



TOMORROW'S  
SOLUTIONS  
TODAY



CONTACT US!

Phone 00966 11 498 0822

E : info@sep.com.sa

2nd Industrial City

Fax 00966 11 498 1712

P.O: Box 355950 Riyadh - 11383

Riyadh, Saudi Arabia

WWW.SEP.COM.SA

SYSTEM HOUSE FACTORY  
FOR ELECTRIC PANELS

TOMORROW'S SOLUTIONS TODAY

# COMPANY PROFILE

We are part of



AlGihaz Holding is A leading Saudi group having over 40 years of successful track of record of providing power EPC turnkey solutions for conventional and renewable energy, communications solutions, security solutions, and creative design.



# THE CONTENT

About Company	03
General Manager	04
SEP Team	05
SEP Mission, Vision & Value	06
Quality Process	07
Approvals	08
SEP Products & Solutions	09
SEP Services	17
SEP Training	19
Resources	21
Our Customers	25



# ABOUT COMPANY

System House Factory for Electrical Panels was established in 2006. Centrally situated in the Kingdom's capital, Riyadh, SEP is a leading ISO certified, Aramco and Saudi Electricity Company (SEC) approved manufacturer for supplying of relay, control, automation and distribution panels from its 8000sqm weather protected industrial unit. Establishing with in a very short period of time an enviable reputation as a dynamic, innovative and specialized company with expert resources offering a comprehensive and professional service. Our dedicated and well experienced team plans project and delivers industrial solution through its proven products, innovative technology and un paralleled services.

## In kingdom of Saudi arabia SEP has

- Modified more than 95 OHTL feeder to UGC feeder for Riyadh METRO Project
- Delivered +15000 relay, control, metering, SAS and AMI Panels
- Commissioned +200 substations



# SEP GENERAL MANAGER

## Dr.Bruno Stocchi

Dr. Bruno Stocchi's educational achievements. Earning a diploma in Electromechanical engineering from ENSEM, DEA in Applied Mathematics (Nancy), he also holds an Engineering Doctorate in Fluid Mechanics.



At the helm of SEP is General Manager Dr.Bruno Stocchi. Transporting a wealth of management expertise to SEP, Dr. Stocchi holds with in his career portfolio a proven track record of esteemed managerial skills. Previously the GM for Vetch, KSA, his lengthy and successful career with Schneider spanned two decades, crossing two continents - Europe and Asia. Equally impressive.

## OUR TEAM

In addition to attaining customer satisfaction, we recognize that our multi-skilled rapidly expanding SEP workforce, comprising of 110 engineers and 206 technicians, is one of our most valuable assets and whose welfare is paramount to the successful operations of SEP. Teamwork and uncor another throughout the workforce, both horizontally and vertically, is the very core of SEP's beliefs and values which enables s to deliver efficient services to our clients in all its forms. Expert with in the realms of Electrical Panel solutions, we endeavor to constantly update the skills of the SEP team in order to satisfy the very needs of our customers.

QUALITY ISN'T AN ACT;  
IT IS A HABIT

Aristotle



## VISION

A Pioneer in the electric panel manufacturing sector, SEP Aspires to become a leader providing customized solutions to customers through adaptation and innovation professionally with 100% customer satisfaction.

## MISSION

We are priding ourselves on excellent customer care and service An ability to deliver fast, reliable and effective solutions. Our ultimate aim is to exceed customer expectations every time utilizing our deep knowledge in industry. We recognize that your succeed is our future.

## & VALUE

”

Customer Focused

Integrity

Perseverance

Innovation

Accountability

Leadership



# QUALITY PROCESS

With customer satisfaction in mind to begin with along stringent quality process and control implemented, maintained and improved at every level, we clearly and confidently demonstrate our eagerness and ability to provide consistently first-rate product that continually meet and exceed the high demand and expectations of our customers and stakeholders and remain compliant with the industry's statutory and regulatory requirements. In doing such we are pleased to convey that all SEP Products are manufactured and consequently processed in compliance to international standards, to which the ISO certificates 9001(2015), 14001(2015) and 45001(2018) awarded to SEP bears witness.



By Ref 090150003032301-issued from the Transmission Standards & Specifications Department at Saudi Electricity Company (SEC), SYSTEM HOUSE FACTORY FOR ELECTRIC PANELS (SEP) Riyadh for Relay & Control Panels is certified and is officially included in the unified list of Technically Acceptable Manufacturers and Manufacturing Plants of Saudi Electricity Company.

# APPROVALS

SEP is approved by National Grid, Royal Commission, Aramco, and SWCC for the supply of following products & Solutions in the Kingdom of Saudi Arabia

- Control and Protection Solutions for substation up to 380kV level
- SEP SAS Solution based on ZENON software from COPA-DATA
- SAS Solutions with Schneider PACIS software up to 380kV level
- Substation Telecom Solutions
- Advanced Metering Infrastructure (AMI) Systems
- SAS Console Desk for NG/SEC substation projects
- SAS Modification for ARAMCO & SEC
- Electrical Enclosures for various applications



## PRODUCTS & SOLUTIONS

### PROTECTION PANELS

Feeder Protection Panels	Load Shedding Protection
Busbar Protection Panels	Bus Section Protection Panels
Transformer Protection Panels	Series Reactor Protection Panels
Shunt Capacitor Protection Panels	Panels Bus coupler Protection panels

### SOME KEY PROJECT REFERENCES

#### 380/230KV SS

Tabuk BSP  
 ALMasha'er SS  
 ALKharj-2 (#9028 SS)  
 ALMadinah Industrial City  
 Abqaiq Central (230KV SS)

#### 132KV SS

Khamis West SS  
 ALRuwaydah SS  
 Tabuk University SS  
 King Faisal Hospital SS



## PRODUCTS & SOLUTIONS

Advanced Metering Infrastructure (AMI Panels)

Automatic Meter Reading System (AMR PANELS)

### SOME KEY PROJECT REFERENCES

Khandamah SS  
 Osaila SS  
 ALBayah SS

Airport North (#9089 SS)  
 ALHaram Road SS  
 ALKharj (#8717 SS)





## PRODUCTS & SOLUTIONS

### SAS & PSA PANELS & SOLUTION

SEP's portfolio of Substation Automation Solutions (SAS) provides our customers with state-of-the-art control and automation solutions by ensuring the highest level of interoperability through international standards like IEC 61850.

- SAS Network Panels
- ATS & ACCS Panels
- PSA Panels for GOSPs
- Server & Gateway panels

- SEP SAS Solution based on ZENON software by COPA-DATA - a leading software solution provider.
- SEP is a qualified Silver partner by COPA-DATA in Middle East region.
- Our SAS team is having 20 qualified, well trained and certified Engineers from COPA-DATA.
- Training for our clients is also performed in our simulated Substation, through which our trainees will get practical Knowledge towards the SAS configuration and Commissioning.
- SEP is officially a System Integrator for Schneider Electric's SAS Solution

### SOME KEY PROJECT REFERENCES

Fruysah SS  
ALFadhli Area

King AbdulAziz Univ 3&5 SS  
ALMadinah Airport-2 SS

ALManar SS  
ALHuda SS

ALKhalidiya SS  
Qatar Road SS



## PRODUCTS & SOLUTIONS

### ENCLOSURES

#### UNIVERSAL ENCLOSURE (BOLTED TYPE)

- Designed by SEP & type tested at KSU, Riyadh and Patented by KACST.
- Modular Designed
- Bottom/Top Entry
- Front Access & Top lifting
- Door access up to 120° & provided with Laminated (Splinter proof) transparent Tempered Glass (4mm) as per 31-TMSS-01 Clause 5.1
- Floor mounting by anchoring bolts
- Frames & Covers assembled by screwing As per 31-TMSS-01 Clause 4.112

#### FOPP ENCLOSURE

- Modular
- Perforated holes are given on internal frames for flexible arrangement of 19" rack
- Internal rack Height range: 60, 100 & 15U
- Door opening angle 120°
- Frame structure is assembled by screw
- Bottom Cable Entry
- Easy Transport & maintenance
- Wall mounting & Removable Front Door & Side covers

#### METALLIC ENCLOSURE

- Enclosure size: 800 x 800 x 2200mm
- Internal Rack Height : 42U
- Internal Rack Width : 19"
- Door's Net Min. Clearance : 702 x 2007.5mm
- Degree of Protection: Up to IP54
- Ventilation: Optional
- Cable Entry: Top & Bottom
- Transport: Top & Bottom lifting

#### CUSTOMIZED ENCLOSURE SOLUTIONS

SEP also provides customized enclosures to our customers based on their requirements with most advanced machineries available in our workshop.





## PRODUCTS & SOLUTIONS

### SAS CONSOLE DESK

- Ergonomic Design
- Compact internal steel structure covered with laminated Wood work in surface, doors & covers
- 360° Adjustable Swivel Arm Support for monitor
- Pullout lockable Keyboard tray
- Adjustable KVM tray
- Floor mounting and Bottom lifting
- Basic Dimension: 735 x 3950 x 945mm
- Standards: IEC 60529, IEC 60297 & IEC 62208



## PRODUCTS & SOLUTIONS

### FIBER OPTIC CABLE PRODUCTION

#### Connector selection meets network requirements

We manufacture all major type of Fiber Optic cables with LC, SC, ST and FC connector types, single mode or multi mode, and simplex or duplex for both indoor and outdoor facilities to fit specific network transmission speed requirements. Our team also does installation of fiber optic cables at customer's on-site facility.

#### Assured Performance and Lifetime Traceability of Test Data

All Patch Cords and Cable Assemblies are factory terminated and 100% tested for insertion loss; single mode patch cords are also 100% tested for return loss and end face geometry is 100% inspected.





# PRODUCTS & SOLUTIONS

## IEC LOW VOLTAGE POWER DISTRIBUTION & CONTROL SYSTEMS

SEP offers a wide range of low voltage power distribution & control systems for safe and reliable power supply and distribution in residential, commercial, and industrial installations. Our LV Power Distribution & Control Systems offering includes but not limited to:

SEPRIME Main Distribution Boards and Motor Control Centers  
SEPLUS Sub Distribution Boards  
SEPLITE Final Distribution Boards

### SEPRIME Main Distribution Boards & Motor Control Centers:

SEPRIME is UL type tested assembly for main distribution boards and motor control centers as per latest IEC 61439-1 & 2 and IEC/TR 61641 for internal arcing. SEPRIME is developed based on a versatile design philosophy that provides great flexibility to meet project specifications and site requirements and ensure increased reliability, tested safety and increased efficiency.

SEPRIME is available in different configurations, which include:

- Power Sections for ACBs and MCCBs with single of multi-tier design
- Distribution Sections for fixed, plug-in, and withdrawable modules
- Main Horizontal busbar at top, middle and/or bottom positions
- Distribution vertical busbars at rear or lateral positions
- Front or rear access
- Top or bottom cable or busway entry
- IP30, IP42, IP43, IP54
- Internal Form of Separation up to Form 4b or Form 4 Type 7
- Various functional modules for power distribution, motor control, power factor correction etc.



## Markets:

### Commercial:

Small and large buildings  
Shopping malls  
Educational Institutes  
Hospitals  
Airports

### Industrial:

Light and heavy industry  
Process industry  
Chemical industry  
Pharmaceutical  
Oil and Gas

### Utilities:

Water treatment plants  
Waste management  
Power distribution  
Telecommunications  
Public transport

### Benefits:

- Increased Local Content.
- A design-verified, modular and flexible system.
- Combination with a large number of components.
- A solution for all kinds of application.
- Long service life, even under harsh operating conditions.

## IEC MEDIUM VOLTAGE POWER DISTRIBUTION & CONTROL SYSTEMS

### Compact Secondary Substations:

A Compact Secondary Substation (CSS) is a type tested assembly comprising an outdoor enclosure containing medium voltage switchgear, distribution transformers, low voltage distribution board, connections, and auxiliary equipment to supply LV energy from MV systems.

These substations are typically installed in locations accessible to the public and ensure safety according to specified service conditions. Our CSS offering includes:

- SEPACK-S

### SEPACK-S Compact Secondary Substations:

As underground cabling and urbanization continues, new rural locations require a lighter and cheaper solution. SEPACK-S product range, where S stands for steel meets this demand. SEPACK-G is designed as per IEC 62271-202 and Saudi Electricity Company (SEC) specification 56-SDMS-04.

# SEP SERVICES

SEP offers a highly qualified protection and automation engineers. The expert team of qualified engineers is capable of carrying out the following activities:

Advanced Numerical Relay testing and commissioning (Differential, Distance, O/C, etc), Bus Bar testing and commissioning, Stability test, Primary Injection, Transformer tests (tanA, turns ratio, etc), LV distribution panels testing, ABTS & ACCS Configuration testing, BCU configuration and integration, CID file preparation for Protection IEDs & Testing and commissioning of SAS systems.

We at SEP accelerate your learning. Everyone has preferred learning techniques which we introduce to our training to help you progress naturally and quickly. Training team conducts technical courses at SEP in collaboration with internal experts and/or external providers. Courses are offered at equipment manufacturer's factory premises and customer's on-site facilities for both Control & Protection system and Substation Automation Systems. Our training courses will focus on practical sessions Hands-on training will be provided by our trainers which help the trainees to learn effectively.

Our testing team includes a mixture of technical and domain expertise relevant to the jobs we handle with our clients. The team is properly structured, with defined roles and responsibilities that allow the testers to perform their functions with minimal overlap and without uncertainty. We have more than 50 engineers specialized on test equipment like FREJA-300, OMICRON CMC-256 Plus, Omicron CT Analyzer, Omicron CPC-100, Isa, Sverker ,etc. and familiar with advanced numerical relays of SEL, SIEMENS, ALSTOM, ABB, GE, etc., We do perform testing and commissioning activities on control and protection panels, and we have also commissioned SAS systems in collaboration with SEL. Our engineers are also having vast experience in commissioning the modification of OHL to UGF circuits in the Kingdom.



SEP has conducted more than 50 training programs on Protection relays & SAS solutions both inside and outside of Kingdom



# TRAINING

## On site & In Factory Training Lab for SAS & PSA

SEP has trained more than 35 Engineers & Technician from National Grid SA only by our CopaDATA Zenon certified trainers. NGSA Trainees were from:

SCADA Maintenance  
S&SD

CSD  
SAS Committee

PED  
TESAD

Projects  
Telecom



- We are providing training to customers in order to get more On-site training /on factory/Customized training service.
- Training program for all level of users 80% of the training is practical training and on hand exercise.
- Training include Protection and Control relays, SAS Solutions training, BCU's and Energy metering
- We have also established trainig center for PSA in NPA (National Power Academy).

# TRAINING

## On site & In Factory Training Lab for TELECOM

### In Factory Training Lab Equipment's

- MPLS-TP-Huawei
- DVM-Huawei
- PSE ZIV
- WDM-Huawei
- NCE-iMaster-Huawei

- We are providing training to customers in order to get more On-site training /on factory/Customized training service.
- Training program for all level of users 80% of the training is practical training and on hand exercise.
- Telecom Training including difference technologies and multi-vendor products.
- SEP instructors are highly skilled and certified telecom engineers.





# RESOURCES



**SALES & MARKETING**

Integrating a team of engineers with a proven track record in customer liaisons, and who have the ability to meet the various demands in the Saudi and Gulf markets. From start-up companies and individuals to corporate entities both national and international, the department has the confidence, skills and knowledge to offer a sound advice on product choice and beyond.



**PROJECT  
MANAGEMENT**

Our Project team is equipped with vastly experienced and highly skilled engineers, who will take the complete responsibility of the project, understands the complete scope and drive the project professionally in meeting the deadlines fixed by our customers.



**DESIGN & PRODUCTION  
FUNCTION**

Using the very latest software in design technology (Eplan P8, Elecdes, Paneldes, AutoCAD, Photoshop), customers can rest assured that our skilled engineers meet the needs of their requirements. Through its continual utilization of modern computerized local area network SEP fosters passion when it comes to keeping abreast of the update of new and key technologies which complements the effort being implemented by our team.



**ELECTRICAL ASSEMBLY  
WORKSHOP**

Covering an enormous, air conditioned space of 4200 sqm, which houses 150 employees, the assembly unit includes expert engineers and technicians who build the electrical panels, including wiring, conduit and cable schedules as per approved design. Our production team is capable of producing 200 panels per month.



**LADIES PRODUCTION  
TEAM**

Our ladies production team is also establishing themselves in the panel production. They are supporting our workforce and are capable of doing pre-wiring Metering, Media Converter, Transducer and AMI panel production. In addition, the team is also capable of doing fiber optic cable production.

SEP employs an integrated expert team in order to carry out the company's spectrum of complex industrial operations. From its Administration Departments through to the Design, Assembly and Mechanical Workshop. the Painting Unit,

the Quality assurance, Inspection and the Service Department, SEP ensures that quality at every level of the operations is maintained ensuring customer satisfaction.



## MECHANICAL WORKSHOP

Lending themselves to the development and manufacture of company products, SEP utilizes the up-to-date machineries which enable its workforce to produce panels more effectively. We can deliver both standardized models and specifically requested prototype as well to the customers.

Some of our Key Machineries for cubicle manufacturing are

- Punching Machine - TRUPUNCH2020
- Bending Machine - TRUPUNCH2020  
- TRUBEND3066
- Gasket Machine - HGTJ401
- Roll Forming Machine - HUAZHONG

## PAINTING UNIT

Employing the French (SAMES) and Italian technology for the automatic electro-static powder coating unit, we are able to support the solutions through the development and pretreatments of the panel's surface metal to protect them against atmospheric damages like erosion.



## QUALITY ASSURANCE AND INSPECTIONS

Ensuring quality, panels are put through a number of stringent inspections in order to maintain the quality our customers are expecting from SEP. Process and quality controls are established where the testing and inspection of materials received from both within and beyond the company is mandatory. During the manufacturing process adequate controls are in place from incoming, in process, testing up to the outgoing and packing of the panels in compliance with local and international standards and regulatory requirements are undertaken before being tested again at the final stage of production according to the standards set both by us and of course to the IEC & ISO standards.





# OUR CUSTOMERS

