



Hussein Mohamed Hussein Hassan

Electrical Assistance Doctor Engineer



26/03/1993



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Marital Status: Married

Organized electrical engineer with over 9 years of experience in testing and configuring protection main relays for high-voltage and medium-voltage systems. Proficient in distance protection relays (SEL-411L, ABB REL670, Siemens 7SA522) and differential protection systems (ABB, Siemens, AREVA, GE,....etc) for transformers and bus bars, ensuring reliable fault detection and system stability. Skilled in implementing REF protection for transformers and configuring Automatic Voltage Regulators (AVR) for optimal performance. Experienced in conducting CT and VT loop testing, stability tests, circuit breaker testing, and detailed scheme checks for protection panels. Seeking to leverage my expertise in a challenging role focused on innovative engineering solutions.

EDUCATION

Pre-Ph.D. in Electronics and Electrical Communication Engineering

Menoufia University| 2022 - 2023

Grade: Excellent with Honors

M.Sc. in Electronics and Electrical Communication Engineering

Menoufia University| 2017 - 2022

Grade: Excellent with Honors

B.Sc. in Electronics and Electrical Communication Engineering

Kafr El-Sheikh Higher Institute for Engineering and Technology, Egypt | 2011 - 2016

Grade: Excellent with Honor grade, and achieved **first place** in my communications and electronics engineering faculty studies during five academic years overall upon graduation.

Graduation Project:

Wireless Power Factor Monitoring through Mobile System

Project Grade: Excellent

AWARDS

1. Received the Best Solution Design Award from the CEO of Madkour Group, in 2022.
2. Military Service: Exempted, Egyptian Military Forces, Soldier, 2016 / 2017 and I have a certificate as an Ideal soldier from military forces, 2017.
3. First Place in Engineering Training West Delta for Electrical Production, 2013.

WORK EXPERIENCE

Senior Installation, Protection, Testing, and Commissioning Engineer

Modern Rooting Contracting – MRC-KSA | April. 2024 - Present

Main Protection Relays Testing, Configuration, and Project Management

- **Distance Protection Relays:** Expertly tested and configured relays such as SEL-411L, ABB REL670, and Siemens 7SA522 for line protection, ensuring precise fault detection and isolation for high-voltage systems.
- **Differential Protection Relays:** Configured and tested differential protection relays from ABB, Siemens, AREVA, and GE for transformers and bus bars, providing fast fault clearance and maintaining system stability.
- **REF (Restricted Earth Fault) Protection:** Implemented REF protection schemes for transformers, enhancing security against earth faults.
- **Automatic Voltage Regulators (AVR):** Configured AVRs for transformers, ensuring stable voltage regulation and optimal performance.
- **CT & VT Loop Testing:** Performed comprehensive current transformer (CT) and voltage transformer (VT) loop tests (both secondary and primary) to validate accuracy and functionality of high-voltage substation protection systems.
- **Stability Tests:** Conducted transformer and bus bar stability tests to ensure reliable performance under fault conditions and proper coordination of protection schemes.
- **Circuit Breaker Testing:** Led circuit breaker tests, including timing, insulation resistance, and contact resistance measurements, ensuring compliance with operational standards.
- **Scheme Checks:** Performed detailed scheme checks for line, transformer, and bus bar Circuit Breaker Failure (CBF) protection panels to verify correct operation as per design specifications.
- Led the installation, testing, and commissioning of 10 mobile substations (132kV-110kV/33kV-13.8kV) for Saudi Electricity Company (SEC), with Hitachi Energy as the main contractor in Jeddah. Oversaw all phases of the project—from planning through ensuring successful delivery on time with technical and safety standards.
- Managed construction activities, including site preparation, construction, and equipment installation, while supervising the installation of various equipment such as power transformers (67 MVA), surge arresters, pass units, neutral earthing resistors (NER), auxiliary transformers, control and protection panels (AMI, RTU,....etc.), AC distribution boards (ACDB), DC distribution boards (DCDB), earthing systems, lightning protection systems, and MV and LV cables (laying and termination), along with AC and DC wiring and control cables.
- Coordinated with subcontractors and teams to ensure compliance with project schedules, quality standards, and safety protocols while monitoring the budget and resources to optimize efficiency and minimize costs throughout the project.

Projects

- 10-Mobile Substations Hitachi Energy in Zahid Industry.
- National Guard Camps in AL-Riyadh.

CERTIFICATES

- 1. C1, and C2 National Grid NG-Safety Rules Qualification and Authorization from SESP, Hitachi Energy KSA 2024.**
- 2. Occupational Safety General Induction (OHS) from SESP, Hitachi Energy KSA 2024.**
- 3. Experience Certificate (4 years), Madkour Utilities Company 2024.**
- 4. TOEFL Training Course 2022.**
- 5. Postgraduate Affairs and Research Sector, 2022.**
- 6. FDTC Fundamentals of Digital Transformation Certificate Menoufia University, 2022.**
- 7. Drive Test Engineer Experience Certificate Red Telecom, 2020.**
- 8. English Language Training Course Speak UP Language Academy, 2020.**
- 9. Instructor Certificate HIET 2019.**
- 10. Analog and Digital PBX Certificate MTC, 2017.**
- 11. Certificate in Electrical Energy Distribution and Electromagnetic Wave Transmission 2017.**
- 12. Power Electronic Basic Applications Certificate Jelecom, 2016.**
- 14. Power Electronic Basic Applications Jelecom, 2016.**
- 15. Advanced PLC Level 1, and 2 EGYCET, 2015.**
- 16. Java Programming SE-Level (1)**
- 17. Engineering Academy, 2014.**
- 18. Microcontroller Training 2014.**
- 19. Honored by Telecom Egypt for Achieving First Place Excellent Appreciation, 2014.**
- 20. Appreciation Certificate in Microcontroller 2014..**

Electrical Technical Office Team Leader

Madkour Utilities-Egypt | March. 2022 - April. 2024

- Managed energy operations, including technical revisions, debt management, sales invoices, site readings with IO Meter, and balancing for, MV/LV networks.
- Participated in the fault analysis committee, analyzing past operations to identify root causes of faults, and discussing incident descriptions, accident causes, actions taken, and interruption durations.
- Oversaw project implementation and provided technical approval for various electrical equipment, including switchgear (SWGRs), distribution transformers, ring main units (RMUs), main distribution boards (MDBs), MV/LV cables, and pillars. Conducted Factory Acceptance Tests (FAT) and Site Acceptance Tests (SAT).
- Supplied the Egyptian Electric Regulatory Authority (EgyptERA) with technical data, such as drawings, feasibility studies, and project information, to secure necessary permissions, domains, and licenses for new projects.
- Engaged in Requests for Information (RFIs), Requests for Proposals (RFPs), Requests for Quotation (RFQs), and Bills of Quantities (BOQs).
- Negotiated terms of quotations to meet both customer and company objectives.
- Collaborated with site engineers to address and resolve technical problems.
- Ensured compliance with Egypt ERA regulations and other legal requirements for all new and renewed contracts related to electricity distribution, including Power Purchase Agreements (PPA), Distribution Service Operator (DSO), Operation & Maintenance (O&M), Facility Management (FM), and Electrical Feeding.
- Prepared electrical quotes for commercial, administrative, and residential complexes, as well as irrigation stations (internal-external feeding).
- Calculated financial dues for the Egyptian Electricity Transmission Company (EETC) and ensured timely preparation of payment requests for all projects.

Projects

- Al-galala substation (2×175 MVA) 220/22/22 KV and MV/LV Network.
- Lina farms substation (2×40 MVA) 66/22 KV.
- Al-Frafra project includes 4 Diesel generator ~ 4 MW and solar panel ~4.5 MW.
- AL-Roubiky substation (2×40 MVA) 66/22 KV.
- Gardenia substation (2×150 MVA) 220/22/22 KV.
- Al-galala marble and granite city substation (2×125 MVA) 220/22/22 KV.
- Gharb El Sherok substation (2×175 MVA) 220/22/22 KV.
- Future Egypt substation (2×15 MVA) 220/66/11 KV.
- AL-Qawmia East (3×40 MVA) 66/22 KV.

Senior Secondary Design Engineer

Madkour EPC-Egypt | March. 2021 – March. 2022

- Prepared Single Line Diagrams (SLDs), relay, and metering protection drawings, including transformer protection, line protection, and bus coupler protection.
- Calculated MV/LV cable sizing and circuit breaker specifications.
- Analyzed interlocking logic and schematic diagrams for panels.
- Designed and gained knowledge about Gas-Insulated Switchgear (GIS), surge arresters, power transformers, and zigzag transformers.
- Conducted AC/DC load calculations, and battery sizing, and developed AC/DC SLD.
- Performed (CT) and (VT) sizing calculations.
- Coordinated between various suppliers, managing differing drawings and designs.
- Reviewed supplier drawings to ensure design accuracy and compliance.
- Ensured compliance with industry standards such as IEEE, IEC, and other regulations.
- Conducted load flow studies, SC, coordination, VD, and arc flash studies

Senior Electrical Operation & Maintenance Engineer

Madkour Utilities-Egypt | March 2020 – March. 2021

- Managed the operation and maintenance of the 66/22 kV substations, ensuring optimal performance and reliability of electrical systems.
- ### **Projects**
- AL-Roubiky Substation (2×40 MVA) 66/22 kV: Oversaw all operational aspects, including load management, equipment maintenance, and fault diagnosis to ensure continuous power supply and compliance with safety standards.
 - AL-Qawmia East Substation (3×40 MVA) 66/22 kV: Led the maintenance team in executing preventive and corrective maintenance strategies, improving equipment reliability and operational efficiency.

SOFTWARE & SKILLS

AutoCad	MS Office
Matlab	Etab
Java Programming	IOMeter System
C/C++ Programming	ERP
Teamwork	Negotiation
Presentations	Outlook
Copywriting	Communication
Data Analysis	Business Writing
Project Management	
Technical Training and Instruction	

Research Publications

Performance Enhancement of the Cell-Free Massive MIMO of the Communication Networks

Focus on enhancing performance in cell-free massive MIMO systems, leading to the publication of two papers.

The Cell-Free mMIMO Networks: Mathematical Analysis and Performance Evaluation

Published in Telecommunication Systems, Springer (TELS) in 2020. This paper provides a mathematical framework for performance evaluation.

Performance Analysis and Simulation of Millimeter Wave Cell-Free mMIMO Network

Published in the International Journal of Communication Systems, Wiley in 2020. It discusses performance metrics and simulation results. Research Statement Approval Approval from the G. Department of Postgraduate Studies, Menoufia University, for registering research publications for 2021-2022.

LANGUAGES

Arabic: Native

English: Very Good

Technical Trainer

Madkour Academy-Egypt | March 2020 – March. 2021

- Conducted training sessions for engineers and technicians at Madkour FM on distribution substations, MV, and LV networks.

Communications Engineer

Red Telecom-Egypt | Aug 2019 – March. 2020

- Collaborated with Orange (Operator) and Huawei (Vendor) on a multi-vendor project, gaining extensive hands-on experience in mobile communication systems.
- Conducted drive tests to assess and optimize network performance, ensuring high-quality mobile connectivity and coverage.
- Awarded a certificate of experience for my role in successfully executing and analyzing network performance for both Orange and Huawei.

Instructor

Higher Institute of Engineering & Technology-Egypt | March 2017 – March. 2019

- Taught electrical engineering at HIET, Kafr El-Sheikh for Nile University.
- Lecturer Conducted math and physics training in various academic centers, focusing on developing students' scientific knowledge and excellence in these subjects.
- Taught at Alexandria Training Center (ATC), providing specialized instruction in electrical engineering concepts.

ONLINE COURSES

- A Bold New Approach to Goal Setting
- Instructor: Michael Bungay Stonier
- Agile at Work: Driving Productive Agile Meetings
- Be the Manager People Won't Leave
- Being Positive at Work
- Building Business Relationships
- Building Rapport with Customers
- Building Resilience as a Leader
- Coaching and Developing Employees (Multiple Sessions)
- Coaching Skills for Leaders and Managers
- Conflict Resolution Foundations (Multiple Sessions)
- Construction Management: Safety & Health
- Customer Service: Serving Internal Customers
- Customer Service Strategy
- Defining and Achieving Professional Goals (Multiple Sessions)
- Delivering Results Effectively (Multiple Sessions)
- Enhancing Your Productivity
- Executive Leadership
- Fred Kofman on Making Commitments (Multiple Sessions)
- Goal Setting: Objectives and Key Results (OKRs)
- How to Have a Great Day at Work
- Instructor: Caroline Webb
- Humor in the Workplace
- Improving Your Conflict Competence
- Inclusive Leadership
- Leadership Foundations
- Making Big Goals Achievable
- Managing Your Emotional Response to Workplace Stress
- Managing Your Emotions at Work
- Motivating and Engaging Employees
- Performance Management: Setting Goals and Managing Performance
- Performing under Pressure (Multiple Sessions)
- Productivity Tips: Finding Your Productive Mindset (Multiple Sessions)
- Professional Networking and Influence
- Quality Standards in Customer Service
- Successful Networking
- The Secrets to Success at Work
- The Ultimate Guide to Professional Networking
- Transitioning from Manager to Leader