

# **MOSAB MAMOUN ALIM ABDELRAHIM**



## **Curriculum Vitae**

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Khartoum, Sudan

### **Career Objectives:**

I am “can do” professional, a result oriented and highly experienced candidate, with a strong educational and professional background, In addition to being a very confident, well-organized, highly motivated, self-discipline applicant, initiative, neat, reliable and devoted person; I am very much capable to Communicate and work under stress while performing in ways that enabling me to reach self-esteem and self recognition

### **Contribution Areas to Organization:**

- Maintenance and configuration of Protective Relays
- Commissioning, Testing & Operation of Substation Primary Equipments and Switchgears.
- Excellent interpersonal skills with people from all levels of corporate management.
- My personal qualities include being consistent, honest, and dependable and a go getter attitude.
- I have good inter- personal & relationship management skills and a positive attitude.

### **Personal Information**

- Profile: Male, 28, Single
- Nationality: Sudanese
- Date & place of birth: 21/7/1991 - Greater Wad Medani, Sudan
- National Service: Completed
- Current Location: Sudan
- Current position: Power System Protection Engineer
- Company: Sudanese Electricity Transmission Co. Ltd (SETCO)

### **Academic Qualifications:**

2008- 2013: **Omdurman Islamic University**

Faculty of Engineering

**B.Sc. (Honors) in Electrical and Electronic Engineering,  
1<sup>st</sup> Class Division (Specialization in Power Systems)**

2013-2015: **University of Khartoum**

Graduate College

**M.Sc. in Electrical Power Engineering**

***Power System Protection Engineer – Protection Department***

- Continuously analyze and monitor Power NW performance and proposed solution & development.
- Forecast effect of Future Load on the NW.
- Check performance of protective devices in the NW.
- Implemented the outcomes of the electrical protection system study.
- Deeply Dealing with electrical equipment and systems (Switchgears (GIS, MG 6, MC Set, NXAIR, 8DB10...etc.) Relays (SIPROTEC, Sepam80, MiCom, ABB..etc), Transformers, EDG, Motors, transmission systems, UPS, VFD, Soft starters, PDCS...etc.) using various test devices and software.
- Propose modification/change for equipment/system improvement/betterment.
- Update settings of protection system according to selectivity study.
- Re-wiring connection for protective relays and carried out primary/secondary injection test.
- Support Projects and Engineering Service Department to dismantle and replace existing Transformers and Switchgears with new ones.
- Coordinate with other technical disciplines for smooth job.
- Prepare documents of electrical maintenance jobs.
- Ensure the availability of spare parts and issuing required material.
- Issue work permit along with job requirements and time frame.
- Designing electrical installations for EHV, HV and MV in normal and hazardous areas, as following:
  - HV, MV and LV cable lines.
  - Step-down transformers  
(500/220/33kV, 220/110kV, 220/110/33kV, 220/110/11kV, 110/66Kv, 33/11kV).
  - EHV and HV lines.
- Electrical connections between Substations and distribution panels.
- Performs relay setting, CT/ VT calculation, commissioning, testing & maintenance activities.
- Assist with the designing and implementing of protective schemes for new substations.
- Carries out routine testing and calibrations on relays.
- Uses specialist configuration software to configure numerical and static relays using the laptop computer on site.
- Manages the relay co-ordination settings to allow the smooth operation of the Company's networks and the interfaces with generation and distribution Companies.
- Undertakes problem solving and analysis of potential problems throughout the protective schemes.
- Maintains a secure database of records and drawings related to the protection schemes and equipment.
- Analyses system outages and proposes modifications and changes to the protection systems for management approval.
- Coordinates all the activities related to protection with Load Dispatch Center LDC, O&M departments
- Undertakes the training activities as directed by Management.
- Diagnose system troubleshooting and apply the most appropriate and economical solution.
- Follow point to point tests between substation/power stations and SCADA/EMS.
- Participate in substation project committees, prepare technical specification, for tenders and evaluate the offers.
- Make necessary schematic electrical drawing modification.
- Prepare the plane of work for commissioning, witnessing and testing substation 110/33/11Kv circuit breaker, transformer & protection panel.

- Prepare the plane of work for commissioning, witnessing and testing substation protection panel.
- Prepare the plan of work for commissioning and testing current transformer (C.T), voltage transformer (V.T).
- Prepare the plane of work for commissioning, witnessing and testing substation protection relays.
- Familiar with operation and testing of all protection relays.
- Familiar with operating commissioning, witnessing and testing of 220/110/33/11Kv Substation.
- Prepare the Setting calculation.
- Familiar with operation of ETAP software.

*January 2014- February 2017 SETCO (Sudanese Electricity Transmission Co. Ltd)*

**Sudan**

***Junior Power System Protection & Commissioning Engineer - Protection Department***

- Familiar with operating commissioning, witnessing and testing of 220/110/33/11Kv Substation
- Commissioning, witnessing and testing substation 110/33/11Kv circuit breaker, transformer, CTs, VTs and protection panels.
- Familiar with Commissioning and testing substation protection relays panels.
- Familiar with commissioning, witnessing and testing current transformer (C.T), voltage transformer (V.T).
- Operating and maintenance and testing of 220/110/33/11Kv Substation Protection schemes.
- Operating and maintenance and testing of 500/220/33Kv Substation Protection schemes.
- Familiar with Numerical & High Impedance Bus Bar Differential, Transformers, Breaker Failure, Digital Fault recorders, Feeder & all Sub Station Equipments.
- Familiar with all type of relays such as: -
  - ABB (all type of protective relays).
  - AREVA (all series).
  - SIEMENS relays.
  - SEPAM (all types).
  - SCHNEIDER (all series).
- Assist with the designing and implementing of protective schemes for new substations equipments.
- Familiar with maintenance (corrective maintenance and preventive maintenance)
- Prepare the plane of work for commissioning and testing current transformer (C.T), voltage transformer (V.T).
- Prepare the plane of work for commissioning, witnessing and testing substation protection relays.
- Follow point to point tests between substation/power stations and SCADA/EMS.
- Testing of Transformers up-to 150MVA:
  - o Insulation Resistance & Polarization Index
  - o Capacitance & Dielectric Dissipation Factor (C&tand)
  - o Winding Resistance.
  - o Voltage Ratio.
  - o Short Circuit Test (Impedance Test).
  - o Vector Group.
  - o Transformer Alarms/trip test.

- Testing of Circuit Breakers:
  - o Insulation Resistance
  - o HIPOT (Leakage Current)
  - o Contact Resistance
  - o CB Operations
  - o CB Alarms/trips
  - o CB Timing
- Testing of CTs up-to
  - o Insulation Resistance.
  - o Capacitance & Dielectric Dissipation Factor (C&D).
  - o Secondary Resistance
  - o Ratio Test o Polarity Test.
  - o Open Circuit Characteristics (Knee Point Voltage)
- Testing of VTs
  - o Insulation Resistance
  - o Ratio Test
  - o Capacitance & Dielectric Dissipation Factor(C&D)
  - o Polarity Test
- Testing and Commissioning of Protection Panels & Wiring
  - o Insulation Resistance
  - o Setting up the relays
  - o Relay Timing
  - o Stability check on through faults
  - o Setting Calculations
  - o Relay Operations
  - o Scheme Functionality Checks.

➤ **Major Tasks Performed:** Jobs carried out during the period SETCO:

**Transmission Field Jobs:**

4/2016	NEW GADRIF 220 kV AIS Substation 110 kV Line Bays -Shahidi Ethiopian Interconnection- Installation, testing and Commissioning Reverse Power Relays – 2X220kV circuits (Schneider MICOM P345)	Team Member
8/2016	Kilo X 110 kV AIS 110/33/11 kV configuration and Commissioning of one transformer 60 MVA (SIPROTEC 7UT,REF542Plus,SPAJ140,MCAG14, MCGG22)	Team Member
12/2016	ALSHOWAK 110 kV AIS Substation 110 kV Line Bays -UPPER ATBARA- Commissioning – 2X220kV circuits (Schneider MICOM P543, P127, P741, P742)	Team Member
10/2016-1/2017	Transmission Substations 220/110/33/11 KV Annual Protection Preventive Maintenance	Team Member
2/2017	SCHNEIDER BARBAR 220 kV AIS Substation Commissioning – 2 x 60 MVA Transformer (220/33/11 kV) and 4X220 kV Lines (Areva P442,P142,P139,P122,P633,P741,P742)	Team Member
10/2016-2/2017	SCHNEIDER ABUHAMAD 220 kV AIS Substation Commissioning – 2 x 60 MVA Transformer (220/33/11 kV) and 4X220 kV Lines (Schneider P442,P142,P139,P122,P633,P741,P742)	Team Member
4/2017	SCHNEIDER GHoubosh 220 kV AIS Substation Commissioning – 2 x 60 MVA Transformer (220/33/11 kV) and 2X220 kV Lines (Schneider P442,p443,P142,P139,P122,P633,P741,P742)	Team Member
3/2017-5/2017	SCHNEIDER HASSAD 220 kV AIS Substation Commissioning – 2 x 60 MVA Transformer (220/33/11 kV) and 2X220 kV Lines (Schneider P442, P142, P139, P122, P633, P741, P742)	Team Member

6/2017-12/2017	SCHNEIDER SOBA 220 kV AIS Substation Commissioning – 2 x 150 MVA Transformer (220/33/11 kV) and 4X220 kV Lines (Schneider P442, P142, P139, P122, P633, P741, P742)	Team Leader
6/2017-12/2017	SCHNEIDER SOBA 110 kV AIS Substation Commissioning – 2 x 100 MVA Transformer (220/33/11 kV) and 2X110 kV Lines (Schneider P442, P142, P139, P122, P633, P741, P742)	Team Leader
12/2017	MERINGAN 220 kV AIS 220/33/11 kV upgrading of transformer 1 Bay and Commissioning – 80 MVA to 100 MVA (ABB RET 521, MCAG14, P142, SEPAM 80, SPAJ 110C)	Team Member
1/2018	MERINGAN 220 kV AIS 220/33/11 kV upgrading of transformer 2 Bay and Commissioning – 80 MVA to 100 MVA (ABB RET 521, MCAG14, P142, SEPAM 80, SPAJ 110C)	Team Member
2/2018	SHAGARA 110 kV AIS 110/33/11 kV replacing of new transformer 2 Bay and Commissioning – 35 MVA (Schneider SIPROTEC 7UT, P143, MCGG22,28, SPAJ 110C )	Team Member
10/2017-2/2018	Transmission Substations 220/110/33/11 KV Annual Protection Preventive Maintenance	Team Member
4/2018	SHOWAK 220KV AIS 220/33/11 KV replacing of new Zig zag transformer bay in transformer 1(Areva P633, P122, P127,P143)	Team Member
7/2018	ROSIERS 220KV AIS 220/33/11 KV replacing of new Zig zag transformer bay in transformer 1(Areva P633, P122,P127,143)	Team Leader
10/2018-2/2019	Transmission Substations 220/110/33/11 KV Annual Protection Preventive Maintenance	Team Leader
4/2019	MERINGAN 110 kV AIS 110/33/11 kV upgrading transformer 3 Bay and Commissioning – 60 MVA to 80 MVA (Schneider MICOM P633, P143, P142, SEPAM 80, SEPAM 40)	Team Member
4/2019	MERINGAN 110 kV AIS 110/33/11 kV upgrading transformer 3 Bay and Commissioning – 60 MVA to 80 MVA (Schneider MICOM P633, P143, P142, SEPAM 80, SEPAM 40)	Team Member
10/2019-1/2020	Transmission Substations 220/110/33/11 KV Annual Protection Preventive Maintenance	Team Member
12/2019-1/2020	GENIED 110 kV AIS 110/33/11 kV upgrading transformer 1 Bay and Commissioning – 35 MVA to 60 MVA (Areva MICOM P633, P143,P142,P122,P127,P741,P742)	Team Leader
1/2020	SENNAR JUNCTION 110 kV AIS 110/33/11 kV replacing new transformer 4 Bay and Commissioning – 35 MVA (Schneider MICOM P633, P143,P142,SEPAM 80)	Team Member
1/2020	HAI ABDALLA 110 kV AIS 110/33/11 kV Upgrading transformer 2 Bay and Commissioning – 35 MVA (Schneider MICOM P633, P143,P142,SEPAM 40)	Team Member

**Major Relays Handled:**

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- Alstom: P633, P631, P442, P437, P741, P742, P142, P543 KBCH, MCAG, MCGG, MBCH etc.
- ABB: REL 511, REL 521, RET 521, RET 511. REL 316\*4, RET 316\*, REL670, RET670, SPAJ 110C, SPAJ 115C, SPAJ 140C etc.
- SIEMENS SIPROTEC: 7UT, 7SA series
- AREVA/Schneider: P139, P14x , P44x , P59x, P543, P740, P741, etc.

**Major Tests Equipment Handled:**

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- Omicron – CMCX56 families
- Omicron - CPC100
- Omicron - CT Analyzer
- Megger – TRAX 600
- Programma – Sverker 760,750 relay test unit.
- ONLY relay test unit (Chinese)
- Megger Insulation test kit.

**Software & Packages:**

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- Fault Recorder Interface for BEN (5000 & 6000)
- SIEMENS SIPROTEC (DIGSI 4.6/4.8)
- ABB (Variety Interfaces)
- S1 Studio (AREVA – Schneider)
- Omicron test universe.
- Basic knowledge in ETAP, MATLAB
- Microsoft Office - Word, Excel, Access, etc.

*September 2013 - December 2015 (Omdurman Islamic University)*

**Sudan**

*Part-time Teaching Assistant - Electrical and Electronic Engineering Department*

**Areas of Expertise:**

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- Good Command of Arabic, English (Writing & Oral)
- PC literate and able to use standard packages
- Teamwork & Cooperation
- Multiple demands handling
- Work under pressure
- Reports & Presentations
- Negotiations
- Confident and positive ‘can-do’ attitude
- Communication techniques
- Good engineering aptitude and transferable skills & developed from academic
- Analytic thinking, problem solving & organizational skills

**References:**

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References available upon request.

