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SICO for Projects and Construction **(SPC)**

Introduction

SICO for Project and Construction (SPC) was established in year 2011 based on huge experience of its mother company Scientific Implementation Company SICO, associated companies and its partners' in the field of projects and construction to meet the construction demand in Egypt, Africa and Middle East. SPC is member of SICO group which comprising several companies in different technical and electromechanical business areas.

The company Quality Policy Statement is that we shall deliver high quality products and services to our clients, on time.

We are committed to the continuous improvement in quality of our products and services, and to the development of our employees at all levels.

SICO for Projects and Construction's service is focused on understanding our customers' needs and fully meeting their expectations. We work collaboratively with our customers and supply chain to build lasting relationships and deliver cost effective civil and electromechanical engineering projects of superior quality.

At SPC "Safety is First", we are very proud of our safety record. Continuous training for our entire staff ensures that our engineers and electricians will perform safely and exceed the requirements of project demands.

Every project is different, and we offer the services and solutions to make sure success of the project .We offer Engineering, Procurement and construction based on different types and categories of projects.

For this project SPC is highly interesting to offer for mainly in power phase of replacing the RMU either for kiosks or rooms



Company Activities

SICO for Projects and Construction was established to satisfy the demand of Egyptian, Africa and Middle East market for the following activities based on a long experience and abilities for Execution, Installation, Construction Supervision, Testing and Start up:

1. High and Extra High Voltage Substations.
2. Electrical underground networks for transmission and distribution networks.
3. Execution of High and Extra High Voltage Overhead Lines.
4. Diesel and gas turbine power plants.
5. Control and Protection Systems
6. Control, Monitoring and SCADA systems for electrical and gas networks.
7. Communication Systems.
8. Distribution substations, panels and kiosks 11 & 22 kV.
9. Electrical Networks for Buildings, Factories and Farms.
10. Technical services and maintenance.
11. Interior and Exterior Lighting Systems.
12. Earthing Networks.
13. Natural Gas reduction stations and networks.
14. Water and Wastewater Systems.
15. Civil Works.



Company Information

Company's Name:

SICO for Projects and Construction (SPC)

Company Background / History:

SICO is a limited partnership company engaged mainly in the Engineering, Procurement, Construction, and commission of civil, electromechanical and energy business.

Company Headquarter:

Address : 95 Ahmed Oraby St., Apt. 206
Mohandessin – Giza – Egypt
Tel : (+202) 3305 2231 & 3345 5393 & 33457847
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Email : info@sicoegypt.com
Sico.spc.eg@gmail.com
Site : www.sicoegypt.com

Officers:

Dr. Abdel Ghany Youssif	Chairman
Dr. Mohammed Youssif	Vice chairman, Business Development
Dr. Tarek Sharaf	Vice chairman, Technical Studies
Eng. Ali Anous	Vice chairman, Projects
Eng. Osama saied	Director, Technical and Quality
Eng. Ahmed Said	General Manager, Technical Services
Mr. Ahmed Ibrahim	General Manager, accountancy

**Public Record/ Incorporation Data:****Commercial Registry No.:**

53985 Cairo

Local Chamber/ Trade Association:

Giza Chamber of Commerce, Giza, Egypt.53113

Tax Card:

Card No. 574 / 245 / 274 Date of Issuance 17 / 10/ 2011

Registration at the Egyptian Union for building and Construction**Contractors:**

53113

Company Branchs (Local)

Non

Company Branchs (Overseas)

- **Libya** : Mizran St. El Fairouz Building 2nd floor
Tripoli, Libya
- **Algeria** : Coop. Rayane Bt. A No 1 Ain Naadja
Gue de Constantine. Alger

SICO

Projects & Construction





Brief Synopsis of Projects



(A)
Brief Synopsis of
Substation Projects



Substation Projects

Execution of different types and schemes of transmission and distribution substations such as:

- 220/66/11Kv, AIS, conventional substations
- 220/66/11Kv, GIS substations.
- 66/11Kv, AIS, conventional substations (indoor & outdoor)
- 66/11Kv, GIS substations
- 33/11Kv, GIS single and double bus substations

The work includes but not limited to:

a. Civil Works

Site survey, site preparation, excavation, Plain & Reinforced concrete, Steel Structure and general Building, Blumping and Fire Fighting system.

b. Electromechanical Works

Erection of all equipment (including primary and secondary switchgears, auxiliary and power transformers, Power & Control cables, Bus Bars, CTs & PTs, Protection system,etc.)

c. SCADA and Communication systems.

Install SCADA and communication systems including wires, cables, RTUs, HMI and its accessories .

d. Test and Commissioning Works

Carry out the required tests for equipment and systems before energizing.



Gehena 66\11 kv substation (Sohag-Egypt)



Electromechanical Installation for Gehena 66/11 KV Substation





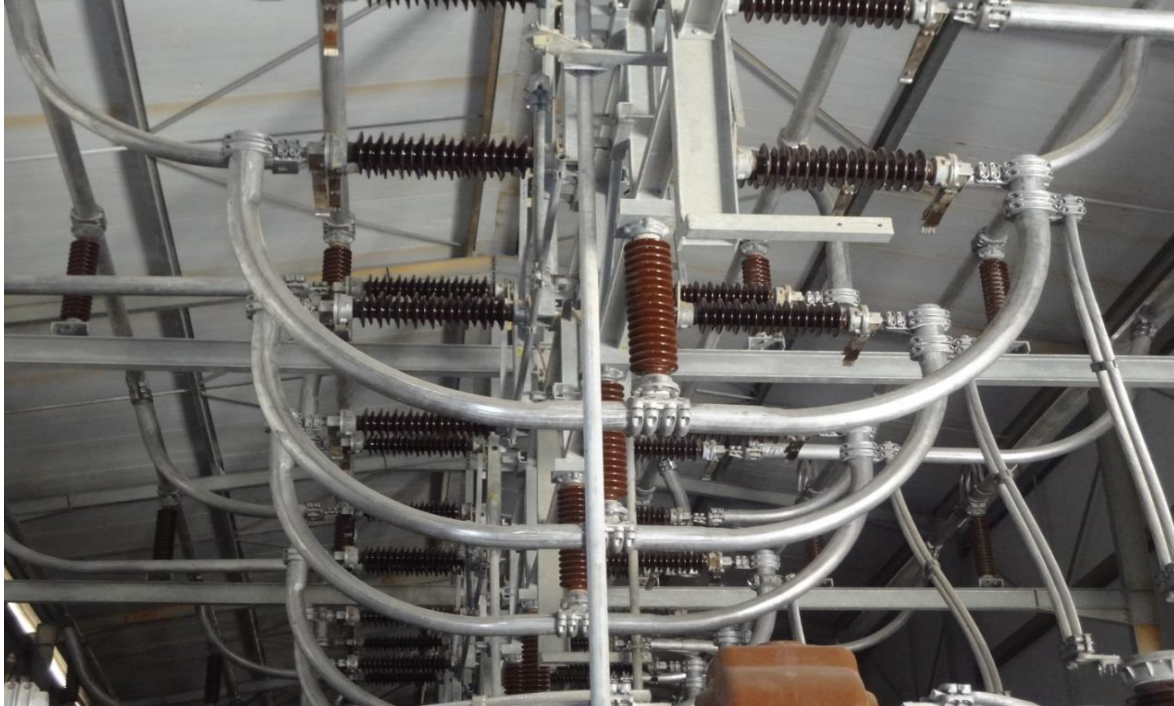
TEMA Civil works AIS 66/11 KV Substation



Surman substation 220/30 / 11kv (zawia-libiya)



Bir terface substation 220/30 / 11kv (zawia-libiya)



66/11 kv AIS indor substation (Elnoor ,albidaa, libiya)



66/11 kv GIS (sirt – libiya)



30/11 kv Double B.B, GIS substation(tripoli-libiya)



1. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of Surman 220/30/11 kV AIS substation
3x125 MVA.

Work includes:

a. Installation of:

- All steel structure.
- 220 kV switchyard.
- Two power transformers 2x125 MVA.
- 220 kV Busbars.
- 30 kV & 11 kV switch gear (indoor).
- DCS Systems.
- AC & DC Systems.
- Earthing Network.

b. Laying:

- 30 kV Cables.
- Control cables.
- Fiber optic cables.

c. Attending & participate in:

- Test & Commissioning of equipment and transformers. Commissioning of DCS and SCADA Systems.

Location : Zawia

Main Contractor: Bab El Madina

Subcontractor : SICO

Year : 2007



2. Owner : General Electricity company of Libya
“GECOL”

Project : Detail design and project management to dismantle 220 kV substation and segregate the material to form two Independent 220 kV substations.

Work includes:

- Study the scheme of old substation.
- Determine the quality of equipment including control and protection systems.
- Store investigation for spare material.
- Prepare dismantle procedures and backing.
- Shipping schedule.
- Specify the additional material require for each scheme (substations).

Location : Tripoli, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2007



3. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 8 AIS indoor 66/11 kV substations

Work includes:

a. Installation of (for each s/s):

- 66 kV panels (usually consist of four feeders, two transformers and bus coupler).
- 11 kV panels (usually consist of seven feeders, two power transformers, one auxiliary transformers and bus coupler).
- Two 66/11 kV, 20 MVA power transformers.
- Protection and control systems
- One auxiliary transformer 11/0.4 kV.
- DC system and Lighting system.
- Cables tray.
- Earthling network.

b. Laying

- Low voltage wires.
- Control cables
- Internal 11 kV cables.
- 30 kV cables between transformers and switchgear.

c. Attend

- Test and commissioning.

Location : Several towns, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2006 / 2009



4. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 16 GIS 30/11 kV single bus bar substations.

Work includes:

a. Installation of (for each s /s):

- 30 kV panels (usually consist of four feeders, two transformers and bus coupler).
- 11 kV panels (usually consist of seven feeders, two power transformers, one auxiliary transformers and bus coupler).
- Two 30/11 kV, 20 MVA power transformers.
- One auxiliary transformer 11/0.4 kV.
- DC system.
- Lighting system.
- Cable tray.
- Earthling network.

b. Laying

- Low voltage wires.
- Control cables
- Internal 11 kV cables.
- 30 kV cables between transformers and switchgear.

c. Attend

- Test and commissioning.

Location : Several towns, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2006 / 20109



5. Owner : General Electricity company of Libya
“GECOL”

Project : Installing SCADA systems in more than 100 substations (66/11 kV & 30/11 kV) and hundreds of 11 kV switchgear

Work includes:

- Remove old protection relays for 66 or 30 kV protection panels.
- Remove old protection relays from 11 kV panels.
- Dismantle all control and protection wires.
- Metal work to prepare new windows to fit with new relays.
- Install new relays with all connections.
- Wired the relays to RUT.
- Insert settings to the new relays.
- Test and commissioning.
- Solve any problem before restoration.

Location : Several towns, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2007 to 2013



6. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 9 GIS 30/11 kV substations double busbar.

Work includes:

- a. Installation of (for each s / s):
 - 30 kV panels (usually consist of eighteen feeders’ three transformers and bus coupler).
 - 11 kV panels (usually consist of seven feeders, two power transformers, one auxiliary transformers and bus coupler).
 - Three 30/11 kV, 20 MVA power transformers.
 - One auxiliary transformer 11/0.4 kV.
 - DC & AC systems.
 - Lighting system.
 - Cable tray.
 - Earthling network.
- b. Laying
 - Low voltage wires.
 - Control cables
 - Internal 11 kV cables.
 - 30 kV cables between transformers and switchgear.
- c. Attend
 - Test and commissioning.

Location : Several towns, Libya.

Main Contractor : Bab El Madina

Subcontractor : SIC

Year : 2008 / 20014



7. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 9 AIS, 66/11 kV substation 2x20MVA.

Work includes:

a. Installation of (for each s / s):

- All steel structure.
- 66 kV switchyard.
- Two power transformers 2x20 MVA.
- 11 kV switch gear.
- 66 kV Busbars.
- DCS & protection Systems.
- AC & DC Systems.
- Earthing Network.
- Lighting systems.

b. Laying:

- 66 kV Cables.
- Control cables.
- Fiber optic cables.

c. Attending & participate in:

- Test & Commissioning of equipment and transformers. Commissioning of DCS and SCADA systems.

Location : Tripoli, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2008/ 2014



8. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 220/30/11 kV 2x125 MVA AIS Bir Trface substation.

Work includes:

d. Installation of:

- All steel structure.
- 220 kV switchyard.
- Two power transformers 125 MVA each.
- 30 kV & 11 kV switch gear.
- 220 kV Busbars.
- DCS Systems.
- AC & DC Systems.
- Earthing Network.

e. Laying:

- 30 kV and 11 kV Cables.
- Control cables.
- Fiber optic cables.

f. Attending & participate in:

- Test & Commissioning of equipment and transformers. Commissioning of DCS and SCADA systems.

Location : Tripoli, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO for projects and construction (SPC).

Year : 2014



9. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 9 GIS 30/11 kV substations single bus
bar manufacture by Schneider.

Work includes:

a. Installation of:

- 30 kV panels (usually 8 feeders, two transformers and bus coupler).
- 11 kV panels (usually seven feeders, two power transformers, one auxiliary transformers and bus coupler).
- Two 30/11 kV, 20 MVA power transformers.
- One auxiliary transformer 11/0.4 kV.
- DC system.
- Lighting system.
- Cable tray.
- Earthling network.

b. Laying

- Internal 11 kV cables.
- Control cables
- 30 kV cables between transformers and switchgear.
- Low voltage wires.

c. Attend

- Test and commissioning.

Location : Several towns, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO for projects and construction (SPC).

Year : 2014 / 20015



- 10. Owner** : Egyptian Electricity Transmission Co.
"EETC"
- Project** : Construction of civil works of Gehena 66/11 kV
Substation buildings and associate site
utilities

Civil works:

- a- Site preparation
- b- 66 kv building.
- c- Control building.
- d- Transformer's bases.
- e- Firefighting rooms.
- f- Oli tanks.
- g- Roads.

Main activities include:

- Mobilization
- Excavation
- Backfilling
- Replacement
- Lean concrete
- Reinforced concrete
- Isulation
- Buildings.
- Finishing

- Location** : Sohag - Egypt.
- Main Contractor** : Egemac
- Subcontractor** : SICO for projects and construction (SPC).
- Year** : 2016/2017



11. Owner : Egyptian Electricity Transmission Co.
“EETC”

Project : Execute the electromechanical works of
Gehena 66/11 kV substation

Electromechanical works:

Work includes:

- a. Install:
 - All steel structures.
 - 66 kV switchgear.
 - Two power transformers 2x MVA.
 - 11 kV switchgear.
 - 66 kV Busbars.
 - Protection Systems.
 - AC & DC Systems.
 - Earthing Network.
 - Lighting systems.
- b. Laying:
 - 66 kV Cables.
 - Control cables.
 - Medium voltage cables.
- c. Attending & participate in:
 - Test & Commissioning of equipment and transformers.

Location : Sohag - Egypt.

Main Contractor : Egemac

Subcontractor : SICO for projects and construction (SPC).

Year : 2017/2018



- 12. Owner** : .Egyptian-electricity-transmission-co
“EETC”
- Project** : Execute the civil works of New TEMA 66/11 kV,
AIS substation (under construction).

Civil works:

- Site preparation
- 66 kv building.
- Control building.
- Transformer's bases.
- Firefighting rooms.
- Oli tanks.
- Roads.

Main activities include:

- Mobilization
- Excavation
- Backfilling
- Replacement
- Lean concrete
- Reinforced concrete
- Isulation
- Buildings.
- Finishing

- Location** : Tema - Egypt.
- Main Contractor** : Egemac
- Subcontractor** : SICO for projects and construction (SPC).
- Year** : 2017/2018



(B)

Brief Synopsis of
OHL Projects



SICO for projects and construction (SPC) had a long experience in the field of OHL and high skilled engineers and technicians with more than 30 years in OHL business. Its activities cover:

- Execution of new OHLs.
- Maintenance of old OHLs.
- Engineering and managing execution of OHLs for all voltage levels 500,400, 220, 66 and 30 Kv.

A. Execution of OHLs

Execution of 400 KV, 70 KM Transmission line Khoms- Mosrata



Drilling (piles)



Pile with steel



Excavation in stone soil



Dewatering system



Concrete



Stub sitting template



Stub setting V block



Damping and compressing For Stub Setting Platform Soil



Tower erection



Insulators collection



Hinging Insulators



Stringing of conductors



Stringing of conductors



1. Owner : General Electricity Company of Libya
“GECOL”

Project : Installation of OHL, 40 km, 220 kV, Obari,
Al Owaynat.

Work includes:

- Determine coordinates.
- Civil work:
 - Excavation
 - Replacement (if required)
 - Laid concrete
 - Stub setting
 - Reinforced concrete
 - Painting
 - Backfilling
- Tower Erection
- Stringing works

Location : Libya.

Main Contractor : National group for engineering.

Subcontractor : Toshki & SICO

Year : 1999



2. Owner : General Electricity company of Libya
“GECOL”

Project : maintenance work for Tamena-Alkararem 220 kV
18 km OHL.

Work includes:

- a. Dismantle old conductors, earthing wire and damaged Insulators.
- b. Replace all defected steel members.
- c. Replace all insulators.
- d. Stringing new conductors and earth wire.

Location : Mosrata, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO for projects and construction

Year : 2012

3. Owner : General Electricity company of Libya
“GECOL”

Project : maintenance for Sakt-Tamena 30 kV, 20 km OHL
& Tamena-Almena 30 kV, 14 km OHL.

Work includes:

- a. Dismantle old conductors, earthing wire and insulators.
- b. Replace all defected steel members.
- c. Replace all insulators.
- d. Stringing new conductors and earth wire.

Location : Mosrata, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO for projects and construction

Year : 2013



4. Owner : General Electricity company of Libya
“GECOL”

Project : execute TRAGHEN-EFGAIJ 220 kV, 97 km OHL

Work includes:

- Determine coordinates.
- Civil work:
 - Excavation
 - Replacement (if required)
 - Lain concrete
 - Stub setting
 - Reinforced concrete
 - Painting
 - Backfilling
- Tower Erection
- Stringing works

Location : Sebha, Libya.

Main Contractor : United Libyan Bulgarian Construction co.

Subcontractor : SICO for projects and construction

Year : 2012



5. Owner : General Electric company of Libya
“GECOL”

Project : execute SIDI ELSAEH-BOUARGOUB 66kV 115 km
OHL

Work includes:

- Determine coordinates.
- Civil work:
 - Excavation
 - Replacement (if required)
 - Lain concrete
 - Stub setting
 - Reinforced concrete
 - Painting
 - Backfilling
- Tower Erection
- Stringing works

Location : Tripoli, Libya.

Main Contractor : United Libyan Bulgarian Construction co.

Subcontractor : SICO for projects and construction

Year : 2013



6. Owner : General Electricity company of Libya
“GECOL”

Project : execute SIRT-ZAMAZM 220kV 90km OHL

Work includes:

- Determine coordinates.
- Civil work:
 - Excavation
 - Replacement (if required)
 - Lain concrete
 - Stub setting
 - Reinforced concrete
 - Painting
 - Backfilling
- Tower Erection
- Stringing works

Location : Libya.

Main Contractor : ALWATANIA GROUB co.

Subcontractor : SICO

Year : 2001



Brief Synopsis of OHLs Maintenance Projects



B. Maintenance of OHLs

The following pictures illustrate the defected steel members and broken glass insulators for 220 KV in Libya (after the war) sico for projects and construction replaced all defected members (angels, insulators, steel and stringing conductors)



Defected steel members



Defected steel members



Broken glass insulator



1. **Owner** : General Electricity company of Libya
“GECOL”
Project : maintenance work for Tamena-Alkararem 220 kV
18 km OHL.

Work includes:

- a. Dismantle of conductors, earthing wire and insulators.
- b. Replace all defected steel members.
- c. Replace all insulators.
- d. Stringing of new conductors and earth wire.

Location : Mosrata, Libya.

Main Contractor: Bab El Madina

Subcontractor : SICO for projects and construction

Year : 2012



2. Owner : General Electric Company of Libya
“GECOL”

Project : maintenance for Sakt-Tamena 30 kV, 20 km OHL
& Tamena-Almena 30 kV, 14 km OHL.

Work includes:

- a. Dismantle of conductors, earthing wire and insulators.
- b. Replace all defected steel members.
- c. Replace all insulators.
- d. Stringing of new conductors and earth wire.

Location : Mosrata, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO for projects and construction

Year : 2013



(c)

Brief Synopsis of
Distribution Projects



3. Distribution Networks

Distriution networks are playing a vital part in transfere power from extra and high voltage networks to majoirity of custmers either on distriution voltage level or low voltage networks (380 v & 220 v). therefor spc is giving high level of intersting to the activities of distriution networks.



Medium voltage circuit breaker



Medium voltage panel



Meduim voltage distriution sustation



Meduim voltage GIS ring main unit



Meduim voltage distriution panel



Meduim voltage transformer



Medium voltage distribution panel (schneider)



Medium voltage distribution panels (Siemens)



Pole mounted transformer



11 kv tension poles



Brief Synopsis of Distribution Projects



1. Owner : General Electricity company of Libya
“GECOL”

Project : Installation, testing and commissioning of 12
Distribution Switchgears 11kV from different
manufacture.

Work includes:

a. Installation of:

- 11 kV panels (usually seven feeders, two auxiliary transformers and bus coupler.
- DC system.
- Lighting system.

b. Laying:

- Internal 11 kV cables.
- Control cables
- Low voltage wires.

c. Attend:

- Test and commissioning.

Location : Several towns, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2006 / 2007



2. Owner : General Electricity company of Libya
“GECOL”

Project : Installation of 130 indoor Distribution Transformer stations (11/0.4 kV).

Work includes:

a. Installation of:

- Distribution transformer.
- Ring Main Unit (RMU) 11kV different types.
- Low voltage board.
- Lighting system.

b. Laying:

- Internal 11 kv cables.
- Low voltage cables

c. Attend:

- Test and commissioning.

Location : Many cities, towns and villages, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO

Year : 2006 / 2009



3. Owner : General Electricity company of Libya
“GECOL”

Project : Installation, testing and commissioning of 30
Distribution Switchgears 11kV ABB

Work includes:

a. Installation of:

- 11 kV panels (usually seven feeders, two auxiliary transformers and bus coupler.
- DC system.
- Lighting system.

b. Laying:

- Internal 11 kV cables.
- Control cables
- Low voltage wires.

c. Attend:

- Test and commissioning.

Location : Mosrata, Libya.

Main Contractor : Bab El Madina

Subcontractor : SICO for projects and construction

Year : 2014 / 2016



(D)

Brief Synopsis of
Oil & Gas
Projects



Nobaria Power Plant Gas Station



Gas Station





Regulator Station Under Fabrication 5000 m³/hr



Regulator Station Under Fabrication 10000 m³/hr



1. Owner : Natural Gas Nubaria Company

“National Gas Company”

Project : Install SCADA system for 8 Gas stations
Along 80 km gas pipe line provided by
Alpha company (Germany).

Work includes:

- Excavate cable trenches for each station.
- Prepare concrete bases for RTUs and solar cells.
- Provide and erect shelter with fire fighting and alarm systems.
- Specify the local material required.
- Supervised installation of the hall project materials.
- Attend test and commissioning.
- Assist in all concerning meetings.

Location : Nobaria power plant and Tanta city

Main Contractor : Alpha – Germany

Subcontractor : SICO

Year : 2006



2. Owner : Town Gas

Project : Manufacture and supply four (4) reduction gas stations

Work includes:

- Prepare engineering and bill of quantities of Required material
- Prepare the specifications of material.
- Import and supply the necessary components.
- Manufacturer the stations at Egypt Gas, facilities.
- Test and commission of stations.
- Delivered the stations to Town Gas.

Location : Giza - Egypt

Main Contractor: SICO

Manufacturer : Egypt Gas

Year : 2007



(E)

Brief Synopsis of
Technical Services
Projects



Technical Services



Repair of 500 KV autotransformer at Cairo 500 S/S



Replacement of old relays y new digital one and connect it to SCADA System



Under voltage cleaning



Company Equipment

**Equipment list:**

item	description	quantity	notes
1	Loders	2	
2	excavators	2	
3	cars	8	
4	tractor	1	
5	mixers	2	
6	Shutters	1	
7	Holding up machine	4	
8	Vibrators	6	
9	Water pump	4	
10	Total station survey inst.	2	
11	All installation tools	6	