

# TALHA USMANI

## ELECTRICAL ENGINEER

Saudi Arabia | +966-502735388 | talhausmani775@gmail.com | Iqama Transferable

### Objective

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Detail-oriented Electrical Engineer with 5+ years of experience as Electrical Engineer, adept at managing complex projects from conception to completion. Seeking to leverage expertise in electrical systems design, project management, and cross-functional team collaboration to drive innovative solutions and enhance project efficiency in a dynamic engineering environment.

### Experience

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#### **Project Engineer (Electrical) | Crystal Engineering Company | Ras ul khair, Saudi Arabia**

(2023 – Continue)

**Project:** Construction of NPCC New Fabrication Yard (Client- **NMDC ENERGY- NPCC (National Petroleum Construction Company)**)

##### ***Role & Responsibilities***

- Supervised the installation of electrical systems, including transformers, panels, and wiring, ensuring compliance with design specifications and safety standards.
- Conducted comprehensive electrical load calculations to determine the power requirements for the entire Yard, ensuring efficient power distribution.
- Designed and specified transformer ratings based on load calculations and the total electrical demand of the building, ensuring the system is capable of handling peak loads.
- Performed cable sizing calculations to determine the appropriate gauge and type of cables required for various circuits, considering factors like current capacity, voltage drop, and safety.
- Calculated circuit breaker ratings to ensure proper protection for electrical circuits, preventing damage from overloads and short circuits.
- Ensured compliance with national electrical codes and local regulations, guaranteeing that all electrical installations were safe, reliable, and up to code.
- Performed fault analysis and troubleshooting during construction to resolve issues in the electrical systems before final commissioning.
- Ensured optimal energy efficiency in the design of electrical systems by selecting energy-saving equipment and systems, reducing operational costs for future occupants.
- Provided technical support and guidance to construction teams on electrical issues, resolving concerns and ensuring work was executed according to the design specifications.

#### **Electrical Engineer | GridFord Al-Arabia Contracting Company | Jeddah, KSA**

(2021 to 2023)

**Project 01:** Rehabilitation of **JEDCO** Building-1 (Client-JEDCO, Consultant **DAR International Engineering**)

**Project 02:** Rehabilitation of **JEDCO** Headquarter Building (**JEDCO** (Jeddah Airport CO.), Consultant- **SJ**)

##### ***Role & Responsibilities***

- Create and implement Quality Assurance plans for electrical projects, ensuring compliance with project specifications, codes, and standards.
- Perform regular inspections of electrical installations, equipment, and systems to ensure they meet design specifications, codes, and standards.
- Conducted thorough assessments of electrical systems to identify areas in need of upgrade.
- Led the repair and replacement of defective electrical components to enhanced system reliability.

- Managed the installation and testing of new electrical equipment and systems, ensuring compliance with safety and regulatory standards.
- Performed routine inspections and maintenance of electrical systems to identify potential issues and prevent failures.
- Developed and implemented rehabilitation plans for electrical networks.
- All calculation for transformer sizing, CB sizing, cable sizing.
- Ensured compliance with industry standards and local regulations, mitigating risks and ensuring safety in electrical installations and repairs.
- Performed fault analysis and troubleshooting on electrical systems, identifying root causes of failures and applying corrective measures.
- Maintained accurate documentation of all rehabilitation work, including system configurations, equipment upgrades, and inspections.
- Provided technical support and guidance to clients regarding electrical rehabilitation processes and improvements.
- Identify potential quality risks in electrical projects and develop mitigation strategies..

## **Electrical Engineer | ZKB Engineers & Contractors**

(2019 -2021)

**Project:** Construction of PKLI&RC Building

### ***Role & Responsibilities***

- Supervised the installation of electrical systems, including transformers, switchgear, distribution panels, and wiring, ensuring adherence to design specifications and safety standards.
- Collaborated with architects, mechanical engineers, and contractors to ensure seamless integration of electrical systems with other building services.
- Designed and oversaw the installation of emergency power systems, including generators and UPS systems, to ensure uninterrupted power supply for critical hospital equipment.
- Conducted comprehensive load calculations for hospital electrical systems, ensuring adequate capacity for critical medical equipment and general building services.
- Calculate the electrical load requirements for different areas (residential, commercial, and community spaces). Ensure that the power supply infrastructure meets the demand of all electrical appliances, HVAC systems, and lighting in the housing units.
- Determined and specified optimal transformer sizing based on calculated load requirements, minimizing energy losses and ensuring system efficiency.
- Calculated and selected appropriate circuit breaker ratings to provide robust overcurrent protection and maintain system safety.

## **Internship | Pak Elektron Limited (PEL)**

(Feb-2019)

**Department:** Distribution Transformer Design

### ***Role & Responsibilities***

- Assisted in the design and development of distribution transformers, ensuring compliance with industry standards and specifications.
- Performed electrical calculations, including short circuit analysis, load calculations.
- Participated in testing prototype transformers for performance, efficiency, and safety, and documented test results.
- Prepared detailed technical reports, including specifications, drawings, and maintenance manuals for transformers.
- Assisted in selecting appropriate materials (core, winding, insulation) based on technical requirements and cost constraints.
- Ensured quality checks were implemented during the design process to meet regulatory standards, including IEC, ANSI, and UL.
- Analyzed field data to identify performance issues and optimize transformer design for improved reliability and efficiency.
- Conducted energy efficiency studies and proposed transformer design improvements for reduced losses and better performance.

## Education

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**BS Electrical Power Engineering**

**2015 - 2019**

*COMSATS University, Islamabad-Pakistan*

## Soft Skills

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- Excellent problem-solving and analytical skills
- Strong communication and interpersonal skills
- Strong leadership and team collaboration
- Proficient with project management software
- Excellent time management skills

## IT Skills

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- MATLAB
- C++
- Proteus
- Data analytics
- MS Office (Word, Excel)
- CAD
- Annotation

## Technical Skills

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- Renewable Energy system
- Uninterruptable power supply
- Circuit breaker
- Relays
- Power Distribution
- Transformers
- Power Protection

## Hobbies

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- Learning
- Social Media
- Annotation
- Cooking