About ACES

Advanced Communications and Electronics Systems Co. is a leading ISO certified “GRADE A” EPC Contractor and “Class 1” System Integrator for Power, Telecom, Security and ICT Projects. We are a subsidiary of Sumitomo Corporation and a Closed Joint Stock - Saudi Company. Our profile includes Smart Campus, Smart Towns, AFC, Data Centers, Wireless Networks, Critical Communication Networks, GSM/CDMA/TETRA/LTE, In Building Solutions, Software Development, VAS, Integrated Security Solutions, Power Solutions, Pre Cast Civil Solutions, Communication Civil Works, Microwave Communication, Fiber & Copper Networks, Broadcasting, Telephony, Operations & Maintenance, Batteries, Generators, Switch Gears, Solar & Wind Power Solutions, Consultancy and many more. Classified as Class 1 contracting company, we have been successfully working for Telecom, OIL & GAS, Utility companies, Government and Education sectors for over 18 years and has been ranked 8th in Saudi Fast Growing 100 companies in 2010.

About Sumitomo Corporation

Sumitomo is a 400 years old 1.3 trillion USD Japanese business group. Their business verticals include Telecom, Media and Electronics, Chemicals, Steel, Mining and Heavy industries. Besides being part of 400 years old Sumitomo Group of Companies, Sumitomo Corporation is also a multinational investment company and an EPC Contractor in Kingdom of Saudi Arabia.

Sumitomo prefers ACES as a system integrator for its mega projects in the region resulting several opportunities for ACES. They not only compliment ACES with their international reputation, partners, expertise, vision and experience, but also support ACES by assuring end customer of their full support to ACES for any mega projects in the region.

Electro Mechanical Department Introduction

ACES Co. is a ‘Grade A’ Engineering Procurement & Construction (EPC) company with an impressive track record of consistent growth. We have emerged as a strong EPC contractor in the Energy, Infrastructure as well as Engineering Services sectors in Saudi Arabia.

The Electro-Mechanical profile of ACES is being taken care by Electro-Mechanical Department of ACES where we continuously strive to provide appropriate Products, Solutions & Services to our clients conforming to international quality standards. The department is having design, implementation and support services facilities spread across the kingdom of Saudi Arabia.

For past 18 year the Electro-Mechanical Department of ACES has been successfully working with Telecom operators, Government sector, Defense, Oil & Gas, Utility Companies and Other big customers in KSA and contributes to 33% of company turnover.
The Line of Business of ACES
Electromechanical Department
includes but not limited to

- Medium Voltage Transmission & Distribution.
- Electrical substations.
- Renewable Energy Solutions (Solar & Wind).
- Hybrid Power Solutions.
- Data Centre Electro Mechanical Infrastructure Design & Implementation as per UPTIME INSTITUTE’s and BICSI Standard.
- Power System Design & Study using ETAP Design Software.
- Rectifier, Inverter and UPS solutions, including Installation, Testing & Commissioning and O&M.
- Complete range of Back up Batteries for Telecom, UPS & Nuclear Power applications.
- Operation & Maintenance.
Kingdom wide operations capabilities through 4 Regional offices & more than 8 branch offices in KSA.

Huge warehousing facilities filled with large quantity of Materials in our stocks.

Hi-Tech Batteries Storage facility store Batteries below 20 degree Temperature.

Availability of buffer stocks catering to needs of urgent projects.

365X 24 x 7 emergency support across the Kingdom for critical sites like Data Centers, Telecom Exchanges etc. And regular preventive and corrective maintenance for sites under O&M, including after sales support.

In Country Local Repair Center well equipped for repairing faulty equipments.

Commitment to keep availability of the spare parts for 10 years.
Electro-Mechanical Department Products, Services & Solutions

Design & Consultancy Services:

We have tremendous experience and expertise to do in house engineering designs and consultancy for Electrical Projects including:

- Load Flow calculations
- AC & DC Cable sizing
- AC & DC Panel Sizing
- Transformer sizing
- Protective device coordination
- DC system Design
- Ground Grid
- UPS Designing
- Generator Sizing
- Short Circuit calculations
- Electromechanical Design for new Data Center as per UPTIME INSTITUTE’s standards.
- Electrical Design for Commercial & Residential Buildings.
- Electrical Design Analysis & simulations for the existing Telecom Exchanges, Data Centers, Substations, Industries, critical buildings.
Projects Management, Implementation and O&M Services:

Utilizing more than 1000 professional resources of ACES, EM Department in general offer Electrical Design, Implementation and O&M full turnkey services.

- Turnkey Implementation services for Electro-Mechanical Projects
- Electrical Design & simulation using ETAP Software
- Operation & Maintenance including preventive and corrective maintenance
- Power system Study and Analysis of the existing Networks
- Electrical Real Time Power System monitoring using MMI (Man Machine Interface)
- Complete Project Management
- Manage & Implement Tier I, II, III and IV Data Center, as per Industry standards
- Complete AC, DC and Electromechanical Installation for Telecom Exchanges.

This includes installation, testing & commissioning of Inverters, Rectifiers, Back up Batteries, UPS, and Panel Boards

- Complete Electro mechanical works for Commercial & Residential Buildings
- Turnkey MV Electrical Substation works.
- Turnkey MV Transmission & Distribution Projects
- Design, implement and maintain complete Hybrid Power solution, Solar & Winds solutions
EM Products & Services

The company's path breaking innovations solutions, green energy solutions and other pioneering products from their peerless partners are being used by organizations globally, in lowering their operating costs, enhancing productivity and driving value for their customers. At Electro-Mechanical Department, ACES offers a variety of products which can be mainly categorized as follows

**DIESEL GENERATORS**
Available Range (LV & MV): 20 KVA to 3500 KVA

**RECTIFIERS**

**Indoor Rectifiers:**
Available Range: (- 48 Volts DC) : 0.85 KWatts (11 Amps DC) to 540 KWatts (10,000 Amps DC)

**Outdoor Rectifiers:**
Available Range: (- 48 Volts DC): 0.85 KWatts (15 Amps DC) to 17.4 KWatts (322 Amps DC).

**INVERTERs**
Available Range: (220 Volts AC / - 48 Volts DC) : 1KVA to 80 KVA

**UPS**
Available Range: 1.0 KVA to 1000 KVA.

**BACK UP BATTERIES**
FOR TEELCOM, UPS, SOLAR & NUCLEAR POWER APPLICATIONS
Available Range:

- OPzV: 214Ah to 3140Ah.
- OPzS with Solar Technology: 213 to 3488Ah.
- OSP.HC: 101Ah to 3900Ah.
- Nicd : upto 1200Ah, etc.
- AGM batteries : 13 AH to 400 AH.
EM Products & Services

AC & DC PANEL BOARDS
• Customized Solution based on customer requirement.

HYBRID POWER SYSTEM PACKAGE SOLUTION
• Customized Solution based on customer requirement

RENEWABLE ENERGY PRODUCTS (SOLAR & WIND)
• Customized Solution based on customer requirement

FUEL CELL
• Customized Solution based on customer requirement

SUBSTATION PRODUCTS
• Mobile Substation
• Underground substation solutions
• Switch Gears
• RMU
• SF6 Circuit Breaker

AIRCRAFT WARNING LIGHTS

FIRE ALARM & FIRE FIGHTING PRODUCTS
Products and Services:

**Rectifier**

\[ V_L = 415 \text{ V} \]

\[ V_{\text{PHASE}} = \frac{415 \text{ V}}{\sqrt{3}} = 240 \text{ V} \]

**Battery**
EM Products & Services

UPS

NH Plus Series: Three Phase 20-120 KVA

NH Series: Three Phase 20-80 kVA

GAIA Series: Single Phase 5-11 kVA

NT Series: Three Phase 20-500 kVA

H Series: Three Phase 15-30 KVA

N Series: Single Phase 1-3 kVA

Hestia: Line-interactive 600 VA

Battery

AGM Red Star Technology

AGM Blue Star Technology
EM Products & Services

10K Amps Rectifier
EM Products & Services

Substation Installation PNU

Offshore Power Site Installations
Hybrid Solutions

Hybrid System Diagram

- Fuel tank
- Level sensors
- Generator 13 – 20 KWe
- Control and alarms
- 230 V AC
- DC Power system / rectifier
- Weather sensor option
- Control and data
- Current levels Temperature
- BTS Load 1 – 2.5 KW
- -48 V DC
- Backup battery -48 V DC
Wind Energy Solutions

ENAIR 3.5
62 KW
EN 24 HORAS

Solar Lights Solutions
APLICACIONES

La fertilización de uso del edificio, a la medida del arquitecto e interiorista, hace de las vidrieras solares un elemento indispensable en la edificación y en obras contemporáneas, en que la eficiencia energética es un factor clave.

Aplicaciones
- Elementos de fachadas ventiladas, muros, cortinas, bañeras, o arranques.
- Sustitución de elementos constructivos tradicionales de revestimiento.
- Vitrales o sistemas fotovoltaicos transiluminados.
- Paneles y sistemas móviles de control solar.
- Sistemas urbanos: marquesinas, pergolas, mamparas divisorias, techos, balcónes, o terrazas.
- Aplicaciones específicas: techos móviles, puertas revestidas, cortinas o cortinillas.

APPLICATIONS

The flexible product configuration, tailored for the architect or designer, made of the sun-activated laminated glass is an essential element for contemporary architecture and design, in which energy efficiency is a key factor.

Applications
- Elements of ventilated facades, curtain walls, highlights or skies.
- Replacements of traditional finishing coating materials.
- Glass or flexible photovoltaic systems.
- Sunshades and solar control mobile systems.
- Urban furniture: screens, pergolas, parking, special building endings, kiosks, balconies or terraces.
- Special applications: Greenhouses, movable roofs, sliding doors, windows or balustrades.
Green Innovative Solutions
Our References Includes

- OIL & GAS
- TELECOM OPERATORS
- UTILITY COMPANIES
- GOVERNMENT
- EDUCATION
- HEALTH
- DEFENSE
- AVIATION
- RAILWAYS
- NUCLEAR

Our Customers
Our Partners
ADVANCED COMMUNICATIONS & ELECTRONIC SYSTEMS
(A Subsidiary of Sumitomo Corporation)

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