

# Daod Mohammad

Rolling Hills Estates, CA

-Email me on Indeed: <http://www.indeed.com/r/Daod-Mohammad/2776e3c08989e835>

A professional electrical engineer with 18 years of extensive experience in low and medium voltage power distribution systems. Experience in designing, troubleshooting, preventative maintenance programs, repair, retrofit, testing, QA/QC, FAT, SAT, coordination of improvement of new projects, cost/budget management for the entire electrical system of refinery. Worked on several small, medium, and large-scale projects at various industrial oil refineries, and the mining industries in North America. Detail knowledge of OESC, CEC, NEC, NETA, IEEE/ANSI, NFPA, API 500, and standards. Proficient in the use of ETAP software for conducting electrical systems analysis.

## Work Experience

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### **Electrical Engineering SME/ Supervisor/Superintendent/QA-QC Manager**

Torrance Refining Company (PBF) - Torrance, CA

January 2018 to Present

- Participated in restoring electrical power supply for the entire sister refinery "PBF Chalmette" after hurricane Ida. This included isolating, safely drying, cleaning, testing, repairing faulted/grounded and energizing all electrical equipment (medium and low voltage transformers, switchgears, MCC's, UPS's).
- Provide technical expertise and business perspective in all areas related to the plant's electrical systems
- Develop technical specifications, data sheets and installation detail for PDC building, power transformers (5MVA), Arc- Resistance Load Interrupting switches (12KV), generators, High Resistive Grounding units, Motor Control Center, Auto-Transfer-Switches, UPS, Batteries and Switchgears
- Create model and perform load flow studies, short circuit studies, arc flash studies, device coordination studies, motor starting studies, ground grid studies, relay settings and voltage drop calculations for the entire electrical distribution systems at 12KV, 5kV, 2.4KV and 480V using ETAP software
- Responsible for electrical systems design (66KV to 120V), specification, installation, testing and start-up for all electrical equipment such power transformers, Arc- Resistance Load Interrupting switches (27KV), Power Distribution Center (2.4KV), generators, High Resistive Grounding units, LV/MV Motor Control Center, Auto-Transfer-Switches, Switchgears and UPS
- Responsible for troubleshooting, preventative maintenance programs, repair, retrofit, testing, QA/QC, FAT, SAT, coordination of improvement and new projects, cost/budget management for the entire electrical system of refinery.
- Works with operating and maintenance teams to drive continuous improvement and reliability of electrical components, equipment (2000 Induction Motors and 50 Synchronous motors) and systems
- Assist with maintenance planning and execution of major equipment repairs and unit turnarounds as needed

- Participate in refining electrical reliability network, industry technical societies, and support engineering standards maintenance and development
- Provide technical expertise for troubleshooting of refinery equipment, including power distribution systems, motor controls, switch gear, UPS systems, and substations
- Supervise and coordinate the work of engineering contractors including liaison with vendors
- Led the QA/QC program, team of employees, and contractors to inspect almost 1,000 work packages from all disciplines (Instrumentation, Rotating Machinery, Fixed Equipment, Electrical, and Piping) to ensure it was completed to the specifications, safely, properly, on time, and within budget. The success of the program resulted to leak free, one time startup of all the units and return them to service safely.

## **Lead Electrical Engineer/ Senior Electrical Engineer**

Jacobs Engineering - Long Beach, CA

October 2014 to January 2018

Chevron, ETP project (65m), Sub-15 (\$20m) & Nitrogen Relocation Plant (\$10m), El Segundo, California

- Responsible for checking and approval of deliverables of Engineers, Designers and CAD operators to produce detail engineering packages, such as Scopes of Work, Materials Take-off, Calculations and Design Drawings for producing complete engineering packages for Construction
- Develop technical specifications and data sheets for PDC building, power transformers (5MVA), Arc-Resistance Load Interrupting switches (27KV), Power Distribution Center (2.4KV), generators, High Resistive Grounding units, Motor Control Center, Auto-Transfer-Switches and Switchgears
- Create model and perform load flow studies, short circuit studies, arc flash studies, device coordination studies, motor starting studies, ground grid studies, relay settings and voltage drop calculations for the entire electrical distribution systems at 16.5KV, 13.8KV, 5kV, 2.4KV and 480V using ETAP software
- Implement engineering standards to provide uniformity in the design of the overall electrical distribution systems in conformance to the NEC, IEEE and Chevron Standards
- Responsible for Purchase Orders, Technical Bid Analysis and awarding projects
- Perform Factory Acceptance Tests for all electrical equipment utilized in projects
- Preparing Man-Hour-Estimates and managing Design change notice
- Develop and recommend variances to design standards without compromising Codes in order to lower cost and improve work quality
- Advise and solve unique design and field engineering problems

## **Electrical Department Head / Subject Matter Expert for USA and Canada DMC Mining Services Head Office**

Number 7 Shaft project Tata Chemicals (\$500m) - Salt Lake City, UT

January 2014 to October 2014

Potash Project for BHP Billiton (\$700m), Saskatoon, Saskatchewan  
Victoria Mine, Advanced Exploration Engineering Project for KGHM (\$800m), Sudbury, Ont

- Provided supervision to Engineers, Designers, Engineering Consultancy, CAD operators and On-site Electricians
- Produced detail engineering packages such as Scopes of Work, Materials Take-off, Calculations and Design Drawings for Construction

- Performed load flow studies, short circuit studies, arc flash studies, motor starting studies, harmonic studies, device coordination studies, ground grid studies, relay settings and voltage drop calculations for the entire electrical distribution systems at 25kV, 5kV, 480V for phase I, II, III of the project using ETAP software
- Produced Front End Engineering Design (FEED)/ Design Base Memorandums (DBM) packages for phase II and phase III of the project
- Responsible for technical bid evaluations and awarding projects
- Managing and preparing Man-Hour-Estimates
- Implementation of engineering standards, engineering installation details, template drawings to provide uniformity in the design of the overall electrical distribution systems
- Member of Joint Health and Safety Committee
- Chaired electrical departmental meetings
- Authorized on-site field changes and verifying as-built drawings, for completion of phase I projects

### **Lead Electrical Engineer**

Worley Parsons, Alliance Projects for Petro Canada/Suncor. - Mississauga, ON  
September 2007 to January 2014

- Performed hazardous area classification assessments
- Produced detail engineering packages which included Scopes of Work, Materials Take-off, Calculations, Design Drawings
- Provided assistance to designers, electricians, contractors, CAD operators to resolve technical concerns, authorize on-site field changes and verify as-built when work was completed
- Performed short circuit studies, load flow studies, arc flash studies, motor starting studies, harmonic study, device coordination studies, Ground Grid studies, relay settings and voltage drop calculations for all the new and upgraded substations in the refinery using ETAP 12.0.0 software
- Involved in Front End Engineering Design (FEED) activities such as the preparation of Design Base Memorandums (DBM). Manage and plan "Man-hour Estimates" for multi-million dollar projects
- Developed substation layouts, underground duct bank layouts, overhead tray layouts, one line diagrams, schematic drawings, wiring drawings, MCC room layouts, power layouts, lighting layouts and grounding layouts for Indoor/Outdoor Substations
- Designed raceways such as cable trays, wire and conduit, duct bank and direct buried cables to provide power to all electrical equipment such as Mixers, Motors, Light Fixtures, Motor Operating Valves, Level Gauges, Electric Heat Tracing circuit and Cathodic Protection Systems
- Produced Pre-commissioning procedures, As-builts, Excavation Permits, As-Found packages for assigned projects
- Produced Electrical Standard Drawings and Documents for Petro-Canada Lubricant Center
- Chair of Joint Health and Safety Committee and member of Safety Work Attitude and Practices (SWAP)

### **Electrical Engineer**

SNC Lavalin Ultra Low Sulphur Diesel (ULSD) Project for Sunoco Inc - Toledo, OH  
November 2003 to September 2007

- Corunna Expansion Project for NOVA Chemicals (\$300m), Corunna, Ont  
Alliance Projects for Imperial Oil, Sarnia, Ont  
Benzene NESHAP Project for Marathon Ashland Petroleum, Detroit, Michigan
- Generated detailed engineering packages, front end engineering packages, Project

Design Specifications (PDS), engineering Man-hour estimates, Bills of Materials and assisted in the procurement of all the required electrical materials

- Designed Substations and Outdoor Switch-Racks for classified areas that are comprised of Starters, Breakers, Transfer Switches, Splitters, and Power

Transformers

- Designed Grounding System for Substations and all its associated electrical and non-electrical equipment

- Designed Electrical Heat Tracing for all process Pipelines, Instrument Devices and process vessels

- Available round the clock to provide field support during shutdown, construction and Pre-commissioning stages

- Designed and drafted electrical drawings such as Conduit, Cable Tray, Lighting,

Substation, Grounding, Duct Banks, Manholes and 4.16 kV Power Distribution layouts, as well as Single Line Diagrams, Schematic and Wiring Diagrams

- Created Load Lists, Voltage Drop Calculations, Heat tracing calculations, Sizing of Multi-cable Transits and Cable Sizing Tables for Motors and Conduit fill

## Education

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### **Bachelor of Science in Electrical Engineering**

University of Windsor

2003

## Skills

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- ETAP 18.1
  - SKM
  - AutoCAD 2010
  - MicroStation
  - Electric Heat Tracing
  - Software
  - MS Word
  - Excel
  - PowerPoint.
- Proficient In The Following Languages