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Contact Information

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Mohammed Hussien Hassan Musa Electrical Engineering

Personal information

Nationality Sudanese

Resident Khartoum

Birth date Sudan – Khartoum

Gender 29/05/1981

Marital Status Married

Religion Muslim

Educations

B.Sc.	Sudan University of Science and Technology: Electrical Engineering	2001-2005
M.Sc.	Sudan University of Science and Technology: Power system	2007-2010
Ph.D.	Southwest Jiaotong University: power system control and automation (Final defence was held at 21. Nov. 2018)	2014-2018

Career objective

I have both the academic and work experience that enables me to handle relevant work properly and efficiently. As well, I always look forward to developing my skills to procure a position that suits my passion.

Attitude

- I always try to keep a positive attitude to show how much I enjoy my job. Every day I come to work with a smile on my face.
- I am good at working teams, I constantly congratulating others on their successes and always motivating my team to keep improving.
- I try to keep an even demeanor through both good times and bad.

Skills

- Ability to deliver under pressure.
- Willing and able to adapt quickly to change and changing priorities.
- Able to work with others effectively within a global team.

- Well-Organized.
- Dealing with Internet.
- Ability to communicate effectively at different organizational levels and across a multicultural environment.

Computer Literacy

- Microsoft office (Word, Excel, PowerPoint & project)
- Computer languages (MATLAB program)
- AutoCAD
- Project managing software's (Primavera, MS Project)

Work experience summary

- National electricity corporation (NEC) from 2006 to 2010
- Sudanese Thermal Power Generation company (STPG) from 2010 up to date
- Participated in commissioning teams for transmission and substations with different voltage levels 220kV, 110kV, 66kV, 33kV and 11kV.
- Strongly experience of Installation, Commissioning, Maintenance & Testing of Power Transformers and Aux. transformer such as:
 - ✚ Ratio & Vector group Test
 - ✚ Winding Resistance Test.
 - ✚ Insulation Test.
 - ✚ Leakage current test (open circuit test).
 - ✚ Short circuit test.
 - ✚ Magnetic balance test.
- Protection system coordination and settings calculation for the national power grid requirements.
- Handling daily events on the network.
- Analysing faults and protection trips and solving problems.
- Performing protection system maintenance (corrective and preventive).
- supervise and provide training to others on protection applications theory and subsequent relay testing techniques
- Protection relays of transformers & Switchgear commissioning engineer at KOSTI thermal Power Station (KTPS) 4*125MW
- Generator protection commissioning engineer in KOSTI Thermal Power Plant (KTPS) 125mw
- Representing protection engineer in all projects belong to STPG
- Responsible for all technical meetings with contractors, manufacturers and designers.
- Design, Preparation and Modification of Protection aspect and Control Systems for STPG.
- Electrical Site engineer of rehabilitation project for Khartoum north power station (2*60 +2*30) MW
- Participated preparation of Tender, kick-off meeting, design meeting, route surveying, soil investigation, and erecting in ALFULA power project transmission and substation (four s/s 220kV, 2*60 MVA power transformer and 1000 km transmission line in western Sudan).
- KOSTI substation commissioning
 - ✚ 4*150 MVA power transformer (11, 220 KV) and protection relay AREVA p633.
 - ✚ 4*16 MVA unit transformer (11, 6.6 KV) and protection relay AREVA p632.
 - ✚ 2*25 MVA station transformer (220, 6.6 KV) and protective relay AREVA p633.

- KOSTI power station 4*125 MW
 - ✚ Generator protection relay AREVA p343, p345.
 - ✚ 6.6kV feeder, motor feeder and aux transformer feeder protective relay. SIEMENS SIPROTEC 7UT612, 7SJ61, 7SJ62 and AREVA p122.
 - ✚ 0.415kV feeder and motor feeder protective relay AREVA p111, p92 and p112.
 - ✚ CTs, VTs, CBs power transformer site acceptance e test.
 - ✚ Loop checking.
- ELFASHER substation:
 - ✚ 3*5 MVA set up transformer 11/33kV protective relay REROLLEDOUBAIS-M, ARGUS over current.
 - ✚ 2*1.2 MVA power transformer protection relay VAMP40
 - ✚ CTs, VTs, CBs power transformer site test.
- ELFASHER power plant:
 - ✚ Diesel generator 3*3.1 MW with protective relay BICKWITH ELECTRIC M-3425A.
 - ✚ 11kV feeder with protective relay VAMP40
 - ✚ 0.415kV feeder with protective relay SPAJ140C
 - ✚ Load sharing & synchronising panel DEIFAGC200
- ELGENENA substation:
 - ✚ 2*5 MVA set up transformer 11/33kV protective relay REROLLEDOUBAIS-M, ARGUS over current.
 - ✚ 2*1.2 MVA power transformer protection relay VAMP40
 - ✚ CTs, VTs, CBs power transformer site test.
- ELGENENA power plant:
 - ✚ Diesel generator 2*3.1 MW with protective relay BICKWITH ELECTRIC M-3425A.
 - ✚ 11kV feeder with protective relay VAMP40
 - ✚ 0.415kV feeder with protective relay SPAJ140C
 - ✚ Load sharing & synchronising panel DEIFAGC200
- Khartoum North Power Station (KNPS):
 - ✚ Predictive and annual maintenance phase2 (2*30 MW) with protective relay AREVA p344
 - ✚ 2*150 MVA set up power transformer with protective relay p633, p632 and p142
 - ✚ 2*20 MVA (11/6.6) unit transformer with protective relay p632 and p142.
- Worked Khartoum North Power Station as electrical maintenance engineer with Experience due to diligence reports, concept studies, bid specifications, bid evaluations, detail design, engineering, design approval, commercial follow-up, supervision of erection and commissioning and training client's personnel concerning in electrical equipment of power plants.
- Worked as a Project engineer of transferring synchronisation of gas turbine unit 25 MW from distribution network to synchronise at national Grid 110KV (design and commissioning).

Training Courses

- Training in all department of national electric corporation (hydro & thermal power station, transmission line & substation, distribution and sells and marketing) from 11/2006-7/2007 Sudan
- ALFULA power project (3*135 MW)
- Rehabilitation of Khartoum north power station (2*60 +2*30) MW
- Training course of maintenance and operation of electrical equipment in **EGCO-Thailand**

- Programmable logic and control course
- AutoCAD Level One. 20th of October, 2009. Intelligentsia for Training & Human Resources Development
- Basic Tools for Improvement. (10_11/15_11_2007). National Electricity Corp. (NEC).
- Khartoum north power station as electrical maintenance engineer from 2010 until 2013
- Training course in omicron academy '**Cergy-France**' from 4-13 September 2013 (basic protective relaying and power system protection testing with OMICRON test universe & MICRON PTL).
- Training course in omicron academy '**Berlin-German**' from 16-20 September 2013(Generator and motor protection testing with OMICRON test universe).

Tools and Software application expertise

- AREVA MICOM –S1 family
- SIEMENS SIPROTEC family (DIGSI 4.4/4.7).
- VAMP
- BICKWISE ELECTRIC IPSCOM M-3425 Series (M-3820D BICKWISE)
- BASLER ELECTIC (BESTCOMS for BE1-GPS100)
- GE (Ener Vista UR Setup)

Equipment's used:

- Secondary injection: OMICRON 156, CMC356, SVERKER760 and FREJA 300
- Primary injection kits: MEGGER TTR 300, primary current injection, primary variable voltage source
- CT analyser, winding resistance, contact resistance, MEGGER insulator tester and CPC 100

Language Skills

- Arabic language as mother tongue
- Fluency English as second language
- Little Chinese language

Publications

1. M. H. H. Musa, Z. He, L. Fu, and Y. Deng, " A covariance indices-based method for fault detection and classification in a power transmission system during power swing," International Journal of Electrical Power & Energy Systems, vl. 105. Pp. 581-591, 2019.
2. M. H. H. Musa, Z. He, L. Fu, and Y. Deng, "Linear regression index-based method for fault detection and classification in power transmission line," IEEJ Transactions on Electrical and Electronic Engineering, 2018.
3. M. H. H. Musa, Z. He, L. Fu, and Y. Deng, "A correlation coefficient-based algorithm for fault detection and classification in a power transmission line," IEEJ Transactions on Electrical and Electronic Engineering, vl. 13, pp. 1394-1403, 2017
4. M. H. H. Musa, Z. He, L. Fu, and Y. Deng, "A cumulative standard deviation sum-based method for high resistance fault identification and classification in power transmission lines", Protection and Control of Modern Power Systems, 2018, DOI: 10.1186/s41601-018-0102-4

5. M. H. Musa, L. Fu, Z. He, Y. Deng, and L. Kai, "Variance index-based method for fault detection and classification in power transmission line," in Energy, Power and Transportation Electrification (ACEPT), 2017 Asian Conference on, 2017, pp. 1-7

Membership

- Sudan engineering council registration
- Sudanese Engineering society

References

- Professor He Zhengyou, Electrical Engineering School, SWJTU, Chengdu, Sichuan, China TEL: 13908086782
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- Engineer: ALI OSMAN ADHAI (head sector of ALFULA project electrical department) TEL: +249911268745