

Egypt Africa Engineering

Electromechanical Engineering, Testing, Training
and Projects Management



Egypt Africa engineering

Up to 2025 Prequalification

Rev.11 dated 20 – Sept. 2025

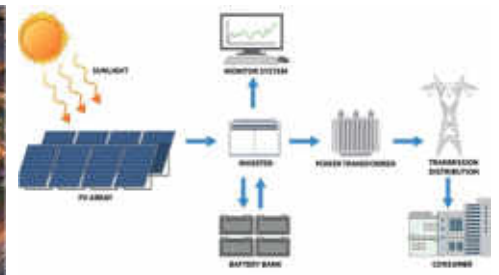


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1. Introduction.

1.1 About Egypt Africa engineering

14 Years ago, in the year 2010, **Egypt Africa engineering "EAE"** started its operation with team of experts having several international background by doing engineering for various industrial plants, small infrastructure projects and specialized technical studies. The major activities concentrated on the detailed design and testing of electrical power systems. Our support start from tender stage by preparing technical offer BOQ's reviewing suppliers offer through contract stage to execution stage up to testing and commissioning The specialized studies such as relay coordination, power quality, load measurements and power factor corrections helped a lot in the growing of EAE. For the time being, Egypt Africa engineering "EAE" is aiming to be a rapid growing engineering company, specializes in Design, detailed design, work shop Drawings and testing & Commissioning of Electromechanical systems. We offer our client various services, in the electrical field, for their projects including feasibility studies, complete design, procurement assistance and installation supervision services, covering the following areas:

- Designs covering all aspects of Electricity Generations, Sub-Transmission and Distribution.
- Design and Installation supervision for Electrical industrial and infrastructure projects.
- Undertaking to refurbish modernization and upgrade of existing Electrical installations.
- Specialized studies for the power system.
- Testing and commissioning for electrical systems.
- Training for the electrical power systems.
- Project management; time, cost & Quality control

Egypt Africa engineering has excellent business relations with all their customers. Company shareholders and employees has significantly contributed to the growth of the company and improved our financials significantly.

The services provided by EAE is not provided only for the local Egyptian market but also for African, MENA and Gulf area.

1.1 From CEO's Desk

In today's fast varied technological, economic and political environment, only the good companies may survive as a small and specialized firm in its field. Egypt Africa engineering is able to stay in business and expand by adopting approaches that meet the important challenges posed by business environment.

Egypt Africa engineering, from humble beginnings starting in the year 2010, aims to be a significant force in contributing to the Egypt engineering market, Egypt Africa engineering always maintained its commitment to improve its efficiency; by its management possessing desired expertise and talent for critical business functions and in maintaining and improving its technical strengths year after year.

Although Egypt Africa engineering is a relatively recent but its vision and dreams are great. EAE wide range of engineering activities made it possible for EAE to strengthen market share in the Electrical engineering sector with a higher level of quality.

Thanks,

Eng. Sherif M. Ali

Founder & CEO

Egypt Africa engineering

1.2 Egypt Africa engineering Vision, Mission and Values

EAE Mission

To open new markets in the field of electrical energy Transmission, distribution and Generation, especially solar, engineering inside & outside Egypt. Considering the highest Technical & quality standards to provide a safe & reliable electrical energy.

EAE Visions

To be one of the top companies implementing Engineering Procurement Assistance and Construction Supervision for Electrical projects in local & international markets; including project management activities.

EAE Values

A large red pyramid graphic is positioned behind the values list. At the top of the pyramid is a red box containing the text 'First of all: People are Our Greatest Asset'. To the right of the pyramid, five red boxes are stacked vertically, each containing one of the core values.

**First of all: People are Our
Greatest Asset**

Honesty

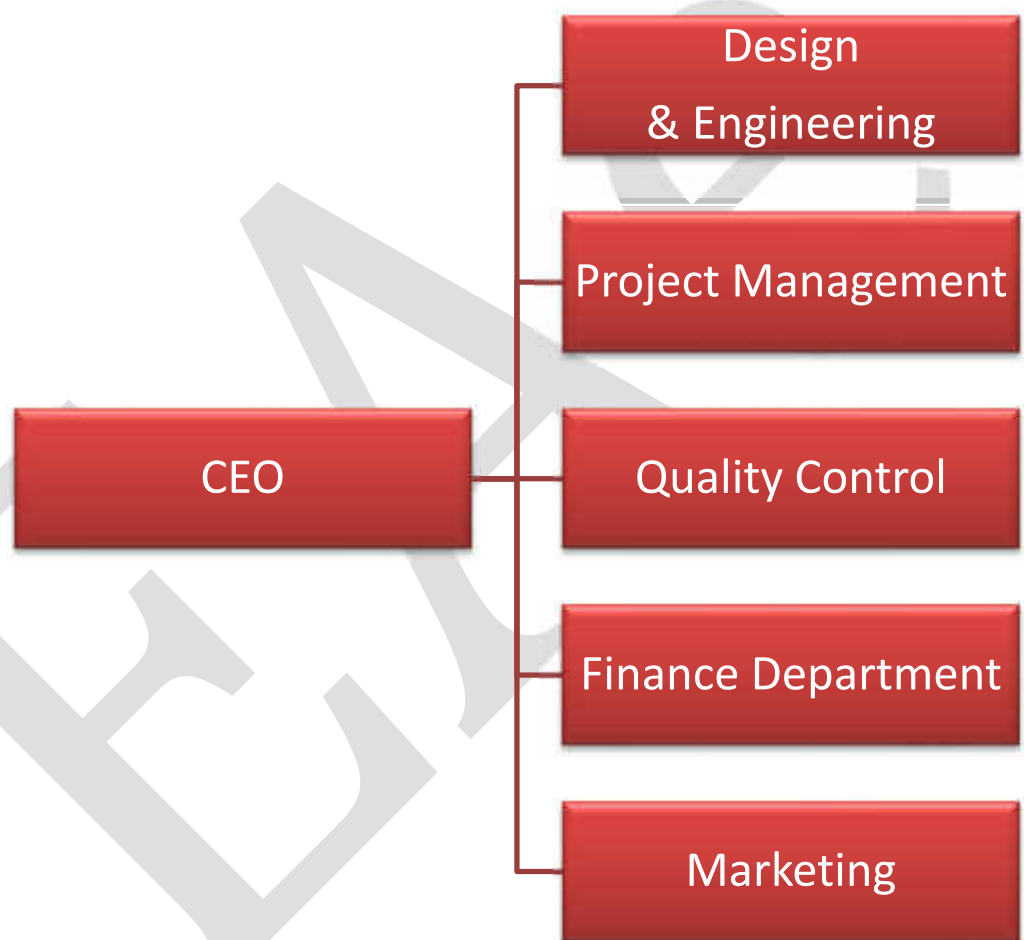
Transparency

Responsibility

Loyalty

Reliability

1.3 Organization Chart Egypt Africa engineering



2. Technical qualification of Egypt Africa engineering

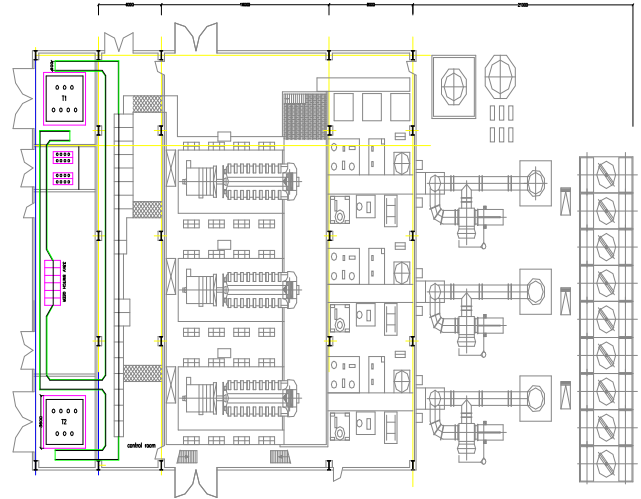
2.1. Provided services.

EAE mainly provides an Engineering Services, tends to be turn key services, which usually abbreviated by **E.P.C**, where:

E = Engineer, which including the basic designs, detailed designs, workshop drawings and all associated required calculations.

P = Procure, which including purchasing assistance for the required materials and equipment needed for construction, and executing the approved designs.

C = Construct supervision, which is the execution phase and site works supervision, testing commissioning and start up for the electrical power systems.



In Addition to the above integrated EPC engineering services EAE can do each activity separately as per the client needs. EAE is targeting all the electrical sectors i.e. generation, transmission and distribution. The scope of work targets the following areas

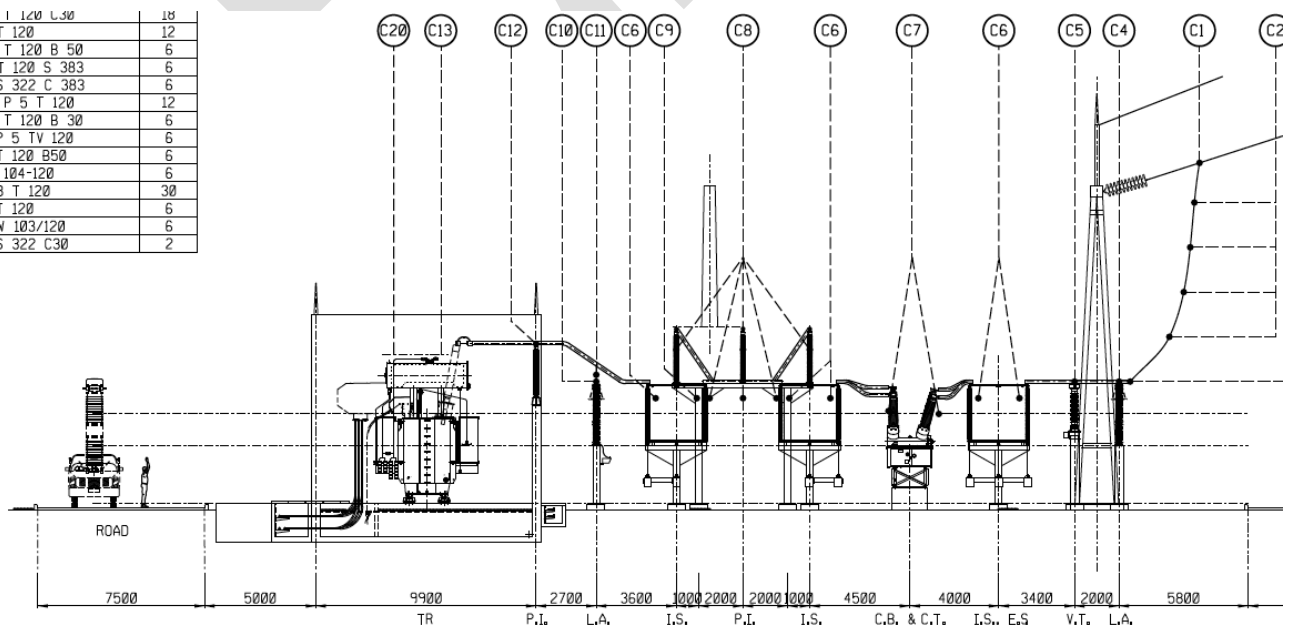
- Design and consultancy services covering all aspects of Electricity Generation, Transmission and Distribution. Egypt Africa engineering is an experienced partner for advisory services, design, and survey and installation supervision services.



- Provide total solutions to ensure the delivery of electricity in the most cost-effective and reliable manner, even to Customers in difficult terrain and complex countries.
- EAe helps the different industrial planets and any distribution network operator to reduce the losses in transmission and distribution network, by using advanced engineering techniques based on scientific analysis and calculation. That plus improving the power quality of the network and increasing its safety and reliability.
- Supply contracts supervision for a wide variety of equipment and materials both manufactured by Egyptian local companies and / or sourced from the clients preferred international suppliers.
- EAe strives to secure complete client satisfaction by offering the best service to suit each customer's requirements, at an optimum price with the fastest delivery time maintaining the required quality standards. The engineering and assistance for procurement facilitates reaching prompt sourcing of materials and strict control over all aspects of supply and delivery processes.

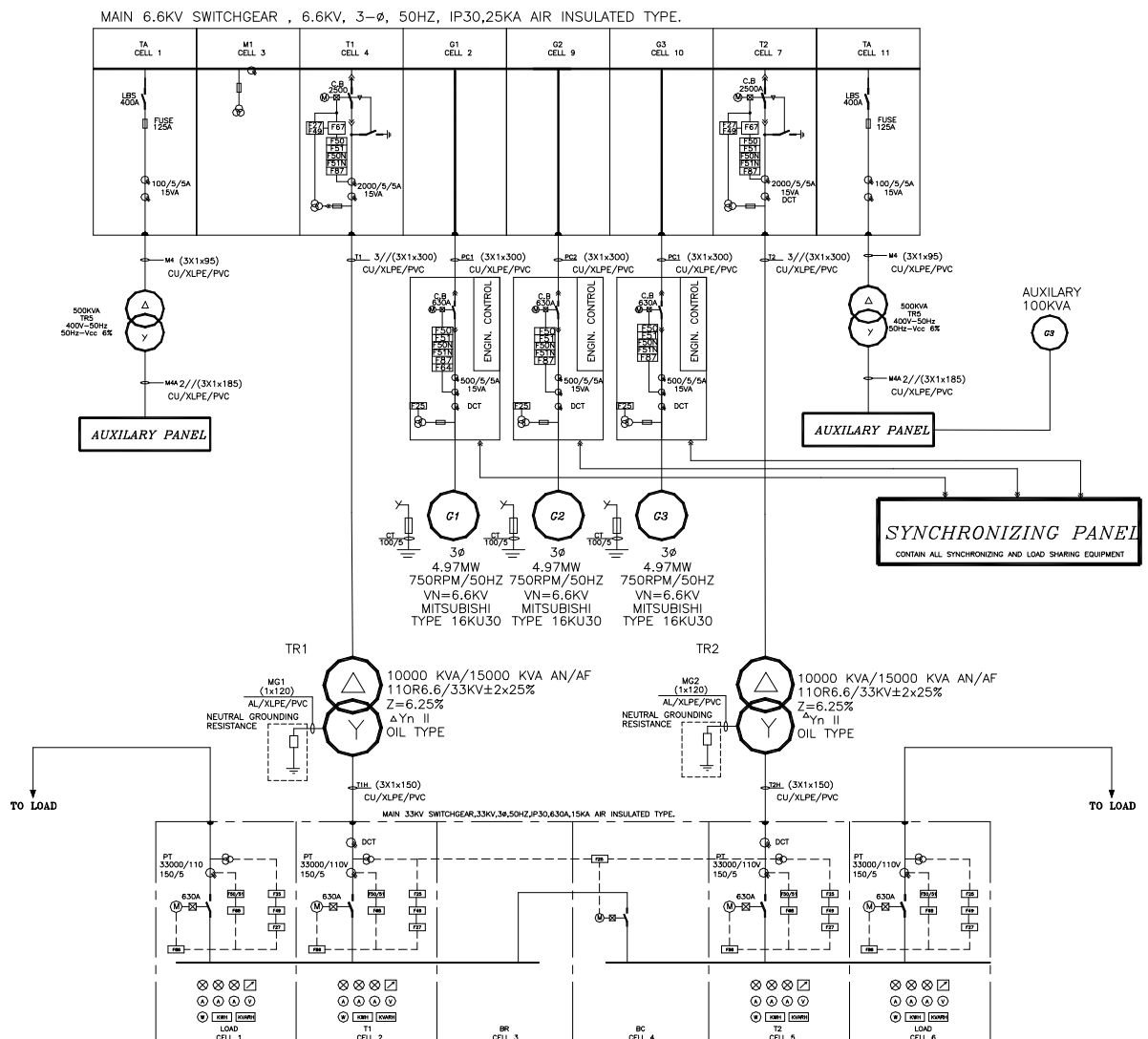


HUL 88 T 120 C30	18
TT 88 T 120	12
TEL 88 T 120 B 50	6
MT 88 T 120 S 383	6
PD 88 S 322 C 383	6
TGC 88 P 5 T 120	12
TEL 88 T 120 B 30	6
TB 88 P 5 TV 120	6
TG 88 T 120 B50	6
BAE 88 104-120	6
BUA T 8 T 120	30
TG 88 T 120	6
TG 8 TW 103/120	6
PE 88 S 322 C30	2



SECTION 1-1

- **Design, supply and Installation supervision of Projects on a Turnkey basis.** Egypt Africa engineers has the know-how and many success stories in executing turnkey projects, taking full responsibility for all development phases. We are highly selective in our choice of suppliers and contractors to ensure project is tailored made to suit individual customer needs with best performance and best prices.
- Turnkey contracts to refurbish or upgrade existing electrical installations.
- Egypt Africa engineering offers services for a wide range of clients including:
 - Public and Private Power Utility companies.
 - Industries.
 - Government agencies



2.2.Detailed scope of work

Includes but not limited to:

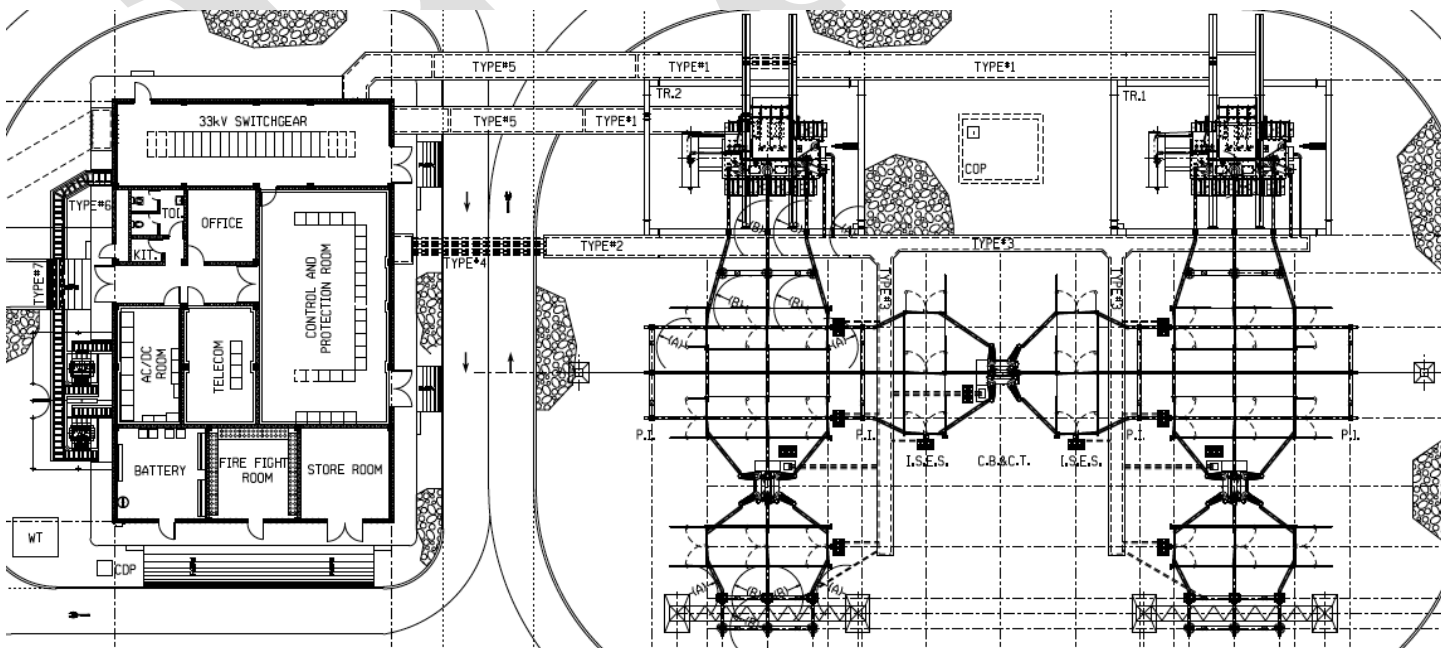
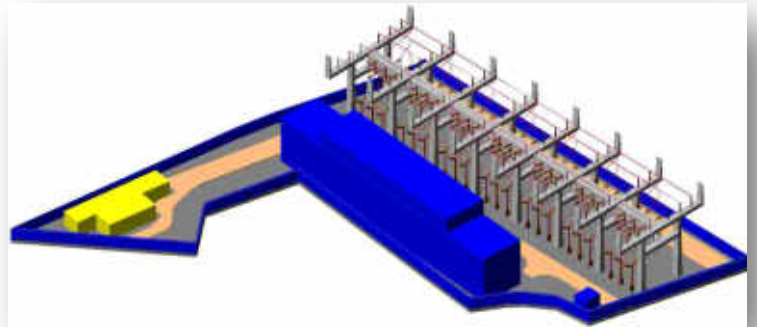
Design and Installation supervision of HV substations. Including but not limited to:

A: Primary engineering including:

- 1 Doing the design for the substation.
- 2 Architectural design.
- 3 Studying the loads at the auxiliaries and preparing the exact SLD for all MV SWG
- 4 Preparing the detailed SLD for the 500 KV SWG showing the required protection and control.
- 5 Doing the load flow and short circuit calculations.
- 6 Design for the grounding system.
- 7 Issuing the details specs and request for quotation documents.
- 8 Help in contract for the SWGs awarding.
- 9 Preparing the detailed work shop drawings for layouts, cabling, civil details and calculations.
- 10 Prepare the relays setting tables.

B: Secondary Engineering Including:

- 1 Preparing the schematic diagrams for control for each bay.
- 2 Issuing the protection diagrams
- 3 PT & CT sizing for the 500 KV and MV SWGs calculations.
- 4 SCADA system basic design.
- 5 Coordination with the network settings.



C: Utilities:

- 1 Design the lighting and power supplies.
- 2 DC system design.

- 3 Ventilation and AC systems
- 4 Lightning protection system design.
- 5 Internal grounding systems.
- 6 LV and MV cables routing and calculation.

D: Supervision, support and testing:

- 1 Revising the technical offers from the suppliers.
- 2 Site supervision on installations, on weekly bases or per site visit from 2 engineers per full day.
- 3 Testing, commissioning and start up.

Engineering, technical assistance for supply and procurement, Installation supervision, Testing and Commissioning for:

- H.V and M.V overhead transmission lines.
- M.V Substations.
- Urban and Rural Distribution Systems
- Cabling systems Design and Installation supervision of Industrial Electrical Power Distribution systems.
- Residential Electrical networks.
- Reactive Power Compensation Systems.
- Urban power network schemes.
- Earthing and lightning protection systems.
- Rural Electrification schemes.

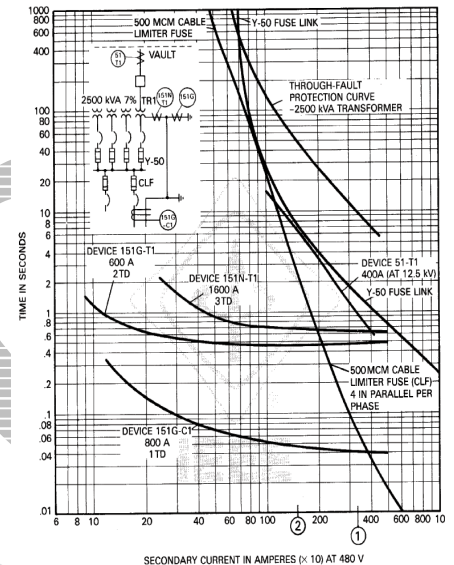
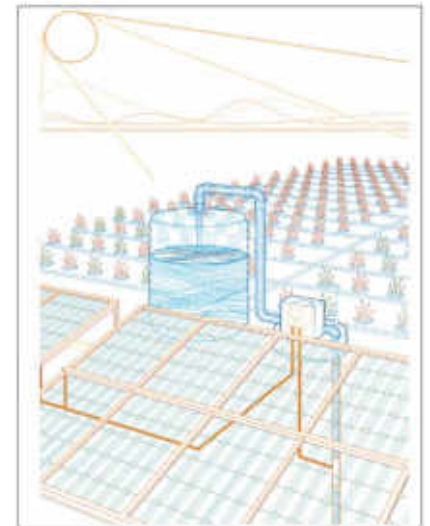
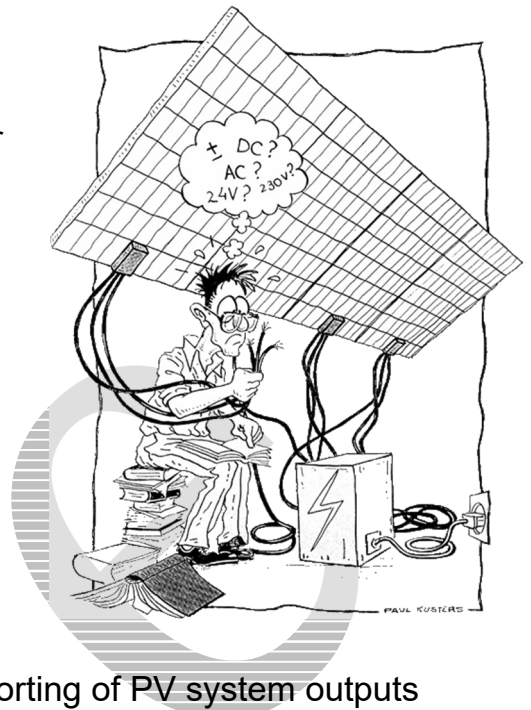


Photo Voltaic generation systems.

- EAe contributes to planning and management of on and off-grid PV systems and multi-technology hybrid systems.
- EAe are familiar with systems that include storage and/or complex load management systems. Appropriate design solutions will be provided based on specific site resources, customer desires and budgets, and assessed load requirements.
- EAe identifies the strategic equipment suppliers and can provide the service as an EPC contractor. That plus supporting the operations and maintenance (O&M) of the installed systems, including development of maintenance contracts and operations manuals.
- EAe can provide the following scope:



- Site surveys for PV and hybrid solutions
- Carry out customer meetings for technical discussion, exploring the budget and capabilities.
- Design a wide range of on and off-grid solar PV configurations including:
 1. On grid systems
 2. Off-grid stand-alone systems
 3. Mini-grids for off-grid clients and communities
 4. Micro-grids for commercial and industrial clients
 5. Large mega-watt scale solar farms
 6. Systems that integrate with existing energy equipment
- Performance modelling, monitoring and reporting of PV system outputs
- Develop cost estimates of PV plants that include all aspects of the project cycle



Specialized Engineering areas

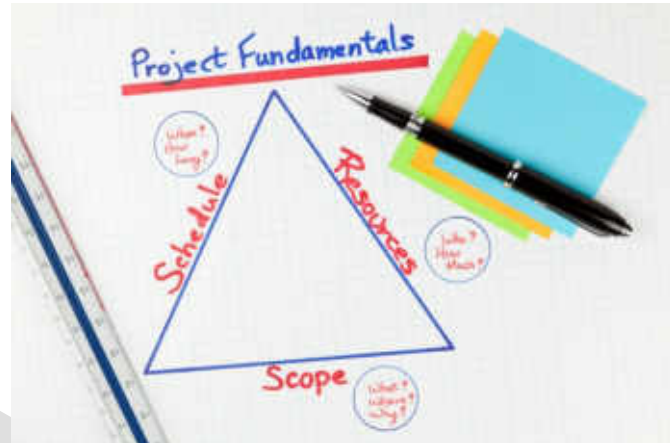
- Load flow and short circuits studies.
- Power system relays coordination studies.
- Grounding systems and lightning protection design for industrial plants, buildings and HV substation.
- Preventive maintenance programs for power system components
- **Value Engineering.**



Projects management.

The specific Services to be provided include:

- (a) assist or undertake the procurement of other consultants, including heritage and environmental specialists and Site Auditors;
- (b) prepare tender documents and appropriate contracts from the Infrastructure Division's suite of contracts, specifically, but not limited to, the Remediation Works Contract and the Medium Works Contract;
- (c) assist Defence and specialist consultants in the development of 'Scope of Works' documents for Contractors;
- (d) manage, coordinate and administer the specialist consultants;
- (e) assist or undertake community consultation tasks, including the development of websites, flyers, FAQ's and community information presentations;
- (f) technical review of environmental and heritage 'due diligence' reports;
- (g) Contract administration of contractors;
- (h) time, cost, quality and risk management advice (including in respect of relevant work health and safety matters and compliance with the WHS Legislation);
- (i) progress reporting and problem log;



Power systems operation training program.

EAE can provide a several power system training, useful for junior engineers and maintenance teams, including:

- Power system component.
- Transmission of electrical power.
- Power Transformers.
- MV / LV switchgears.
- Grounding and lightning protection.
- Electrical calculations.
- Relay coordination studies.
- Electrical power distribution design aspects.

2.3.Our Location:

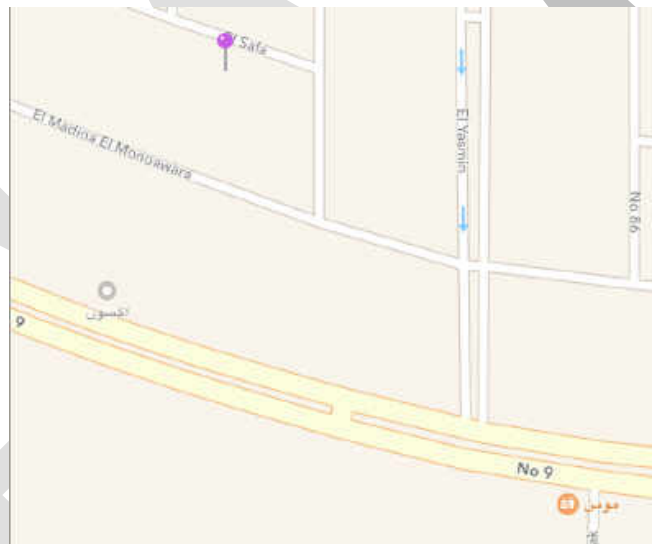
Address: Plot No. 7934 ElSafa St. Near by El Gazeera Academy
El-Mokattam City – Cairo - Egypt.

Phone: (+202) 25080860
e-mail: sh.ali@eaengineering.net
Mobile: (+202) 01001650004
(+202) 01274333340
WEB : www.eaengineering.net

Location on Google map: 30.0100110, 31.3081690



<https://goo.gl/maps/VkjEgk86HA2>



3. Reference list of EAe.

Many contracts and jobs were achieved by EAe such as:

Design, site supervision and studies:

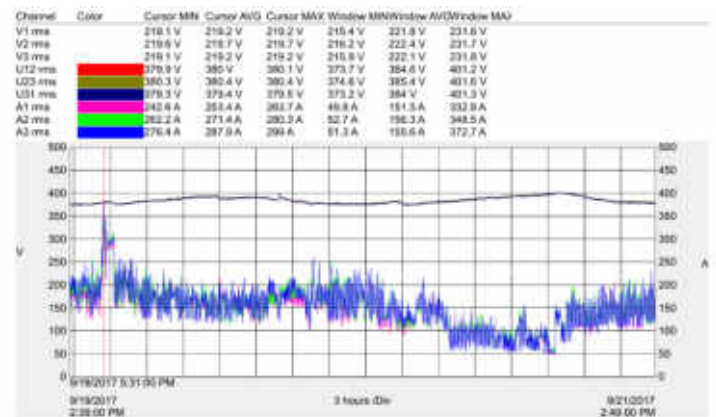
1. Badr El din sites lightning and earthing protection systems at western desert.
2. Techno Gulf earthing and lightning protection project at red sea.
3. EXIT 10 at Riyadh 7 – mall internal SPD systems.
4. Port Said SPDs – internal lightning system.
5. Amirya earthing and lightning protection.
6. SONKER technical document control for ABB scope for PTJ.
7. Eastern company 10 MWe power generation plant complete electrical designs and control wiring preparation.
8. Beshay Solar system 500 KWe, including earthing system.
9. SONKER selectivity study.
10. APRCO selectivity study.
11. TATWEER MISR and G4S security systems at IL-Mont Galala, FUKA bay and Bloom field projects.
12. COCA-COLA Assuit solar system complete designs and selectivity study.
13. NCIC Establishment of Fertilizers Storage Area & Port Facilities at Ain Sukhna port with ABB & Petrojet including:
 - a. complete electrical power and utilities designs and control wiring.
 - b. Power system analysis and selectivity study.
 - c. Complete light current systems.
 - d. Earthing system.
 - e. Lightning protection system.
14. Custom Building at Sadat City electromechanical work shop drawings.
15. Scitra Factory infra structure for electrical system at 6th of October.
 - a. complete electrical power and utilities designs and control wiring.
 - b. Power system analysis and selectivity study.
 - c. Complete light current systems.
 - d. Earthing system.
 - e. Lightning protection system.

16. Zeta Pharma Sadat planet, complete electrical designs including:
 - a. complete electrical power and utilities designs.
 - b. Power system analysis and load flow.
 - c. Complete light current systems.
 - d. Earthing system.
 - e. Lightning protection system.
17. Cairo West 500KV substation, HV primary engineering work.
18. Home Care factory - Scitra Factory at 6th of October. Same scope as above Zeta project.
19. P&G double sachet. Control system and workshop drawings for the control panel, P&ID and Material take of and BOM,
20. Baby Care factory - Scitra Factory at 6th of October. Scope same as Zeta project.
21. Mein USAID project 33 KV OHTL project at Liberia.
22. SCIB factory 6th of October old planet as built for electrical system.
23. Marcyrl Pharmaceutical plant SLD, electrical calculations and site supervision.
24. Nisir Farm electrical system at Wadi-Elnotron.
25. Design of all Light current systems infrastructure, security and data systems for Scitra,
26. Misr Steel Admin. Building at Attaka work shop drawings for all electrical systems.
27. Multi-National forces power factor correction at north "Al Gaura" and south "Sharm" camps.
28. Multi-National forces power supply from utility for Al Gaura camp.
29. Selectivity study for Cairo west air base for the Egyptian Army in cooperation with CORPS of Engineers.
30. Selectivity study for AICI Abbasiya site for the Egyptian Army in cooperation with CORPS of Engineers.
31. Selectivity study for Hykastep project for the Egyptian Army in cooperation with CORPS of Engineers.

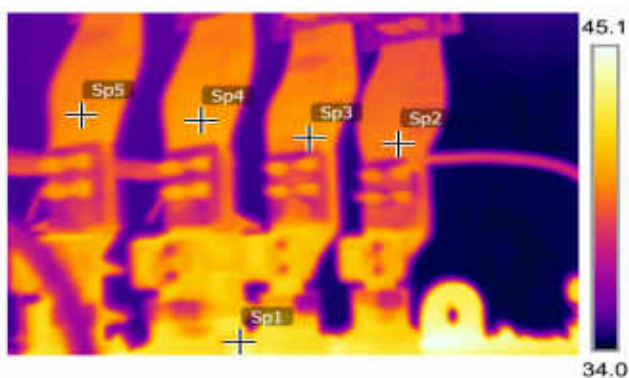
32. Abo Zabal Selectivity study for the Egyptian Army in cooperation with CORPS of Engineers.
33. Family foods warehouse at 10th of Ramadan.
34. Sues steel factory Protection study with ABB
35. Sonker project
 - a. technical management with ABB.
 - b. Selectivity study for ABB.
 - c. Interconnection wiring detailed drawings for ABB and Petrojet.
36. Dmyatt Oil pumping station and oil transfer selectivity and power system protection setting for ABB/Enppi.
37. DANON farm lightning protection system and power distribution rehabilitation.
38. Arabian Cement Co. SUKHNA PLANT SOLAR project 6Mwe design, calculation.....etc.
39. NEOM selectivity and electrical calculation.

Measurements, Testing and commissioning:

1. Gabor complex measurements.
2. Earthing measurements for National Bank
3. SCIB factory 6th of October planet MV and LV networks testing.
4. East of Port Said port electrical system, including all the medium voltage network.
5. Multi-National forces power supply from utility for Al Gaura camp.
6. Bayty power network.
7. Japanese Embassy in Madii.
8. Cairo West base electrical system upgrade.
9. Dry port MV cables testing.
10. Measurements and harmonic analysis for many industrial planets.
11. Acadmia at Alexandria power system MV & LV.
12. Fayed AICI power source testing MV & Power Tr.
13. Arabian Cement Co. SUKHNA PLANT SOLAR project 6Mwe testing, MV and LV.
14. Benban solar plant three parks earthing tests and modifications.
15. Testing and commissioning for ACADMIA at Alexandria.
16. EL-GOUNA SOLAR PLANT
17. Eastern company powergeneration testing.



Plus many miscellaneous small plants electrification, grounding and lightning protection.



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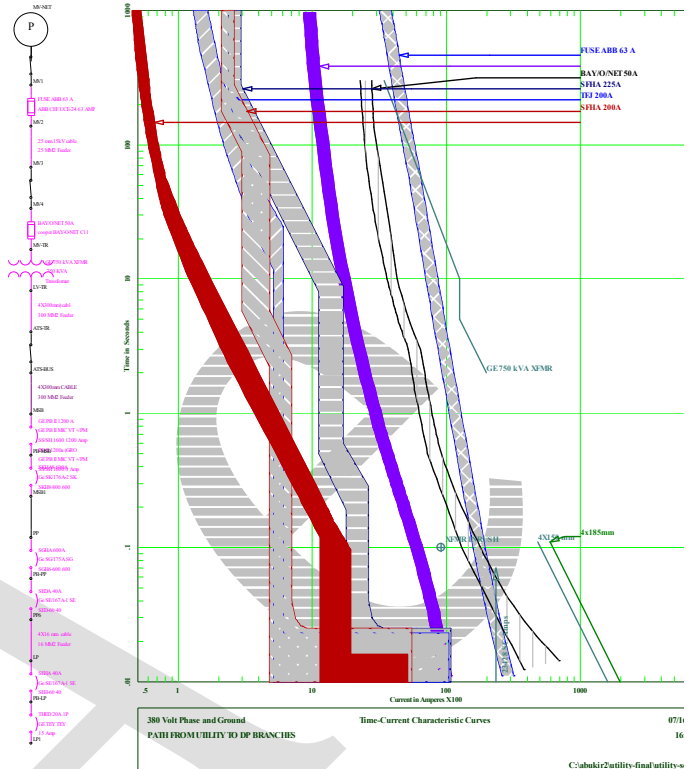
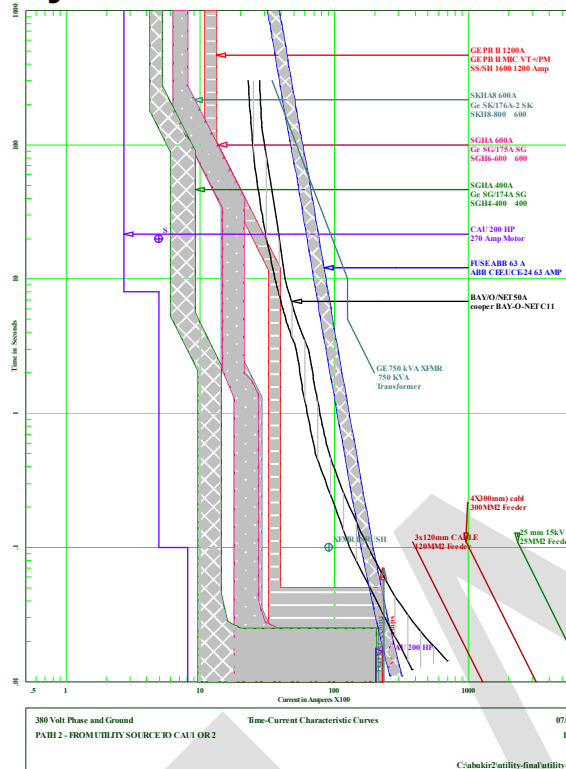
4. Applied Standards

Egypt Africa engineering mainly applies the following standards:

- *IEC - International Electro Technical Commission.*
- *DIN - German Standard Institute.*
- *VDE - Association of German Electrical Engineers.*
- *BS - British Standards.*
- *EN - European Standards.*
- *NFPA - National Fire Protection Association.*
- *NEC - National Electrical Code (NFPA 70).*
- *IEEE - Institute of Electrical and Electronic Engineers.*
- *NEMA - National Electrical Manufacturers Association.*
- *ICEA - Insulated Cable Engineers Association.*
- *INETA - International Electrical Testing Association.*
- *ANSI - American National Standard Institute.*

5. Sample from previous work

Relay coordination studies



Load measurements

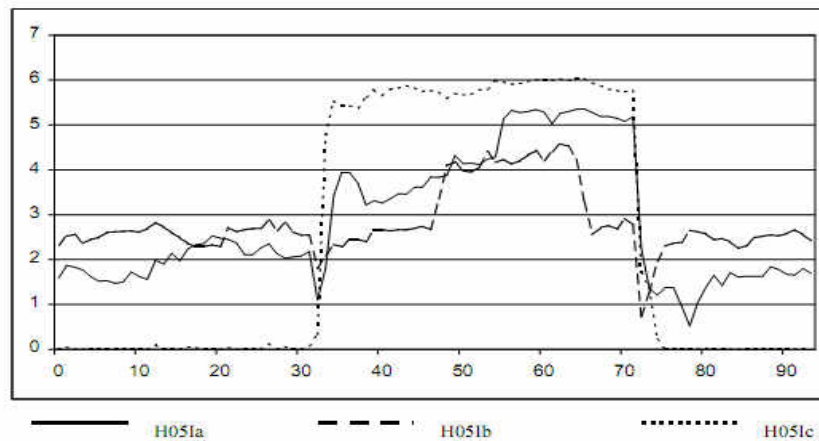


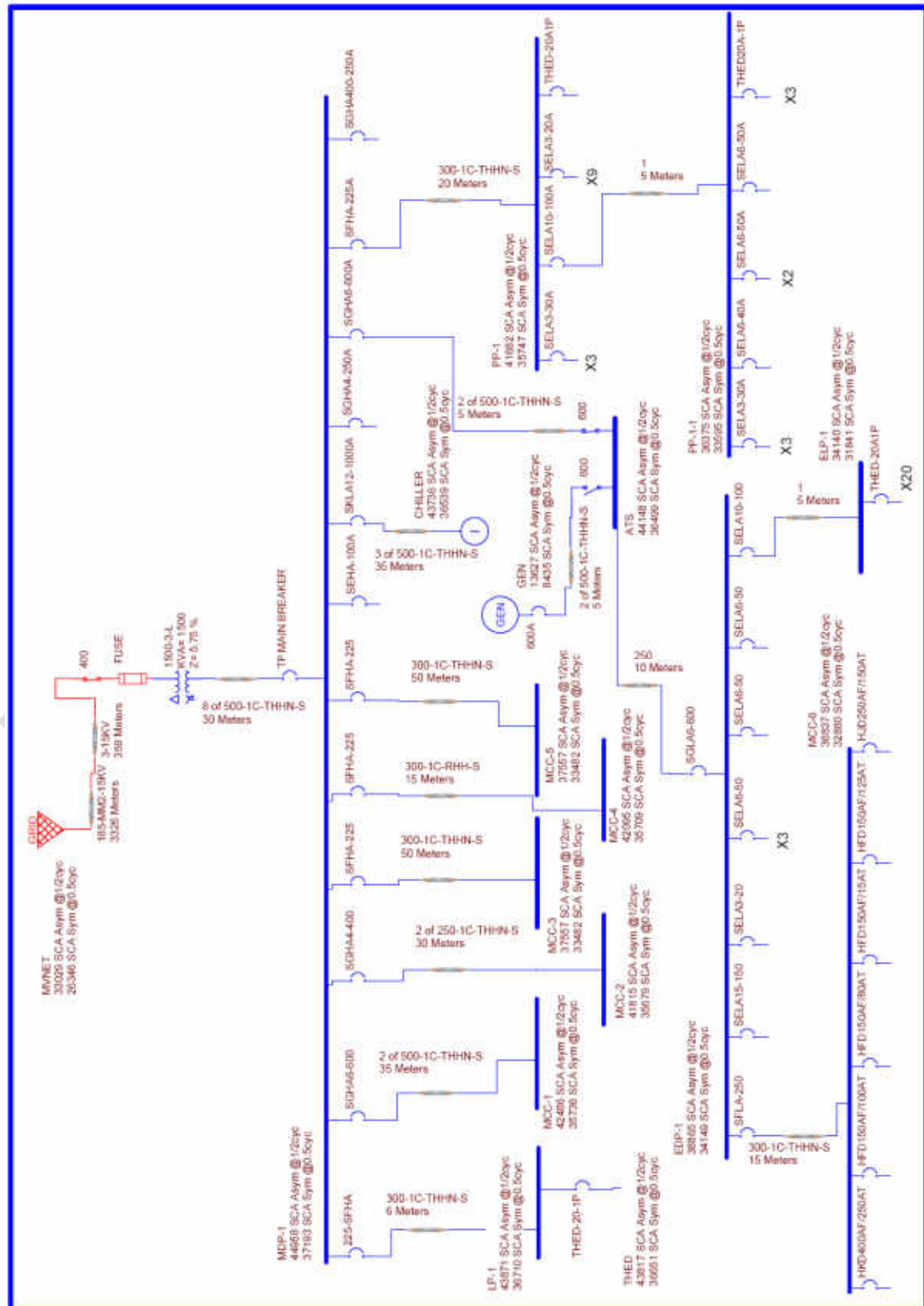
Fig 10. Line current fifth harmonic component in percentage of the line current

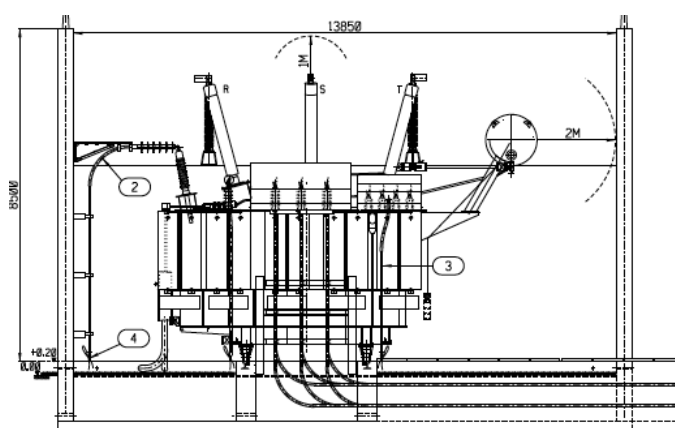
M.F.O. NORTH CAMP EL-ARISH – SINAI, EGYPT
SS-1 SUBSTATION MEASUREMENTS
PERIOD OF THE MEASUREMENTS FROM 24-25 JUNE 2003
Print Out Date: July, 2003 Rev. : 0

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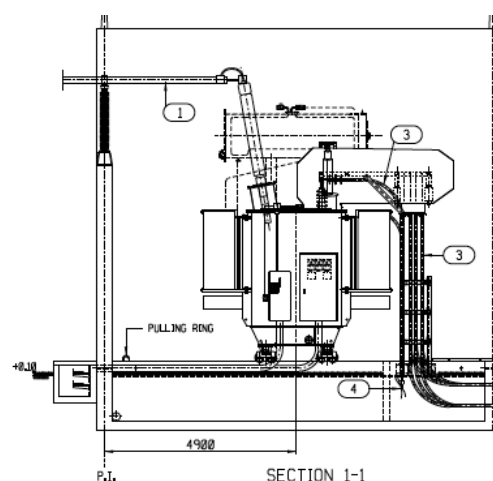
Load flow, VD and short circuit calculations

Industrial designs



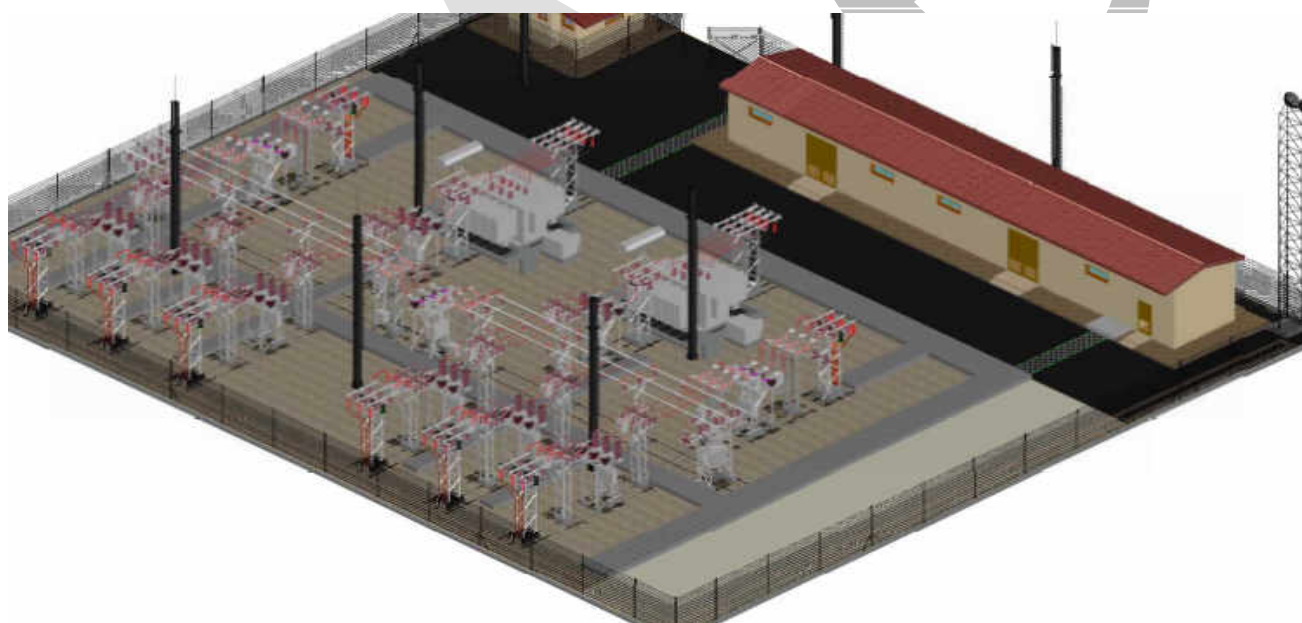


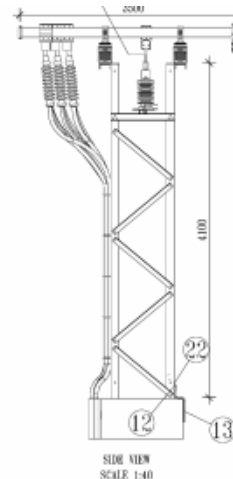
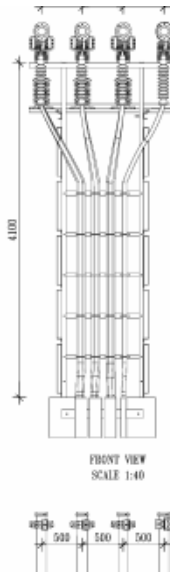
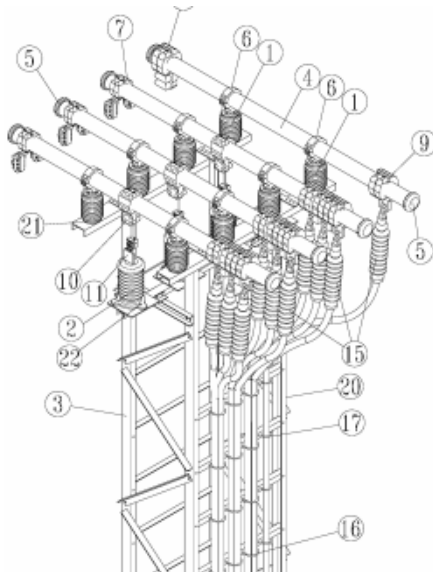
ELEVATION VIEW



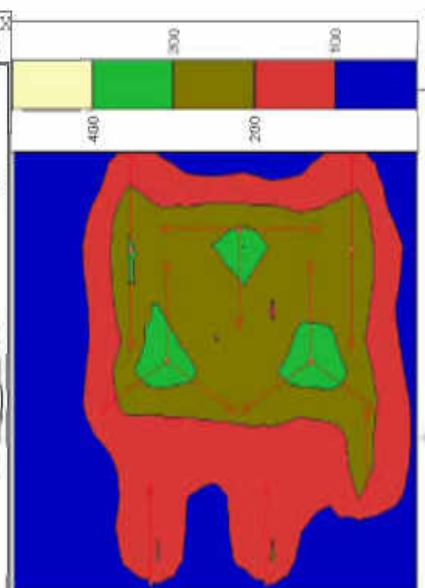
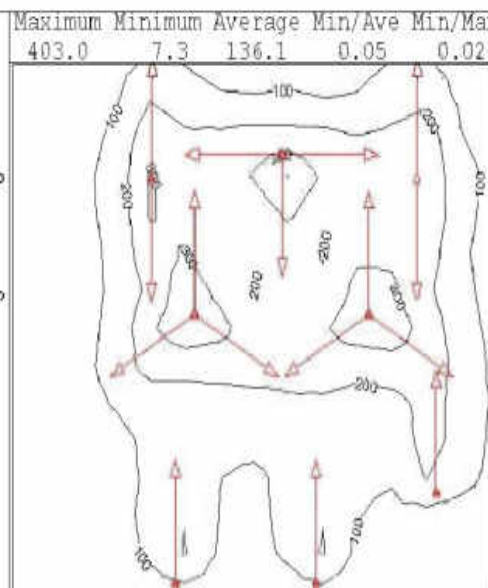
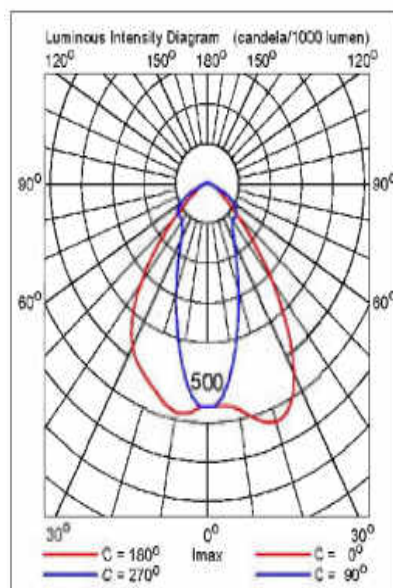
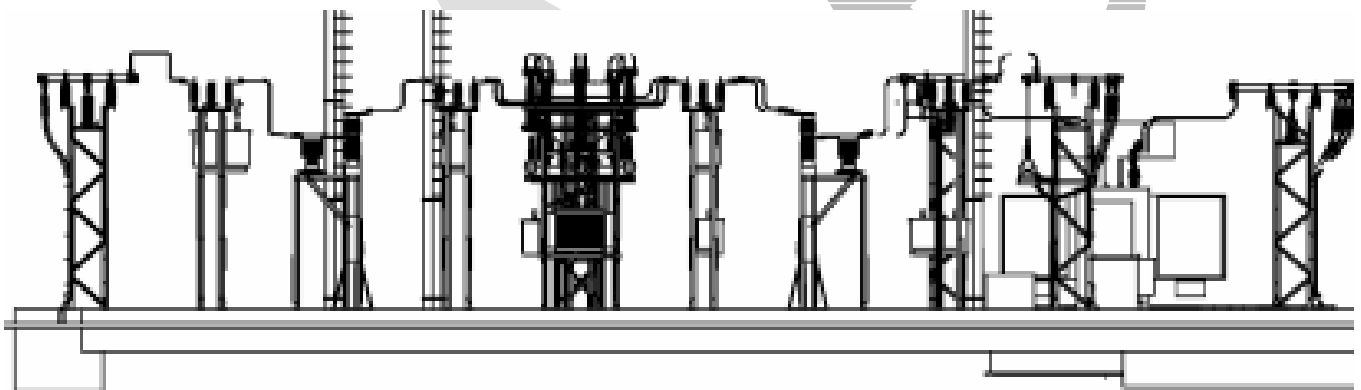
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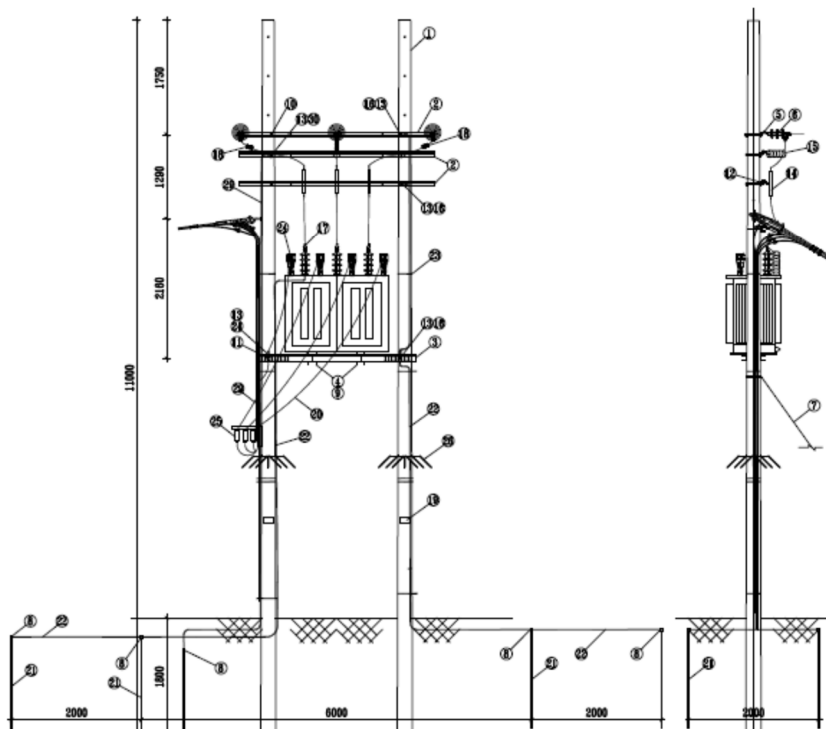
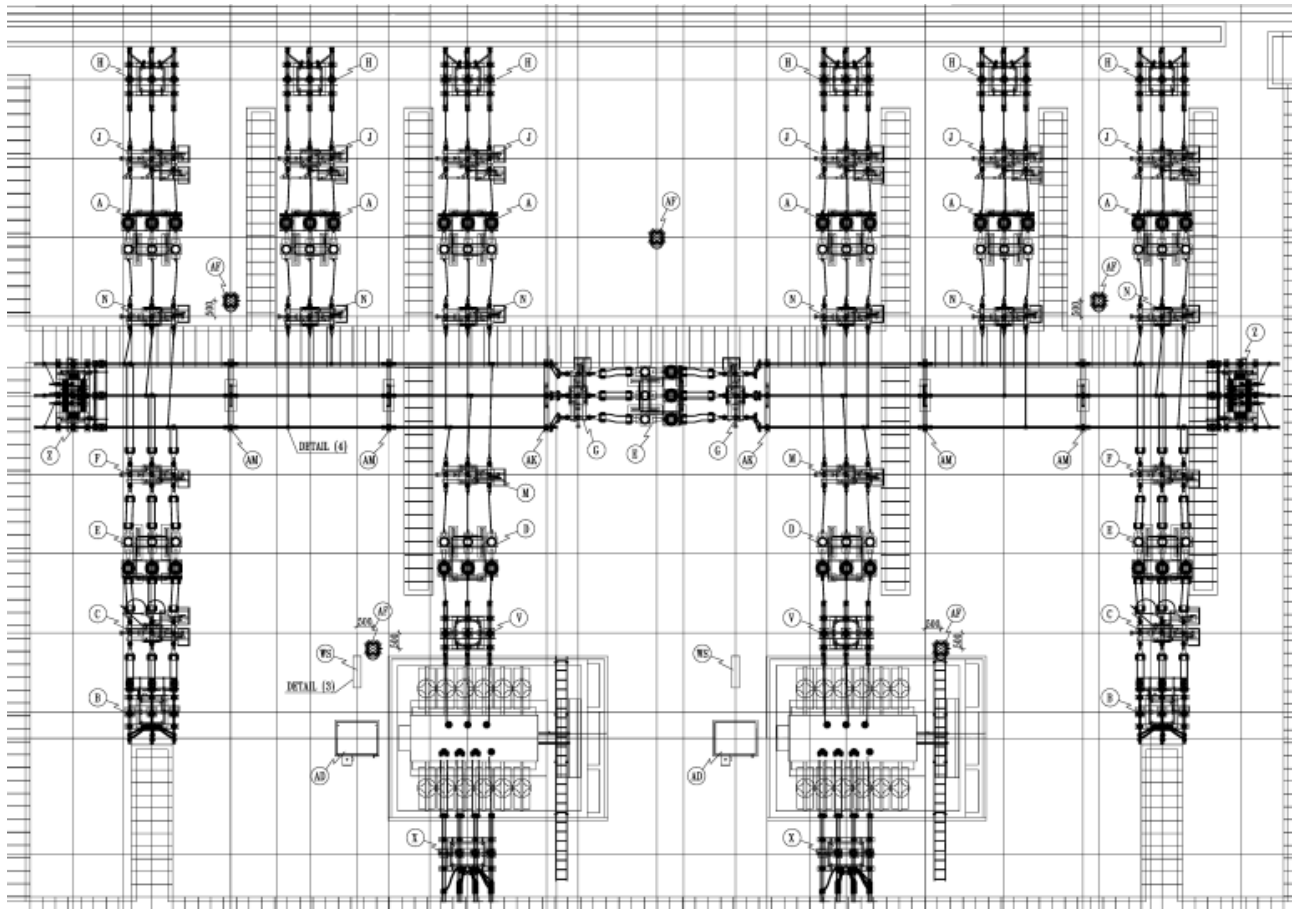
MV & HV indoor & outdoor substations





1	11 KV/10 KA surge arrester.	No. 8
2	11KV Steel support structure for cable gully for transformer Feeder ref.DWG.NO P-02-10-DWG-C-00-05.	No. 3
3	Al Seamless busbar tubular with external Dia. 120mm/8mm Thickness ,min rated current 3000A.	No. 14
4	Al Corona Free End Caps suitable for busbar Tube Dia. 120mm, belted type.	No. 8
5	Al Fixed support Clamp , PCD 76 , belted type Suitable for busbar tube with Dia. 120mm.	No. 8
6	Al line twin conductor Tap-off Clamp , rated Current 3000A , belted type to tap off from busbar tube With Dia. 120mm to stranded conductor with Dia. 25-27mm	No. 3
7	Al Tap-off Clamp for single conductor, rated current 1000A Belted type to tap off from busbar tube with Dia. 120mm To stranded conductor with Dia. 25-27mm	No. 1
8	Bi-metal Palm clamp (with one hole) , belted type to tap off for busbar tube with Dia. 120 mm.	No. 10
9	Bi metal Tap off clamp belted type , rated current 630A, Suitable for tubular busbar Dia. 120mm to single conductor CU 70mm ² or Dia. 11mm.	No. 3
10	Bi metal palm Clamp to single stranded conductor , rated Current 630A , belted type suitable for conductor CU 70mm ² or Dia. 11mm.	No. 3
11	Cu Cable lug 76/12 mm ²	No. 7
12	70mm ² PVC insulated Copper conductor.	No. 15
13	70 mm ² Bare CU Conductor.	No. 15
14	11 KV Outdoor Terminations for the cables 0.35/11KV - 1 x 500 mm ² CU/ALP/ANA/PVC	No. 10
15	U-bolt c/w Nut,washer & spring washer Length 150mm Ref.DWG.NO P-02-10-DWG-C-00-05.	No. 15
16	U-bolt c/w Nut,washer & spring washer Length 90mm Ref.DWG.NO P-02-10-DWG-C-00-05.	No. 5





No.	NAME OF FITTING	QTY.
1	11M WOODEN POLE (STUCT)	2
2	CROSSARM 50x50mm, 3m LENGTH	3
3	U CHANNEL 2.4m LENGTH	2
4	U CHANNEL 60mm LENGTH	2
5	ONE WAY SHORT STRAP PL	3
6	11KV PORCELAIN STRAIN INSULATOR	3
7	11KV COMPLETE STAY SET	2
8	ROD TO CONDUCTOR CLAMP(70mm/10mm ROD)	5
9	BOLT (M16x127) WITH NUT & WASHER PLATE	4
10	BOLT (M16x250) WITH NUT & WASHER PLATE	8
11	BOLT (M16x300) WITH NUT & WASHER PLATE	8
12	BOLT (M16x40) WITH NUT & WASHER	8
13	BOLT (M16x40) WITH NUT & WASHER	14
14	11KV CUTOFF FUSE 20KA	3
15	11KV SURGE ARRESTOR 10KA	3
16	COPPER LTG 70mm ²	8
17	66- MERA LTG AL-CU (AAAC 50-55)	8
18	DOUBLE LINE TAP 50-100mm ²	3
19	DANGER NAME PLATE WITH NAILS	1
20	95sqmm Copper, PVC Coated Conductor	45 M.
21	2.4m, Dia. 16mm Galvanized Steel rod	5
22	1x70mm ² CU/PVC (M)	40 M.
23	Galvanized Steel 2-holes Strap with nails (70-95mm)	8
24	COPPER LTG 95mm ²	8
25	LF 3 POLE FUSE SWITCHES	1
26	ANTI-Climbing Device	2

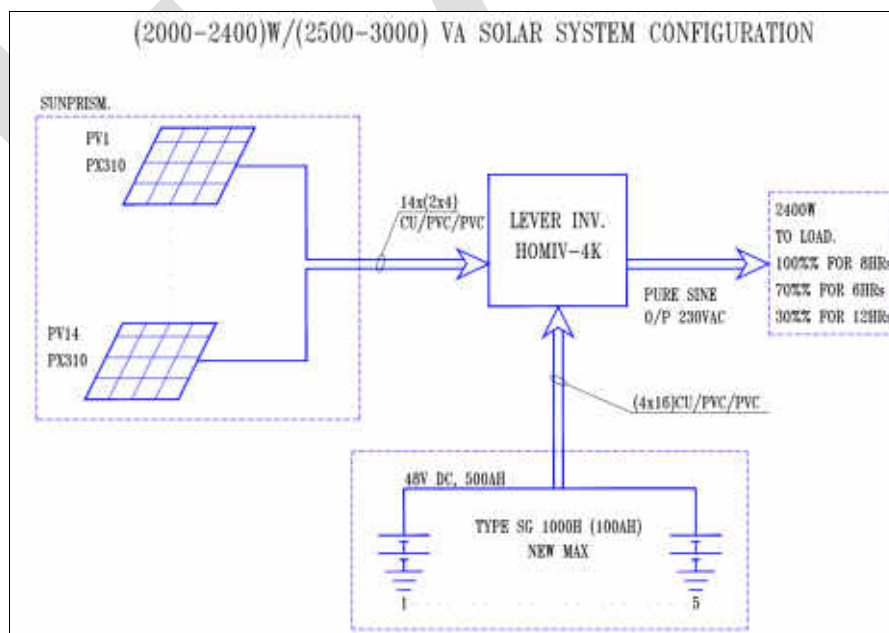
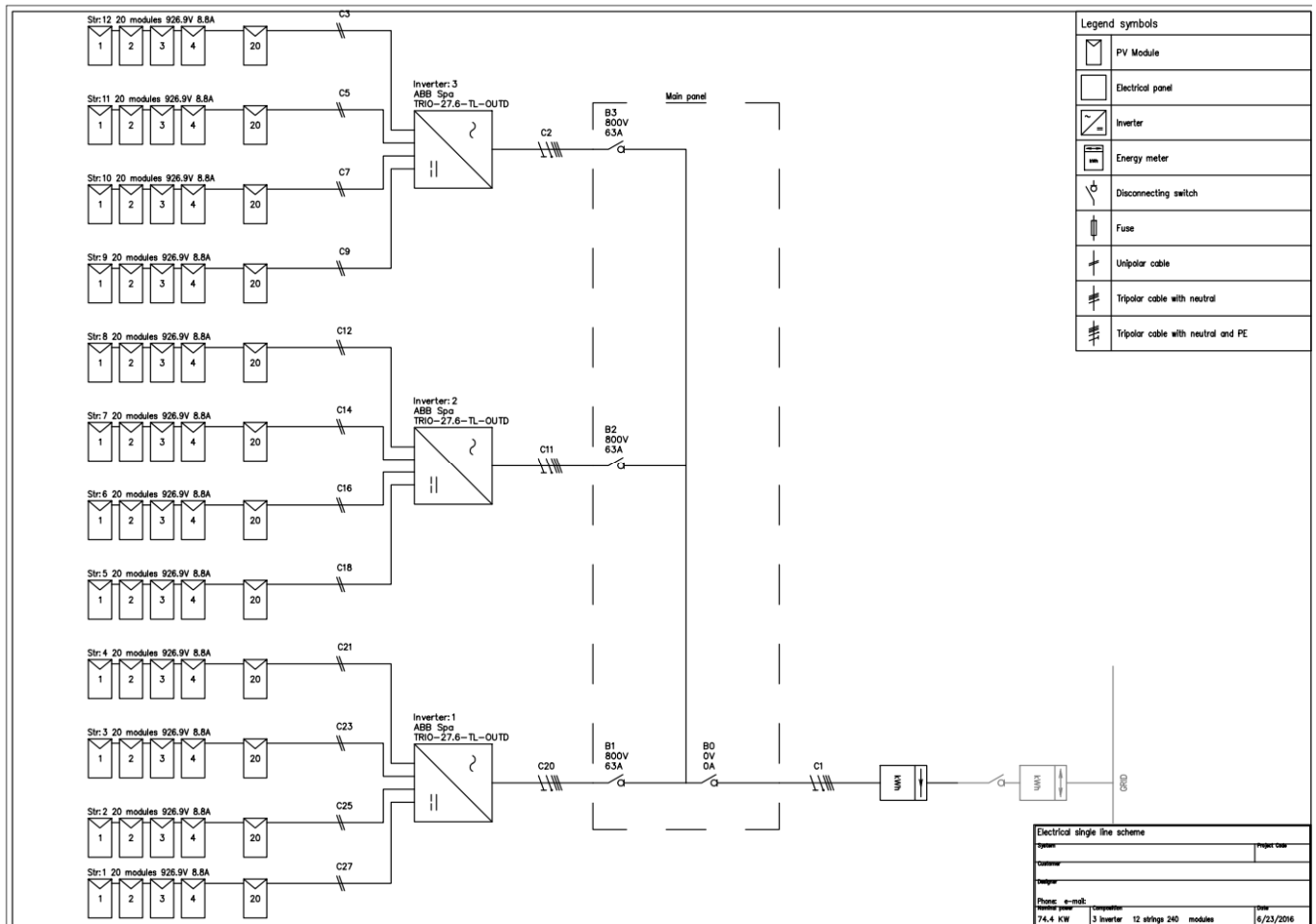
NOTES:-

- 1- THE EXACT BURNING DEPTH OF THE POLE WILL BE ACCORDING TO THE NATURE OF THE SOIL .
- 2- ACCORDING TO THE SPECIS THE LF SPOL FUSE NUMBER (PZADERS) WILL DEPEND ON THE RAYS OF THE TRANSFORMER .

TR RAYED 50KVA	2xLF SPOL FUSE
TR RAYED 100KVA	2xLF SPOL FUSE
TR RAYED 200KVA	2xLF SPOL FUSE

- AND THE NUMBER OF THE BOLT (M16x250) WILL DEPEND ON THE NUMBER OF THE LF SPOL FUSE .

PV systems



6. Resume of Key Persons

KEY personnel CV's

Eng. Sherif M. Ali Founder & CEO

Sherif Mohamed Ali Hassan

B.Sc. Electrical power Engineering

Proven areas of expertise and key qualifications include

A: Technical "include but limited to":

1. ***Design, Engineering, Testing and Commissioning of Electrical Generation Stations.***
2. Preparation for MV & LV networks designs and calculations.
3. Preparation of specifications, BOQ and tender documents.
4. Preparation of detailed workshop drawings for MV & LV networks.
5. Design, supervision for industrial and commercial buildings and hospitals electrical and light current systems.
6. Preparation of specialized studies such as harmonic analysis, Power factor correction calculation with harmonic filters, relays coordination studies and short circuit analysis.
7. Grounding potential gradient control and lightning protection designs and workshop drawings.
8. Training for electrical power systems in general and training for specialized topics such as potential gradient control for earthing systems, protection and lightning protection.
9. Procurement assistance.
10. Urban power network schemes.
11. Street Lighting schemes.
12. Rural Electrification schemes.

B: Commercial "include but not limited to":

13. Supply vision and imagination at the highest level (normally working closely with the Board)
14. Identify, develop and direct the implementation of business strategy (depending on the situation some criteria may already exist or be established by the organization's chairman, owner(s)/shareholders)
15. Analyzing opportunities from both technical, commercial and risks.
16. Analyze the bidding documents and extracting the requirements and associated risks.
17. Projects pricing for LV, MV networks and HV overhead transmission lines.
18. Contracts revising and modifications to minimize risks.
19. Develop, Approve or revise any technical and commercial offers.
20. Preparing, revise or approve company / projects budgets and plans.
21. Reading, analyzing the financial statements and/or participate in its preparation.

C: Managerial "include but not limited to":

22. Plan and direct the organization's activities to achieve stated/agreed targets.
23. Sponsorship and leading for technical, business development and commercial activities.
24. Report to Board on organization plans and performance.
25. Take decisions as delegated by the Board.
26. Act as the organization's representative in its dealings with the outside world.
27. Keeping good relationships with the inside and outside personnel and key persons and focusing on customer satisfaction.

28. Maintain and develop organization culture, values and reputation in its markets and with all staff, customers and suppliers.
29. Develop and enhance the internal work processes and define the relationships with various functions.
30. Monitor the company functions and the sites status and progress, plus closely support and monitor the HR and Financial functions.
31. Play a leading part in determining composition of committees, so as to achieve harmony and effectiveness.
32. Execute the responsibilities of a company Manager according to lawful and ethical standards of the group.

PROFESSIONAL EXPERIENCE:

- ❖ **El Sewedy Cables Group / Electric T&D** Feb. 2005 till Dec. 2010
 - 🚧 **Group Director of Contracting El Sewedy Cables** Feb. 2005 till Jun. 2006
 - 🚧 **General manger & Vice Chairman El Sewedy electric T&D** Jun. 2006 Till Dec. 2010

El Sewedy Electric T&D is an international organization specialized in the supply, installation and commissioning of overhead transmission lines and substations on a turnkey basis and services for utilities and industries including rural electrification and street lighting projects throughout Africa and the Middle East.

I participated in and carried out many technical, managerial and project management activities to implement infrastructure electrical power projects inside and outside Egypt.

Services description and scope of work:

- **Design, Engineering, Supplying, Installation, Testing and Commissioning of Electrical Generation Stations.**
- Design, Supply, Installation, Testing and Commissioning of M.V Substations.
- Design, Engineering, Manufacture, Supply, Installation, Testing, Commissioning and startup of Urban and Rural Distribution Systems.
- Design, engineering, manufacturing, supply, installation, testing, commissioning and startup of MV & HV underground cables up to 220 kV
- Design, Engineering, Manufacturing, Supply and Installation of Electrical Sub-Transmission networks.
- Design and Installation of Industrial Electrical Power Distribution systems.
- Design and Installation of Reactive Power Compensation Systems.
- Urban power network schemes.
- Street Lighting schemes.
- Rural Electrification schemes.
- Load flow and short circuits studies.
- Power system relays coordination studies.
- Power systems operation training program.

Achievements:

- ✓ Starting and initiating El Sewedy Electric T&D Co. in cooperation with El Sewedy cables group and El sewedy Cables team support. The total value for the projects executed over six years of work was more than 800MU\$.
- ✓ Training the staff of the company and setting the roles, P&P, KPI's and work flows. Reaching a

- strong international organization
- ✓ Design supervision of installation, testing and commissioning many of M.V Over Head Transmission Lines.
- ✓ Design supervision of installation, testing and commissioning many of M.V substations.
- ✓ Design supervision of installation, testing and commissioning many of H.V underground cabling systems.
- ✓ Preparation of all project cost sheets, time schedule and bidding documents.
- ✓ Preparation of the projects budgets including the planning for manpower, machinery, execution time and cash flow.
- ✓ Projects follow up including all project management activities.
- ✓ Participating in many bidding and preparation of the commercial offers with hit rate more than 15%.
- ✓ Successfully doing many marketing, BD and sales activities
- ❖ **Shaker Consultancy Group** Aug. 1992 till Jan. 2005
 - ✚ **Junior Electrical Engineer "Part time"** Aug. 1992 Till Dec. 1996
 - ✚ **Senior Electrical Engineer** Jan. 1997 till Dec. 1998
 - ✚ **Senior Electrical Engineer, Industrial projects sec. Head at CONISYS S.A.E** Jan. 1999 Till Jan. 2005

Since joining SHAKER Consultancy Group in 1992, I participated in and carried out many activities in industrial control and power supply system Medium and large-scale projects.

Services description and scope of work:

Activity code Brief Description

- A. Design, Engineering, Supplying, Installation supervision, Testing and Commissioning of Electrical Generation Stations.**
- B.** Design supervision of installation, testing and commissioning of industrial and administration buildings and hospitals electrical systems, including Preparation of full construction documents for power and light current electrical systems.
- C.** Design and commissioning of motor control center, and full automatic and semi-automatic-permissive-synchronizing panels for generator sets.
- D.** Preparation of power system relays coordination studies.
- E.** Testing, commissioning and startup of electrical power system equipment up to the M.V level.
- F.** Design and commissioning of earthing and lightning protection systems for H.V substations and high rise buildings.
- G.** Preparation of value engineering studies.
- H.** Preparation and performing of power systems training courses.
- I.** Other qualifications.
 - Good knowledge for H.V conventional & GIS substations design.
 - Good knowledge for instrumentation and control design and techniques.
- J.** Projects Management as a client / contractor representative.

❖ **Faculty of Engineering and Technology Helwan University** Feb. 1992 till Dec. 1996

✚ **Teaching assistance.**

Teaching assistance for the following subjects, that plus the post graduate studies:

Electrical machines – Industrial electronics – High Voltage

EDUCATION:

- ✓ B.Sc. in Electrical Engineering, Faculty of engineering HELWAN University, graduated in 1992 with a rate of "Excellent with Honor Degree" stood The FIRST.

- ✓ Post graduate studies for two years in the electrical power and machinery dept. Faculty of engineering HELWAN University.

Other STUDIES:

- ✓ MBA leadership, Liverpool University student No. H00019353 “ progress about 85% “ I passed all modules then hold for the final project.

MEMBERSHIP OF PROFESSIONAL SOCIETIES:

- ✓ Egypt Engineers Syndicate membership No. 28/07508 - 1992 Electrical.
- ✓ Egypt Engineers Syndicate Consulatant for buildings electrical works No. 0401522.

TRAINING COURSES and activities :-

- ✓ On job training for all the above-mentioned qualifications.
- ✓ English courses in AUC in the first two years from graduation, I got level18 certification and got 480 degree in TOEFEL in 1993.
- ✓ Training in Cummins generators factories in UK for one week.
- ✓ Grounding systems in the Egyptian engineering syndicate for one week.
- ✓ Engineering workshops in Turkey and UK.
- ✓ Training in South Wire factories, Atlanta USA.
- ✓ Preparation for and participate several times in ELECTRICX exhibition.
- ✓ Preparation for and participate in Abo Zabi exhibition.
- ✓ On job training on PLC and SCADA systems.
- ✓ Training in TBEA power transformers factories in China for one week.
- ✓ Time management and communication skills workshops.
- ✓ Project management for three weeks.
- ✓ Training in El Sewedy cables group factories, in Egypt and Sudan.
- ✓ PMP course.
- ✓ Mind map training – Tony Bozan.
- ✓ Six months diploma in strategic management.

COMPUTER SKILLS

Excellent knowledge for the following:-

- ✓ MS Word, Excel, Power Point & MS project
- ✓ EDSA, ACAD and aware about many design programs.
- ✓ In addition to, some engineering applications.

LANGUAGES:

Arabic:Mother tongue.

English:Fluent (Speaking and Writing).

The following pages show the reference list for the CEO & founder of EAe during his work in other firms.

Reference list of jobs Executed inside and outside Egypt under the direct management, responsibility and full-time participation from EAe founder & CEO with El Sewedy Electric T&D. from 2005 to 2010

Suez Canal Crossing Cables 66KV Cable Project

Project Description:

Connecting El Kantara East to El Kantara West by 66KV 630 mm² cable and earthing cable 1x240 mm² cable including all the necessary joints and terminations, in addition to 2 fiber optic cables.

Scope of Work:

Design, Engineering, Manufacturing, Testing (On shore and off shore), Delivery, installation and commissioning on turnkey project basic 66KV XLPE 630 mm² Copper Power cables with its accessories (Joint & Termination) and fiber optic cables with its accessories.

Client name:	Egyptian Electricity Authority EEA
Main Contractor:	El Sewedy
Route length:	800 Meter
Power Cables:	4.8 Km
Contract date:	6/2005
Contract Completion Period:	5 Month
Actual Completion Period:	3 Month
Value of contract	5 M LE

Cairo North - Bassos Cables 220KV Project

Project Description: Connecting Cairo North 220 KV substation to Bassos 220 KV substation by underground power cables XLPE 220 KV.

Scope of Work: Design, Engineering, Manufacturing, Testing (On shore and off shore), Delivery, installation and commissioning on turnkey project basic 220KV XLPE 800 mm² Copper Power cables with its accessories (Joint & Termination) and fiber optic cables with its accessories.

Client name:	Egyptian Electricity Authority EEA
Main Contractor:	El Sewedy
Route length:	10 Km
Power Cables:	61.2 Km
Contract date:	10/2002
Contract Cost:	83 M EGP
Contract Completion Period:	9 Month
Actual Completion Period:	8.5 Month

Talkha Generating Station

Project Description: Connecting Talkha new power plant 750MW to the existing 220KV GIS switchyard by underground power cables XLPE 220KV.

Scope of Work: Design, engineering, manufacturing, testing, delivery, installation and commissioning on turnkey project basic for 3 circuits and supply the national grid with 750MW.

Client Name:	Egyptian Electricity Authority EEA
Main Contractor:	El Sewedy
Route Length:	1.2 Km
Power Cables:	7.5 Km
Contract Date:	4/2005
Contract Completion Period:	18 Month
Actual Completion Period:	12 Month
Value of Contract:	16 M LE

El Dekhila Project

Project Description:

Cable laying and termination using horizontal directional drilling (HDD) for 220KV cable as a Turn Key Project.

Scope of Work:

Supply, Installation, Supervision of Installation, Commissioning of 220KV cable on turnkey basis.

Client Name:	Alexandria National Iron & Steel Co. (ANSDK)
Main Contractor:	El Sewedy Electric
Route Length:	1.2 Km
Power Cables:	500m from 3x300mm ² 33KV and 200m from 3x163mm ² 33KV
Contract Date:	7/12/2004
Contract Completion Period:	5 Month
Actual Start Date:	9/2005
Actual Completion Period:	3/2005
Value of Contract:	5 M LE

Reference list of jobs Executed in & outside Egypt, under the direct management participation from my side, as general manager.**Inside Egypt****Abo Kir Badr 500 KV 340 KM single circuit OHTL****Project Description:**

Connecting Sidi Krir power plant to Badr near by 10th of Ramadan city 500KV switchyard by OH 500 KV single circuit power Line.

Scope of Work:

Design, engineering, manufacturing, testing, delivery, installation and commissioning on turnkey project basic for single circuit 500 KV OHTL including two Nile crossings.

Client Name:	Egyptian Electricity Authority EEA
Main Contractor:	COBRA / El Sewedy
Route Length:	340Km
Contract Date:	10/2009
Contract Completion Period:	24 Month
Actual Completion Period:	30 Month
Value of Contract:	172 M US\$

East Awinat 220 KV 380 KM double circuit OHTL**Project Description:**

Connecting East Ewinat to Aswan by 220 KV OHTL.

Scope of Work:

Design, engineering, manufacturing, testing, not including tower and cables delivery, installation and commissioning on turnkey project basic for 220 KV OHTL.

Client Name:	Egyptian Electricity Authority EEA
Main Contractor:	El Sewedy
Route Length:	380Km
Contract Date:	10/2009
Contract Completion Period:	24 Month
Actual Completion Period:	24 Month
Value of Contract:	75 MLE

Outside Egypt

El Khartoum Kids Hospital, Electrical systems design and supervision on installations and project management.

North Sudan

Project Description: Over Head transmission line 33kV and 33/11kV substation at North, Sudan state on turnkey basis.

Scope of Work: Design, Engineering, Testing, Supplying, installation and commissioning on turnkey project basis OHTL 33kV and 33/11kV substation

Client Name:	National Electricity Corporation, NEC-Sudan
Main Contractor:	El Sewedy Electric
Power Cables:	33kV
Length	1690Km
	2 Substation
	20 Month
Contract Value:	41 M USD

El Khartoum New Network Sudan

Project Description: Over Head transmission line 33kV and 33/11kV substation at North, Sudan state on turnkey basis.

Scope of Work: Design, Engineering, Testing, Supplying, installation and commissioning on turnkey project basis OHTL 33kV and 33/11kV substation

Client Name:	National Electricity Corporation, NEC-Sudan
Main Contractor:	El Sewedy Electric
Power Cables:	33kV
	LV Network
Length	2200 Km
	58 Kiosk
	12 Month
Contract Value:	25 M USD

River Nile Sudan

Project Description: Over Head transmission line 33kV and 33/11kV substation at North, Sudan state on turnkey basis.

Scope of Work: Design, Engineering, Testing, Supplying, installation and commissioning on turnkey project basis OHTL 33kV and 33/11kV substation

Client Name:	National Electricity Corporation, NEC-Sudan
Main Contractor:	El Sewedy Electric
Power Cables:	33kV
	MV & AAC
Length	2000 Km
	3 Substation
	18 Month
Contract Value:	63 M USD

River Nil & El Shamalia Sudan

Project Description: Over Head transmission line 33kV and 33/11kV substation at North, Sudan state on turnkey basis.

Scope of Work: Design, Engineering, Testing, Supplying, installation and commissioning on turnkey project basis OHTL 33kV and 33/11kV substation

Client Name:	National Electricity Corporation, NEC-Sudan
Main Contractor:	El Sewedy Electric
Power Cables:	33kV
	LV Network
	18 Month
Contract Value:	55 M USD

El Shamalia Sudan

Project Description: Over Head transmission line 33kV and 33/11kV substation at North, Sudan state on turnkey basis.

Scope of Work: Design, Engineering, Testing, Supplying, installation and commissioning on turnkey project basis OHTL 33kV and 33/11kV substation

Client Name:	National Electricity Corporation, NEC-Sudan
Main Contractor:	El Sewedy Electric
Power Cables:	33kV
Length	1440 Km
	LV & ABC
	12 Month
Contract Value:	25 M USD

Fiber Glass lighting poles, Ghana

Project Description: Outdoor lighting project Ghana Street Lighting (Koforidura Town)

Client name:	The Ministry of Energy
Main Contractor:	El Sewedy Electric
Power Cables:	33kV
	0.43kV, 4x25mm ² cable = 51.6Km
	3 x 50 + 1x25mm ² cable = 2.3Km
	1 x 2.5mm ² cable = 30.2Km
Contract Date:	11/2006
Contract Value:	6 M USD
Contract Completion Period:	11/2007

Supply of Distribution Materials Ethiopia

Project Description: Supply of Distribution Materials value of 28M\$

Client name: Ethiopian Electric Power Corporation (EEPCo.)
Main Contractor: El Sewedy Electric
Supply of Distribution Transformers 33/0.4 kV & 15/0.4 kV
Supply Spare Parts for MV Switchgear
Supply of ABC Cables
Supply of AAAC conductor

Supply and installation of Distribution networks in Mozambique

Project Description: Engineering, Supply and installation of Distribution networks including metering system value of 14 M\$

Client name: Electricity De Mozambique (EDM)
Main Contractor: El Sewedy Electric
Supply & install of Distribution Transformers 33/0.4 kV
Supply & install Spare Parts for MV Switchgear
Supply & install of ABC Cables
Supply & install of AAAC conductor

Supply and installation of Distribution networks in Rwanda

Project Description: Engineering, Supply and installation of Distribution networks including metering system value of 3 M\$

Client name: RECO
Main Contractor: El Sewedy Electric
Supply & install of Distribution Transformers 33/0.4 kV
Supply & install Spare Parts for MV Switchgear
Supply & install of ABC Cables
Supply & install of AAAC conductor

Reference list of jobs Executed under the direct management and full time participation from EAE founder & CEO with Shaker Consultancy Group. From 1992 - 2005

A. Design and supervision of installation for electrical systems (M. T. and power distribution network lighting system, light current....etc.) for numerous project as example:

The scope Such as:

Design and preparation of the detailed drawings for the M. V network L.V network, MCC's, lighting system, light current systems, earthing system and lightning protection system. The work includes periodic site supervision and project coordination.

1. Factory 100, Iron Steel Production Facility Egypt

Period: From 1993 to 1994. Location: ABo-zabal App. App. Elect. Works cost: 20 M L.E.

2. Procter and Gamble Egypt

Period: From 1993 to 1999. Many projects. Location: 6th. Of October City. App. Elect. Works cost: 15ML.E.

*** New Tower Project and Pneumatic Conveying System**

*** Paste Making System**

*** P-15**

*** New Paper (CSX+) Project**

3. SADAT, Metal Co.

Period: From 1994 to 1996. Location: Sadat City App. Elect. Works cost: 5 M L.E.

4. Miser Chemical Boilers Project 2x120 T/H

Period: From 1996 to 1997. Location: El-Max Alexandria. App. Elect. Works cost: 10 M L.E.

Additional Scope:

Preparation of the inter-connection and 'wiring diagram for the control and instrumentation work.

5. Interagro Dairy Farm Facility

Period: From 1998 to 2000. Location: Nubaria City App. Elect. Works cost: 25 M L.E.

6. Milk Factory "Bety"

Period: From 2000 to 2002. Location: Nubaria City. App. Elect. Works cost: 45 M L.E.

7. El- ATTAL Steel Factory

Period: From 2000 to 2002. Location: Suez – Attaka. App. Elect. Works cost: 7 M L.E.

8. E.G Metals Copper rod Factory

Period: From 1999 to 2001. Location: Ismailia –Industrial Free Zone. App. Elect. Works cost: 5 M L.E.

B. Design and commissioning of Electrical systems including full automatic and semi-automatic-permissive-synchronizing panels for generator sets including parallel operation with utilities. For numerous projects as example:

1. SAFAGA Port D/G Station

Period: From 1997 to 1998. Location: NEW SAFAGA PORT. App. Elect. Works cost: 25 M L.E.

2. NILE CITY D/G Station

Period: From 1999 to 2000. Location: Cairo App. Elect. Works cost: 5 M L.E.

C. Preparation of power system relays coordination studies for L.V and M. V. For numerous projects as example:

1. Misr Compressors at 10th of Ramadan City
2. RAS El-Tine Navy Base (*)
3. Abbassia and Darassa Water Pumping Stations
4. Sheraton Heliopolice Hotel
5. Ismailia Waste Water Treatment Plant
6. Cairo West EAF (Pacer Forge Facility Support) (*)
7. EAF workshops at El-Maadi (*).
8. El-Shikh Zaid Hospital
9. CAL Moscow (*)
10. Gabal El-Asfar Waste Water Treatment.

D. Testing and commissioning of electrical equipment. For numerous projects as example:

1. Abbassia and Darassa Water Pumping Stations
2. Sheraton Heliopolice Hotel
3. Ismailia Waste Water Treatment Plant
4. El-Sadat Metal Co.
5. Port Said Waste Water Treatment Plant
6. El-Quantara Pumping Station

7. Gabal El-Asfar Waste Water Treatment
8. Misr Chemical 2*120T/h Boilers
9. Procter and Gamble
10. El-Masria Steel Factory

11. Mubark Huge Pumping Station @ TOSHKY

Commissioning and stat up for the PLC based control system. The station consists of 21 pumping units each 12MWe 16.7 m³/s Static Head of 54 m. The commissioning work period from Aug.2002 to Sep. 2003.

E. Design and commissioning of earthing and lighting protection systems for H. V substations and high rise buildings. For numerous project as example:

- 1- El-Mahmoudia Combined Cycle Power Station (1993)
- 2- Damanhour combined Cycle Power Station (1993)
- 3- El-Kurimat Power Station (1995)
- 4- Safaga 220 kV S/S.

L. V Earthing and Lightning Protection Projects

1. Cairo Meridian Lightning Protection system
2. American Embassy-House Earthing System
3. Egyptian Co. for Investment Earthing System
4. Abu- Tartar Rotary Furnace Earthing System
5. Tourah Cement Co. Lightning Protection

F. Preparation of value engineering studies. For numerous project as example:

Value Engineering and Electrical Master Plan Studies

- * Participate in Sahl-Hashish Electrical Power System V.E study (1997)
- * Participate in Interagro Dairy Farm Electrical Power System V.E study (1998)
- * P&G Electrical Master Plan for 15MVA
- * Galaxo welcome 2000

G. Preparation and performing of power systems training courses. For numerous projects as example:

Galaxo welcome Egypt. - Alexandria cement Co. - P&G Co.

H. For the Other qualifications.

Sidi Krir and Ay on Mosa 2x320kwe Power Plants Boilers

Participate in the instrumentation work, such as wiring diagrams, purchase specifications, instrumentation layout drawings, terminal point's drawings and earthing system

H.V Projects

Participate in design of the H.V substation (layout, sections and trenches design), for the following substations:

1. El-Omayed 220/66/11 kV substation
2. New-Quena 220/66/132/11 kV substation
3. Marsa Matrouh 220/66/11 kV substation
4. Safaga 220/66/22 kV substation

Projects Management as a client representative and /or as a contractor representative.

1. Procter and Gamble Egypt
2. SADAT, Metal Co.
3. Miser Chemical Boilers Project 2x120 T/H
4. El- ATTAL Steel Factory
5. E.G Metals Copper rod Factory

Appendix A:

EAe commercial registration and Taxes card

Appendix B: Reference drawings