited.

**Scope:**

* Testing and commissioning the 500KV substation perform all the activities as above mention.
* Extensive Hands of Experience in different Protection Schemes used in Power house.
* Specialized to commission AIS substation, Familiar with electrical system protocols and configuration.
* Commissioning of 550MVA GSUT, 38MVA UAT (Unit Auxiliary Transformer) and 400KVA Excitation Transformer.
* Commissioning of GIS system of UN=20KV GCB (Generator Circuit Breaker) and LCI TF.
* Well Knowledge about LS2100e Load Commutated Inverter and EX2100e Excitation system for 9HA.01 GAS Turbine.
* Handling, troubleshooting and solving fault problems in Power house.
* Solving all problems in Electrical HT (11, 33,66kV) and LT (440,220Volt) Transmission system.
* Well Knowledge about Generation, Transmission, Distribution and Utilization of power system.
* Worked directly with Project team in all activities of Engineering, Procurement & Construction.
* Review and approval of, Site Acceptance Tests procedures, Testing & Commissioning procedures, RFI (Request for Inspection), Contractors inspection and test plan.
* Perform all electrical commissioning testing and Energization activities.
* Coordinating with the Client/Consultant, Project Management Team of Main-contractors, Sub- contractors and other service Contractors.
* Worked as an operation Engineer during Back Energization of 500KV substation, GSUT (Generator Step-up Transformer), GCB (Generator Circuit Breaker) and GT (Gas Turbine).
* Well experience Gas Turbine Initial Capacity test, Performance test, RRT (Run Reliability Test), Full Load Rejection Test, GT Governor Droop test, GT DLN (Dry Low Nox) Tuning test.
* Perform all the Reactive Capability at 60% load & at 100% load of Gas Turbine.
* Perform step response/ AVR Droop Test as per PPA (Power Purchasing Authority).
* Well known out operation of 9HA.01 GE (General Electric) Gas Turbine system i.e. monitoring of compressor system, Combustion Fuel system, Turbine Compartment system and Exhaust system.
* Coordinate with **NPCC (National Power Control Centre)** an important role for Load management, power factor and Daily Energy Report & generation status report.
* Well known out operation and maintenance of Generator Substation switchyard and cooling system.
* Maintenance of All Types of Field Instruments and Trouble Shooting for Smooth Running of the Continuous Process Plant.
* Configuring and Faults Diagnosis of DCS, PLC, SCADA, RTU, Profibus Communication, Analyzers and Control Loops.
* Well Understanding of Field Instrumentation and Field Signals.
* Practical Knowledge of Pre-Commissioning and Commissioning Procedure.

# **Internship at Thermal Power Plant Muzaffar Garh**. (320 MW DCS Based control)

Work as an Internee Engineer for two month. Understanding Power Generation process and familiarizing with electrical & electronics instruments i.e. temperature, pressure, level and flow measurements and Distribution of Supply. Also familiar to calibrate the temperature, pressure gauges.

# SAFETY Conscious:

* Fully Aware Of Industrial Safety And Permit-To-Work (PTW) System For Personal Safety As Well As Plant Safety Or Emergency Handling. Follow The SAFETY Procedure Standards Like Housekeeping.
* Having Good Knowledge Of Plant Safety Rules & Regulations.
* Observing Safety In Accordance With Government And Company Standards.
* Good Knowledge About Permit To Work Systems (PTW).
* Capacity To Do Job Alone By Following Safety Rules & Regulations.

# Testing Equipment Used:

Primary Injection Test Set (ISA, KAM5.12/ Italy),

Capacitance & Dissipation Factor Test Set (Biddle/ Sweden), Meager (ABB,10KV), Transformer Turns Ratio Test Set (AEMC, (8V&1mA) / USA),

Timing Test Set (TM 1600/ Sweden),

Contact Resistance Test set (MOM 600A / Sweden),

HI POT Test set (PGT 80-D5/ Germany), Dielectric Test Set DC 80KV (RTIU-100KV/ China)

**REFERENCES**:

***Will be furnished on request***