

SAS SYSTEMS ENGINEERING **2013** Year in Review



**Engineering the world's
most advanced
extra-low-current
systems**



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Chairman's message

My colleagues and I are delighted to welcome you to the 2013 Year in Review of SAS Systems Engineering.

Two thousand and thirteen has been a year of powerful enhancements for our company, as much in the sense of the technological advancements we have applied as the scale and diversity of the projects we have worked on.

An important aspect of these accomplishments has been our continued expansion into the global marketplace, through our partnership with an unprecedented number of top manufacturers as well as our work for internationally renowned clients.

As we look ahead to a future of steady growth, I would like to thank all of our clients for making SAS an industry leader in Saudi Arabia and beyond, and to convey my gratitude to our hard-working executive members, department heads, and engineers for their dedication to quality, innovation, and unrivaled service.

Alawi Baroum
Chairman, SAS Systems Engineering





General Manager's message

In 2013, perhaps more than ever in the history of our company, client satisfaction has been the most prominent hallmark of our success. That's because, at SAS Systems Engineering, we continue to place the emphasis on establishing long-term relationships with our clients rather than making a quick sale, and are committed to long-term solutions rather than providing a quick fix.

I believe it is no accident that today our client roster reads like a who's who of Saudi Arabia's and the entire region's most prestigious end users. They include airports, power stations, railways, oil refineries, and government ministries; hotel chains, universities, hospitals, and mosques; and corporations such as multinational banks as well as royal palaces.

Harnessing the genius of technology has been our passion ever since the establishment of SAS in 1986. That passion has been complemented by our insistence on offering only the most advanced, most cutting-edge products and systems from top manufacturers in Europe, the US, and elsewhere. And this, in turn, has inspired us to build a workforce which is simply second to none.

We have made certain, therefore, that our engineers and technicians are not merely adequate or capable, but outstanding. Similarly, we have made sure that our project managers, sales associates, and customer-care representatives do not simply qualify for the job, but rather embody our highest ideals of professionalism: by being courteous, knowledgeable, and willing to go the extra mile. One testament to our commitment to professional excellence can be found in the ongoing and rigorous trainings which we provide to our personnel, in terms of know-how and managerial skills alike.

All of these corporate values, without an exception, point to a single overarching goal: the total satisfaction of our clients. In 2013, we strove tirelessly to realize this goal, irrespective of the size and complexity of the projects entrusted to SAS. Today our abiding promise to you, our esteemed clients, is to continue to stop at nothing in order to surpass your expectations.

Hovig Kurkjian
General Manager, SAS Systems Engineering





Editor's note

Toward the end of 2013, as we began to prepare our latest Year in Review, I was once again filled with a deep sense of pride in view of the collective accomplishments of our colleagues.

Hard work and dedication. These are the salient impressions one is left with when reviewing the endeavors taken on by our personnel, whether they be the engineers and managers of our various departments and branches, or our teams of sales representatives and customer-care specialists.

This year, I would like to convey a special appreciation to all of them, not only in recognition of their dedication to quality and service, but their penchant to come up with innovative solutions when faced with challenges. These are the hallmarks of genuine professionalism, and ultimately the reason that scores of valued clients continue to place their trust in SAS Systems Engineering.

Also in terms of professionalism, I would like to commend our colleagues for organizing or taking part in numerous advanced trainings, conferences, and seminars, as well as maintaining a strong presence in regional and international trade exhibitions throughout 2013.

The present Year in Review is a celebration of all these achievements, and also an expression of our commitment to continued excellence in engineering and service.

Sona Hamalian
Business Practices Officer,
SAS Systems Engineering



Company profile

SAS Systems Engineering is a leading technology company based in Saudi Arabia.

We specialize in the design, installation, and maintenance of fully integrated, extra-low-voltage systems, comprising fire protection systems; security and communication systems; and automation and building management systems (BMS).

Since the launch of SAS in 1986, we have built a global reputation for excellence, and our achievements have been recognized year after year with awards from partners, manufacturers, government bodies, and regulatory agencies.

Today the success of SAS continues to be grounded in values and capabilities which equally reflect our core emphasis on innovative solutions, dedication to providing first-rate service, and adherence to the principles of Corporate Social Responsibility. Moreover, SAS is a regional pioneer of green technologies, particularly through its expertise in designing ultra efficient green buildings.

As we represent and work with many of the world's top manufacturers, we feature products and systems that define the state of the art. And with branches across Saudi Arabia as well as Qatar, we carry out projects through an outstanding workforce, led by a corps of highly experienced, factory-trained engineers and project managers.

SAS also invests heavily in research and development, designing sophisticated products and components which help reduce costs for clients and end users alike.

It's all part and parcel of our iron-clad commitment to customer satisfaction, in terms of ensuring superb quality, timely project fulfillment, systems maintenance, courteous after-sales support, and worry-free warranty backup.



Company profile

Our areas of expertise:

- Consultation
- Design
- Supply
- Installation
- Testing and commissioning
- Service and maintenance
- Warranty backup

Our products and systems:

Fire protection systems

- Fire alarm, detection, and voice evacuation systems
- High Sensitivity Smoke Detection (HSSD) systems
- Clean agent (FM-200 and Novec 1230) fire suppression systems
- High- and low-pressure CO2 fire suppression systems
- Foam systems
- Twin-agent systems
- Water spray systems
- Automatic sprinkler systems
- High- and low-pressure water mist systems
- Dry chemical fire suppression systems

Security systems

- Access control and ID management systems
- Intrusion Detection and Assessment Systems (IDAS)
- Computerized monitoring
- Integrated perimeter protection
- Closed Circuit Televisions (CCTV)
- Video analytics
- Physical Security Information Management (PSIM)
- Burglar-alarm systems
- Road barriers, blockers, tire killers, and sliding gates
- Walkthrough metal detectors
- Turnstiles
- Metal and explosive detection
- X-Ray scanners
- Under Vehicle Inspection Systems (UVIS)
- Automatic car-plate-recognition systems
- Parking management systems
- Visitor-management systems
- Radar and sonar systems

Communication systems

- Audiovisual (AV) systems
- Satellite MATV/CATV
- Multimedia presentation systems
- Video walls and rear projections
- Home theater systems
- Public address systems



- Conference systems
- Master clock systems
- Simultaneous interpretation systems
- Intercom systems

Automation and building management systems (BMS)

- HVAC
- Lighting
- Power management

Fully integrated with:

- Security access control systems
- Fire alarm systems
- Lifts and elevators
- Power metering
- Energy-monitoring and control systems
- UPS
- Emergency central-battery systems
- Leak-detection systems

Uninterruptible Power Supply systems

SAS Systems Engineering works throughout Saudi Arabia and internationally. Headquartered in Jeddah, we have branches in Riyadh, Al Khobar, Jubail, and Madinah, as well as Doha, Qatar.

SAS Systems Engineering is an official representative of major manufacturers and suppliers in the United States, Europe, and elsewhere.



2013 Projects spotlight

King Khalid University, Abha

It is a distinct privilege for SAS Systems Engineering, and particularly our Fire Protection Department, to be working on the King Khalid University construction project.

A large-scale initiative valued at \$3.4 billion, the university is being built on an 8-million-sqm site, in the southwestern Saudi Arabian city of Abha, in the Asir region. When completed in 2014, the co-educational facility will accommodate 50,000 students and comprise various colleges, including the KKU Medical City, student and faculty housing, conference halls, sports buildings, a bank, a mosque, a printing press, and a library, in addition to administrative structures.

Currently the SAS Fire teams are implementing the engineering of Novec 1230 Clean Agent Gas Protection systems at the KKU Male Campus (Phase I), as contracted by the Guangdong Overseas Construction Group as well as Al Rashid Trading and Contracting Company (RTCC), and in collaboration with our long-time partners Kidde Fire Systems and 3M.

SAS is also set to install fire protection systems at two KKU power substations, under contract by Al Gihaz, and at the KKU Medical Male Campus (Phase II), with the Saudi Arabian Baytur Company.



Rabigh Power Plant No. 2

The Rabigh Power Plant No. 2 is the largest project in the history of SAS, showcasing the award-winning expertise of our Fire Protection Department.

In 2011, SAS was awarded an EPC contract for providing the full scope of fire protection systems at all facilities of the plant. The scope comprises the design, engineering, manufacturing, installation, testing, and commissioning of all firefighting, fire alarm, and fire detection systems and accessories.

Currently under execution, the project is slated to be completed in late 2014. To date, our fire teams have installed and commissioned hundreds of fire protection systems at the site, including:

- A fire water pump house
- A sea water pump house
- FM-200 suppression systems
- Foam injection, monitoring, and foam deluge systems
- Spray systems
- Sprinkler systems
- Pre-action systems
- A fire alarm system
- Fire extinguishers and
- A fire hydrant and cabinets.



Owned by one of our most valued clients, the Saudi Electricity Company (SEC), the Rabigh Power Plant No. 2 is an extension of the existing power station. Located on the Red Sea coast, approximately 150 kilometers north of Jeddah, the new plant has a nominal output of 2,800 MW, utilizing four conventional oil-fired thermal generating units, each producing a net electrical output of 700 MW.

The plant consists of four turbine generator units, four conventional heavy fuel oil-fired boilers, four FGD plants, and three MSF desalination plants.

In 2013, our fire teams installed, tested, and commissioned fire alarm and firefighting systems, including foam skids, at the plant, doing so on schedule and to the full satisfaction of the contractor, Doosan Heavy Industries, and the client. As of the close of 2013, SAS had achieved 80% completion of the multi-year project.



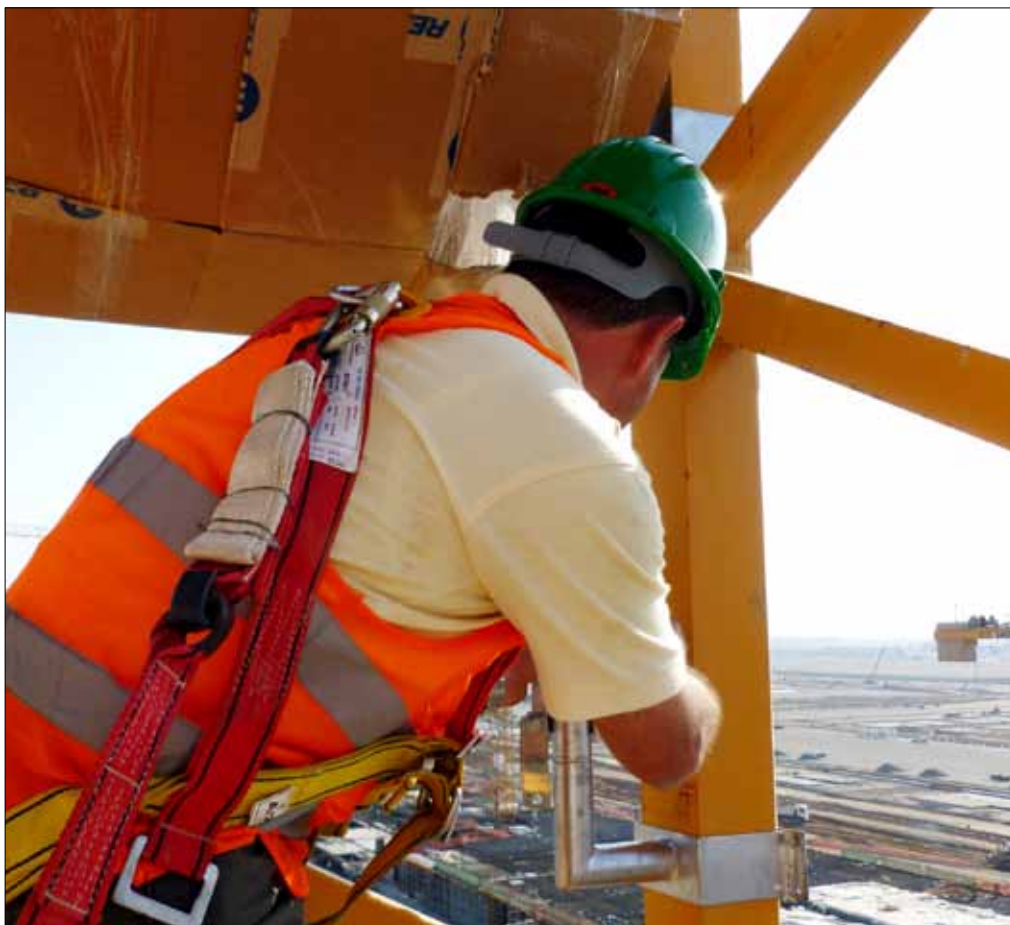
King Abdulaziz International Airport

The SAS Security and Communication Department was awarded a prestigious contract for designing, engineering, and installing fire alarm, sound, and IP-CCTV systems at the new facilities of King Abdulaziz International Airport (KAIA), located 19 kilometers north of Jeddah. KAIA is Saudi Arabia's busiest airport and the third largest in the country.

Within the scope of the project, our Security and Communication teams introduced a number of cutting-edge technologies, including the Very Early Smoke Detection Apparatus (VESDA) and the BIAMP Networked Media System.

VESDA is considered one of the world's most advanced fire-detection systems. On its part, the BIAMP Networked Media System, which delivers, manages, and enhances sound, combines remote systems into a single network and allows for faster installation and easier upgrades.

The most challenging aspect of the KAIA project has been the installation of 200 IP cameras on 30-meter-high cranes for encompassing the enormous construction area. Since the site lacked a stable power source, our engineers linked the cameras to the control room via wireless transmitters, using 100-watt solar panels with batteries, capable of supplying power 24 hours a day. In addition, our engineers created many wireless bridges to provide lines of sight between cameras and the control room.



Working with top international hotel chains

SAS Systems Engineering works with numerous Saudi Arabian corporations and multinational companies, including many of the world's most distinguished hotel chains.

We bring our decades of expertise to these establishments, helping make their sites safe and secure, environmentally sustainable, and run with optimal efficiency.

In 2013, SAS won a highly coveted bid to work on the very first Nobu Hotel in Saudi Arabia, located in Riyadh. Founded by celebrated restaurateur Nobu Matsuhisa, Nobu Hotels provide luxurious sanctuaries in discerning environments, featuring imaginative new restaurants, relaxing rejuvenation, distinctive service, and world-class retail.

The scope of our work for Nobu Riyadh consists of the design, engineering, and installation of a cutting-edge building management system, including the Siemens Desigo Total Room Automation (TRA) system — which represents a leap forward in the design of green buildings — as well as an extensive CCTV network.

Also in Riyadh, we completed an extensive BMS upgrade at the Radisson Blu Hotel and finished installing and commissioning a state-of-the-art BMS at the Holiday Inn Meydan, a beautiful property featuring 450 rooms and suites and amenities such as a restaurant, a fitness center, and meeting facilities.

In 2013, our valued clients in the hospitality sector included two more luxury hotels, namely Oberoi and Elaf Taiba, in the Madinah area.

At the Oberoi Hotel, we executed a complete fire protection system upgrade. The scope of our work comprised 57 FM-200 systems, an extensive network of fire alarm panels, and a Global Fire Graphic system to cover the entire property. Likewise at the Elaf Taiba Hotel, our teams of engineers performed a complete upgrade of the fire alarm system, including all interfaces with security and HVAC systems.



Al Riassa Building, Madinah

Ever since its establishment in 1986, SAS Systems Engineering has worked as a trusted EPC contractor for many of Saudi Arabia's most eminent institutions, including the Saudi Electricity Company, the Ministries of Interior, Health, and Higher Education, and the General Presidency for the two Holy Mosques (Makkah Haram and Madinah Haram).

In 2013, SAS was awarded a contract for installing state-of-the-art fire protection systems at the newly built Al Riassa Building.

An imposing structure admired for its beautiful architecture, Al Riassa will house the administrative and management offices of the Haramain Riassa.

Today our fire protection teams are implementing the design, installation, programming, testing, and commissioning of all fire alarm and fire suppression systems at the Al Riassa Building.

The scope of the work includes the provision of foam and FM-200 systems, and fire alarm systems powered by an Intelligent Network.

The project was contracted to SAS by Juffali Air Conditioning, Mechanical, and Electrical Company (JAMED).



Saudi Private Airline Terminal, Jeddah

Seamless systems integration has always been a core strength of SAS Systems Engineering. Through the synergistic mix of technological innovation, leading-edge products, and decades of experience, we specialize in providing clients with complete solutions for safety and efficiency, encompassing the fields of fire protection, security, building automation, and communication.

These attributes are illustrated in our Saudi Private Airline Terminal (SPAT) project, in Jeddah. Owned by the Civil Aviation Authority of Saudi Arabia, SPAT is an elegant landmark which features the state of the art of private aviation.

In 2013, our Jeddah teams completed an extensive project at SPAT, to the full satisfaction of the client and our contractor, BTC.

The scope of our work consisted of the design, engineering, programming, testing, and commissioning of a range of fully integrated systems including IP-CCTVs, an Access Control Server, IPTVs, a public address network, A/V equipment, and a fire alarm network.



Blaise Diagne International Airport, Senegal

A \$725 million project, the Blaise Diagne International Airport is being constructed in Ndiass, about 45 kilometers from Dakar, Senegal. When completed, the airport will have an initial operating capacity to handle 3 million passengers a year from a single runway. A second phase of development could ultimately provide capacity for 10 million passengers a year, with the development of a second runway.

In 2009, SAS was awarded the distinguished project of providing the airport with an array of integrated solutions comprising fire protection, security, and building management systems. Beginning that year, our teams executed the supply and installation of an extensive BMS network for the monitoring and control of electrical and mechanical systems in all of the airport's buildings. Furthermore, we have installed a comprehensive and fully integrated suite of IP-CCTV, ACS, IPTV, public address, A/V, and fire alarm systems throughout the site.



In 2013, our engineers continued to implement the BMS aspect of the project. The Johnson Controls-based system currently being installed by our teams is distributed across the various facilities of the airport.

In addition to providing core functions of HVAC and electrical control and monitoring, the system is being integrated with various low-current systems, such as public address and access control, and special airport systems including the visual docking guidance system, baggage-handling system, and explosion-detection system, among others. SAS Systems Engineering was contracted for the project by BTC.



Jubail Export Refinery

The Jubail Export Refinery is a \$9.6 billion site owned by SATORP, a joint venture of Saudi Aramco and Total Refining and Petrochemical Company. The refinery is one of the most advanced in the world, capable of processing 400,000 barrels of oil per day.

In 2012, SAS Systems Engineering was contracted by the Sumitomo Company to design, supply, and install an integrated security system at the Jubail Export Refinery. The project, one of the largest we have ever executed in eastern Saudi Arabia and the country as a whole, was implemented in accordance with the latest directives issued by the High Commission of Industrial Security.

Our work at the Jubail Export Refinery continued in 2013, as the teams of our Jubail branch implemented a number of fire protection and security projects at the site. The scope of their work encompassed the design, engineering, supply, installation, testing, and commissioning of firefighting and fire alarm systems (contracted by Rotary Engineering Limited) as well as a fully integrated security system (contracted by Sumitomo).



Makkah Holy Haram

It is a distinct privilege for SAS Systems Engineering to be collaborating on projects for many of Saudi Arabia's most revered public institutions.

In 2013, our Automation Department continued work on the design and supply of a building management system for a total of four public structures serving Makkah Haram visitors and pilgrims. These buildings — namely those at Ajjad, Safwa, Angery, and the Bus Station — are currently under construction. The system we engineered for the buildings will control their ventilation networks and integrate other systems including UPS, escalators, water mist systems, and the central battery system.

Also in 2013, our Automation teams were contracted to implement the challenging project of relocating the Massaa BMS Control Room. The relocation was necessitated by the Mataf expansion project at the Makkah Holy Haram complex. Our engineers successfully executed the relocation of the control room while fully maintaining the operation of the system, despite the harsh site conditions and the demolition work in progress. The project was carried out in the minimum possible time frame, using fiber-optic technology to ensure consistent communication over long distances.

Another major SAS project has been the design and installation of extensive security and sound systems at the Makkah Holy Haram. The technologies we applied for this project include an integrated network of CCTV cameras and the very latest in sound-delivery and enhancement equipment.



Shoaiba Power Plant

Saudi Arabia's power industry is one of the most important sectors in which SAS Systems Engineering has built its reputation.

Ever since the launch of our company in 1986, our work has remained a ubiquitous presence at power plants and substations throughout Saudi Arabia, thanks to the continued trust of one of our most distinguished clients, the Saudi Electricity Company.

In 2013, for instance, SAS Riyadh was honored by the Saudi Electricity Company for the third year in a row as its top fire-protection subcontractor in the central region.

Throughout the course of 2013, SAS teams designed, supplied, and installed an array of cutting-edge systems — including fire protection, security, and building management systems — to numerous power plants and substations. Among these was the Rabigh Power Plant No. 2, for which we executed an extensive fire protection project (the largest project in the history of SAS), as well as the Power Plant No. 9, in Riyadh, one of the biggest of its kind in the Middle East, generating more than 6,000 megawatts of energy.

Another major power plant for which we completed work in 2013 was the Shoaiba Power Plant (Stage III). For this particular project, our Fire Protection team engineered, installed, and commissioned state-of-the-art firefighting and fire alarm systems across the plant, executing the work on schedule and to the total satisfaction of the contractor, Alstom Power, and the client, SEC-WOA, alike.



The Fire Protection Department in 2013

Internationally recognized for its innovative technologies and outstanding service, the SAS Fire Protection Department marked yet another year of impressive growth.

Led by a highly experienced team of engineers and technicians, the department completed a diverse range of projects in the commercial and industrial fields, was awarded numerous high-profile contracts, and further expanded into the construction sector.

A key to the success of our Fire team is its dedication to retaining the trust of our clients and building healthy relationships at each step of project implementation, from conception and design approval to handover. Of equal importance to the equation is the supportive work of our Sales and Service departments, which complement the work of engineers, supervisors, and technicians to help make for a wonderful customer experience across the board.

In 2013, SAS Fire was awarded design approvals and contracts for projects including an international airport, a university, a paint factory, and numerous power substations. Among these ongoing projects are the following:

- Makkah North 380 kV Substation (EC WOA)
- Qurayyah IPP 380 kV Substation (SEC EOA)
- Qaisumah 380 kV Substation (SEC EOA)
- Modon 380 kV Substation (SEC WOA)
- Nuzha/Hindawiyah/Tiyam 110 kV substations (SEC WOA)
- Al Ushairah 110/33 kV Substation (SEC WOA)
- Al Eyse 110/33 kV Substation (SEC WOA)
- Bani Malik/Rabigh/Eskan 110 kV substations (SEC WOA)
- Arafat/Wali Ahad 110 kV substations (SEC WOA)
- 132/33 kV Sabya North Substation (SEC SOA)
- King Khalid University (KKU) Male Academic Campus (Civil Defense, Asir Region)
- Yanbu II Power and Water project – Marine Facilities (Marafiq)
and
- Haramain High-speed Railway 380 kV - six substations (SEC-WOA).



In terms of projects completed in 2013, SAS achieved the on-schedule, 80% completion of the Rabigh Power Plant No. 2 project, the largest of its type in SAS history, under contract by Doosan Heavy Industries. All designs and technical calculations for the 2,800 MW power plant were produced by our Fire team in Jeddah, showcasing the advanced engineering capabilities of the company. The team engineered, constructed, installed, tested, and commissioned hundreds of fire protection systems for the site.

Apart from Rabigh, our Jeddah Fire team completed the installation, testing, and commissioning of various projects across the western and southern regions of Saudi Arabia, to the full satisfaction of main contractors and end users. These projects included the SWCC Shuqaiq Environmental Facilities, Islamic Development Bank, Jubail Export Refinery, Mobily headquarters, Ras Al Zaur Environmental Facilities, Ashwaq Al Haram residential complex, and numerous power plants and substations, among them the Shoaiba Power Plant (Stage III). One of the most challenging projects executed by the team in 2013 consisted of the installation of fire protection systems at six water-pumping stations of the Saline Water Conversion Corporation, in Southern Saudi Arabia's Shuqaiq area. At issue was the fact that the pumping stations are located in a remote part of the country, across a mountainous terrain with extremely difficult access. However, thanks to the resourcefulness and hard work of our entire operation team, the project was implemented flawlessly, and testing and commissioning were completed on schedule.



Prince Mishal Bin Majed Bin Abdelaziz presenting a Recognition Shield on behalf of the Civil Defense Authority to SAS Systems Engineering representative Mr. Nadeem Shamsi, Head of the SAS Fire Protection Department, during a ceremony at Andalus Mall, Jeddah.

Major presentation for Civil Defense Authority

Interfacing with our growing client base, partners, and prospective clients continues to be one of our top priorities. In December 2013, the SAS Fire Protection Department organized a seminar for senior officials from the Saudi Arabian Civil Defense Authority, in collaboration with our valued partners Kidde Fire Systems and 3M.

The seminar, held in the southwestern city of Abha, focused on the King Khalid University construction project. SAS considers it a great honor and privilege to be involved in this prestigious initiative.

Currently our teams are under contract to install Novec 1230 Clean Agent Gas Protection and other fire protection systems at various structures of the university, including the Male Campus, the College of Language and Translation, and two power substations. Our work is being carried out under contract by the Guangdong Overseas Construction Group, Al Gihaz, Al Rashid, and Saudi Arabian Baytur Company. During the presentation in Abha, SAS speakers as well as representatives from Kidde and 3M briefed the Civil Defense officials about the progress of the project. Specifically, SAS executives presented briefings about the successful completion of the engineering phase, and discussed our plans for the installation, testing, and commissioning of the required fire protection systems.



The Security and Communication Department in 2013

Ever since the launch of SAS in 1986, ensuring the physical security of public and private sites has been a key component of our work. Today our security products and systems are harnessed throughout the industrial, governmental, commercial, and residential sectors, with high-profile sites including airports, hospitals, railway stations, power plants, refineries, mosque complexes, and corporate buildings.

SAS is also a leading provider of communication systems, with a diverse portfolio of products ranging from satellite MATV/CATV/IPTV and public address systems to video walls, home theater systems, and simultaneous interpretation systems.

Our expertise in these fields has earned the trust of a long list of prestigious Saudi Arabian and international clients and contractors, among them the Saudi Electricity Company, the Ministries of Interior, Health, and Higher Education, Samsung Engineering, Arabian Bemco, BTC, Sumitomo, Orascom, GACA, Daelim Industrial Company, Marafiq, SABIC, Saudi Archirodon, ICAD, Dar Al Handasa, Hanwha Engineering and Construction, and Hyundai Engineering, among others.

What sets our Security and Communication Department apart is a highly synergistic approach that combines engineering virtuosity with state-of-the-art technologies. Our teams of manufacturer-certified engineers specialize in providing systems that can be fully integrated with other onsite systems such as fire protection, fire alarm, and automated building management, offering hardware and software solutions from the world's top suppliers.

Advanced technologies applied by our teams include the Remsdaq C-5 Enterprise Edition System, which performs as an extremely flexible access control network; the Very Early Smoke Detection Apparatus (VESDA); and the single-network, centralized BIAMP sound system.

In 2013, SAS provided integrated security and communication solutions to several prominent institutions. Major projects were completed at the Shoaiba Power Plant (Stage III), the Saudi Private Airline Terminal in Jeddah, the Mena Railway station in Makkah, the Makkah Holy Haram Mobile Mataf structure, Saudi Ground Services in Jeddah, Dammam, Riyadh, and Madinah, and the Saudi Airlines Building in Jeddah.



Given its outstanding accomplishments, our Security and Communication Department was also awarded numerous new contracts and contract renewals. Currently our teams are implementing projects at the Qaseem Power Plant (Stage III) and Qurayyah Power Plant, the King Abdulaziz International Airport expansion site, Saudi Ground Services, the Jubail Export Refinery, multiple sites of the Makkah Holy Haram, including Ablution facilities, government hospitals at various locations, and the Shoaiba Combined Cycle Power Plant (Stage II).

Breakthrough technologies

In 2013, the SAS Security and Communication Department applied a number of cutting-edge technologies at King Abdulaziz International Airport (KAIA), comprising fire alarm, sound, and IP-CCTV systems.

Among these systems was the Very Early Smoke Detection Apparatus (VESDA). It consists of a control panel connected to a network of pipes, each of which has a series of small apertures or sampling points. Air is continually drawn from these sampling points via an aspirator and filtered for dust particles. Much like a conventional system, the air is exposed to a laser chamber, where, if smoke is present, light is scattered, setting off the alarm. The VESDA system, which can be interfaced with most alarm control panels, is manufactured by Xtralis of the United Kingdom.

Another notable addition to KAIA was the BIAMP sound system, which delivers, manages, and enhances sound. Through the BIAMP Networked Media System, remote systems are combined into a single network which shares processing power and resources. Allowing for faster installation and easier upgrades, the BIAMP Networked Media System, which is manufactured in the United States, ends the need for multiple, isolated systems and miles of cable.

The most challenging aspect of our work at KAIA was the installation of 200 IP cameras on 30-meter-high cranes to cover the immense construction area. As the site lacked a stable power source, our engineers solved the issue by utilizing 100-watt solar panels with batteries, capable of supplying power around the clock. The cameras were connected to wireless transmitters for sending signal to the control room via a wireless receiver installed on a pole near the control room. Our teams also created many wireless bridges to provide lines of sight between cameras and the control room. Our CCTV cameras are manufactured in the United States by Arecont, and our solar panels are made by Topray of China.



The Automation Department in 2013

Innovation is the hallmark of the SAS Automation Department. The accomplishments of our engineering corps have earned international recognition for advanced building management and automation systems, with clients across the public, industrial, and commercial sectors.

In 2013, we continued to offer state-of-the-art modular solutions. These systems not only provide an unprecedented level of automation, but can evolve throughout the life cycle of a building's automation network, with an open platform for incorporating new technologies.

Our integrated automation systems achieve optimal streamlining and up to 40% energy savings, through the controlled interplay of heating, ventilation, air conditioning, lighting, and shading within a room. With years of experience in the design of innovative building management systems, SAS offers automation systems that can help a building become certified as a green building, noted equally for superb energy efficiency and significant cost savings.

The engineers of our Automation Department went one step further in 2013, by designing a set of remote-automation, flow-measurement, monitoring, and Supervisory Control and Data Acquisition (SCADA) systems. These innovative products, which now can be supplied worldwide, offer a simple yet powerful telemetry solution that leverages easy-to-use technologies and inexpensive public networks.

By offering these systems, SAS meets the needs of end users by providing both process engineering and control-panel manufacture, ensuring optimal process control and factory automation.

In the course of 2013, our Automation team completed a number of high-profile projects. They include the installation of HVAC control systems for over 100 facilities of Saudi Arabia's Ministry of Interior; the challenging relocation of the Massaa Control Room at the Makkah Holy Haram; the commissioning of a HVAC control system for the Qaseem Power Plant extension project, as well as the integration of the facility's fire alarm system, featuring the latest in Siemens DDC-based solutions; and the complete scope of automation systems for additional buildings at the Qurayyah Combined Cycle Power Plant.

The track record and excellent reputation of our Automation Department have also earned it several new contracts and contract renewals in 2013. Currently our team is installing a complete



building management system at the Al Riassa Building, which will house the administrative and management offices of the Haramain Riassa.

Another prestigious project is the new Blaise Diagne International Airport, in Senegal. For this distinguished initiative, our team is providing a Johnson Controls-based automation system throughout the site, for the control and monitoring of HVAC and electrical systems, as well as full integration with various low-current systems such as public address and access control, and special airport systems such as visual docking guidance and baggage handling.

Our Automation team also designed a control system for the four Ablution and Toilet facilities of the Makkah Haram. The system will be integrated with facility systems such as UPS, escalators, water-mist systems, and the central battery system.

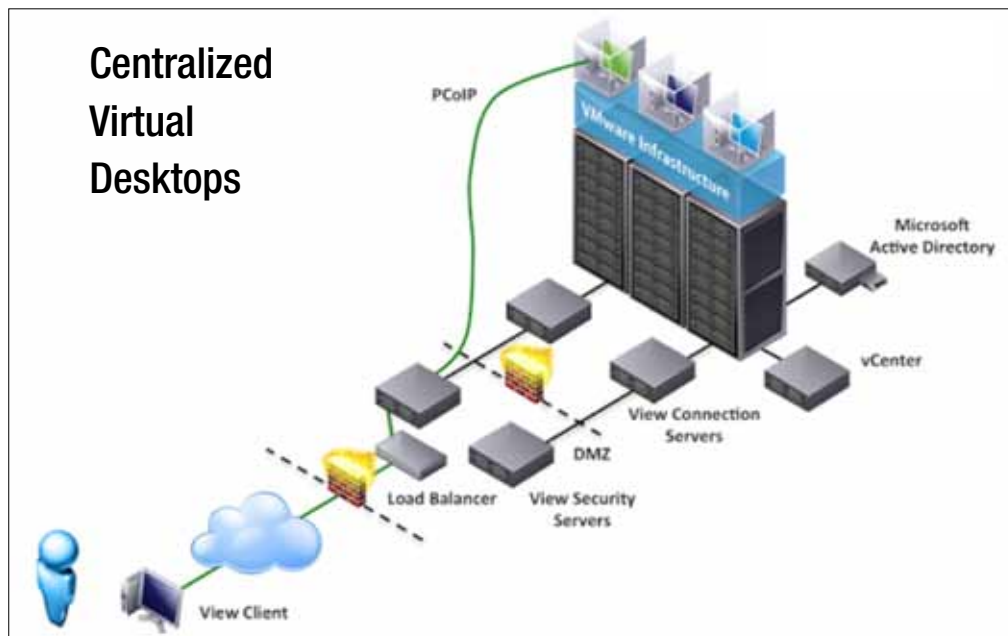
Professional growth was another major area of focus for the SAS Automation Department in 2013. Our technicians and engineers received product trainings from such manufacturers as Sauter and National Instruments, while our managers completed an advanced training in Project Management. In addition, our engineers attended a globally renowned trade fair, the Hannover Messe Industrial Automation exhibit.



The IT Department in 2013

With the goal of providing optimal virtualization and leading-edge security, the SAS IT Department and its operations team have carried out a thorough restructuring of its systems. The resulting improvements include IT-cost savings of up to 40%, which have been accomplished by redefining the department's server structure as a virtual environment. In 2014, the department will implement Cloud technologies across the board, offering SAS teams an unprecedented level of computing mobility. As importantly, the department will continue to reorganize all SAS computer operations into a state-of-the-art Enterprise Resource Planning (ERP) system. Ensuring outstanding consolidation and ease of use, the ERP system allows SAS to deploy integrated applications to manage all business processes and automate back-office functions.

Moreover, the IT team will introduce a new level of support to employees and visitors in 2014 by redefining and enhancing its HELPDESK module. As importantly, the IT Department will focus on creating a centralized data storage to prevent data loss. These enhancements go hand in hand with our unrelenting effort to safeguard the security and integrity of our digital data. By implementing well-defined IT protocols and policies on the one hand, and protecting our internal networks with a world-class firewall on the other, we provide clients, employees, and visitors alike with an IT work environment of unparalleled security.



Our branches in 2013: SAS Riyadh

When engineering excellence meets outstanding service, the results can be awe-inspiring.

Throughout 2013, the SAS Riyadh branch surpassed expectations by consistently delivering on our core values: synergy and teamwork, uncompromising quality and innovation, on-time project implementation, maximum job-site safety, comprehensive after-sales support, and professional growth. It is dedication to such principles, across all departments, that continues to make our Riyadh branch the central region's foremost name in the fields of integrated fire protection, building management systems, security, and communication.

For the third consecutive year, SAS Riyadh was honored by the Saudi Electricity Company as its top fire protection subcontractor in the central region. Similarly, SAS Riyadh has lived up to the trust of a long list of distinguished clients and contractors, including AECC, Al Babbain, Alstom, ABB, Al Toukhi, Arabian Bemco, Delta, and Nour Energy, among others.

In 2013, the SAS Riyadh Fire Protection Department completed several projects at some of Saudi Arabia's most distinguished institutions. These projects included the design, installation, testing, and commissioning of fire protection systems at various SEC substations, the King Abdullah Petroleum Studies and Research Center, the Al Kharj Military Base, the Central Region Telecommunications Control Center (CRTCC), and King Faisal Specialist Hospital and Research Center, among others.

SAS Riyadh was awarded numerous new contracts, marking further expansion into various commercial sectors. New for 2013 were an AECC contract for seven substations in the central, western, eastern, and southern regions; an Al Babbain contract for two 380 kV substations; a letter of intent from Nour Energy for seven substations in the central and western regions; a direct SEC contract for upgrading firefighting systems at the Power Plant No. 9, one of the biggest of its kind in the Middle East; a Saudi Oger contract for installing fire protection systems at the headquarters of the Ministry of Education; and a contract by MRK for upgrading firefighting systems at the cooling tower and storage building of the Aramco KAPSARC project.

In late 2013, SAS Riyadh reached another milestone when it was awarded a letter of intent from El Seif Engineering and Contracting Company, for the installation of FM-200 fire suppression systems at the King Faisal Air Academy, in Riyadh, and the King Faisal Air Base, in Tabuk. Moreover, SAS



Riyadh was approved by the Youssef Maroun Contracting Company as a firefighting-systems supplier for the Saudi government's Technical and Vocational Training Corporation. Thanks to this great achievement, SAS Riyadh was awarded an FM-200 fire suppression system contract for the Saudi Aviation Training Center. Also in 2013, SAS Riyadh provided extensive technical and operational support to the power-generation department of the Saudi Electricity Company, especially at the Power Plant No. 9 and the Qaseem Power Plant, paving the way for the awarding of new maintenance contracts in 2014.

As in previous years, the accomplishments of our Riyadh Fire team in 2013 were complemented by efforts to enhance the professional growth of team members. To this end, our managers and engineers received advanced training in the sale and application of the latest Notifier Fire Alarm Systems, and were given a presentation by Honeywell on FFAST, the new aspirated fire-detection system.

The achievements of the SAS Riyadh BMS, Security, and Communication Department have been equally noteworthy. With a rock-solid reputation for outstanding service and leading-edge systems, the department was awarded many major contracts in 2013. Among them are a BMS contract for the Saudi Aviation Training Center in Riyadh; a BMS and CCTV contract for Nobu Riyadh, the illustrious international chain's first-ever hotel in Saudi Arabia; and a contract for upgrading the public address system at the SABIC Technology Center in Riyadh.

The department also earned the trust of several new and prestigious clients such as General Electric, the Technical and Vocational Training Corporation, and Al Sharqawi, among others. As importantly, on the strength of our teams' impeccable track record, National Commercial Bank (NCB) renewed its maintenance contract for two years.

The SAS Riyadh BMS, Security, and Communication Department's major completed projects in 2013 include the installation of a BMS network at Holiday Inn Meydan Riyadh, a sophisticated destination featuring 450 rooms and suites, a restaurant, a fitness center, and meeting facilities; a complete BMS upgrade at the Radisson Blu Hotel Riyadh; and the supply and installation of a security system at the GE offices in Riyadh.

As with the Fire Protection team of our Riyadh branch, engineers and managers of the BMS, Security, and Communication Department pursued a host of opportunities for professional advancement. Our staff received trainings by top global manufacturers including Notifier, Siemens, Christy, and Advancis, and two of our engineers were trained in the use of Siemens' pioneering Desigo Total Room Automation system.



Riyadh team: Breakthrough technologies

In 2013, our Riyadh teams have begun utilizing the Autodesk Revit software. A Building Information Modeling (BIM) solution, Revit improves multi-disciplinary coordination of structural design documentation, minimizes errors, and enhances collaboration among building-project teams. By providing construction professionals with simulative tools to evaluate constructibility and design prior to construction, Revit enables engineers to design complex building systems.

Also in the field of BMS, SAS Riyadh adopted Siemens' pioneering Desigo Total Room Automation (TRA) system, which marks a revolutionary leap in the design of green buildings.

TRA ensures the perfect interplay between heating, ventilation, air conditioning, lighting, and shading within a room, resulting in optimal comfort and energy savings. TRA also offers maximum flexibility and the freedom to add expansions as needed. The building floor plan and the room layout can be adjusted easily and quickly — without modifying electrical or HVAC installations. This means less initial expenditure and lower costs down the line.

Enhancing efficiency: In its ongoing effort to both maximize efficiency and achieve cost savings for clients, our Riyadh Fire team established an in-house workshop in 2013, with the goal of manufacturing Fire Alarm Modules Boxes (FAMCs). Today the workshop is in full swing, producing module cabinets that meet stringent technical and quality requirements. Also in 2013, our Riyadh Automation team launched an in-house workshop for making high-quality DDC panels. In 2013 alone, close to 60 panels for BMS applications were produced, for clients including Nobu Hotel and the Saudi Aviation Technical College.



SAS Al Khobar and Jubail

In 2013, the SAS Al Khobar and Jubail branches carried out numerous projects across Eastern Saudi Arabia, applying the latest advances in integrated security and fire protection systems.

Continuing to build on a reputation of excellence in engineering and service alike, our Al Khobar and Jubail teams implemented projects for some of the country's most prominent institutions, including the Saudi Electricity Company, Saudi Aramco, TASNEE, ArcelorMittal, Saudi International Petrochemical Company (SIPCHEM), and Jubail Export Refinery, among others. Our work for these clients have been synergized with top contractors such as Al Osais, Sojitz, and NCC.

Among major projects completed in 2013 are the supply, installation, testing, and commissioning of Kaba turnstiles and explosion detectors at the Saudi Aramco Luberef project site, and the installation of a fire protection system at the SEC D.I.E.-4 Substation. Furthermore, our teams executed a suite of integrated fire protection and security projects at the Jubail Export Refinery, with commissioning slated for 2014.

Other completed projects include the installation of fire protection and fire alarm systems at the SEC Hafer and Manifa substations and the ArcelorMittal Tubular Products mill, at Jubail Industrial City, as well as the installation of security systems at the SIPCHEM EVA and SEC Qurayyah plants.

Our teams in Al Khobar and Jubail were awarded several important contracts in 2013. They comprise fire protection projects for the Qatif and Qaisumah substations, slated to be completed in 2014, as well as a large order from Saudi Aramco for security barriers, to be installed at the company's facilities in Dhahran, Abqaiq, Jeddah, and Ras Tannura.

Today our engineers and technicians continue to provide maintenance services for the fire alarm, firefighting, and security systems of the TASNEE and SIPCHEM sites at Jubail Industrial City.

In addition to their accomplishments in terms of design, installation, testing, and commissioning, our Jubail engineering team was privileged to provide trainings to two of our most prestigious clients, Saudi Aramco and the Saudi Electricity Company. For Saudi Aramco, our personnel conducted a training session on security barriers; and for the Saudi Electricity Company, a seminar on security intrusion systems.



Technology spotlight: Engineering the world's largest foam skid

In 2013, our Jubail Fire team made history by engineering a foam skid of unprecedented size and complexity. It all started when SAS was entrusted with the project of providing a fire protection foam system for the oil-export terminal facilities at the Saudi Arabian Total Refinery Project (SATORP) site in Jubail, one of the largest of its type in Eastern Saudi Arabia.

Given the extraordinary scale of these facilities' fire protection requirements, the consultants proposed a massive foam skid capable of handling any emergency. Subsequently, through SATORP's main contractor, Dayim Punj Lloyd Construction, SAS was given the task of engineering, supplying, and commissioning the proposed skid.

Led by engineer Mukhtar Farid, SAS rose to the challenge of designing the next-generation skid, while its actual construction was executed by Chemguard, one of the world's top manufacturers of foam equipment. As the engineer in charge, Mr. Farid coordinated all phases of the project, advising and guiding our suppliers as well as the SATORP engineering team.

Our efforts resulted in the largest foam skid ever built, measuring 12 meters long and 5.5 meters wide. Transporting such immense machinery presented challenges of its own. Considering the near impossibility of hauling the skid in one piece, our team solved the problem by dividing the system into parts and reassembling it on the project site.

The skid contains a 12,000-gallon foam tank, two foam pumps of 125 horsepower each, and related equipment. The system controller was specially designed to operate the pumps both remotely and locally, in case of a fire. Power to the skid is delivered through two feeders.

We have also installed a special emergency switch. In case of a power failure in one of the feeders, the switch automatically transfers the action of the pumps to the active feeder.



SAS Madinah

Ever since its launch 25 years ago, SAS Madinah has been recognized as one of the region's leading providers of low-current systems.

A core testament to the expertise and professionalism of our Madinah team is the trust placed in its work by numerous prominent clients, including the General Presidency for the two Holy Mosques (Makkah Haram and Madinah Haram).

In 2013, SAS Madinah was awarded the distinguished project of supplying the new Al Riassa Building with state-of-the-art fire protection systems. A large, beautiful structure in the heart of Madinah, Al Riassa will house the administrative and management offices of the Haramain Riassa.

Currently our Madinah teams are implementing the design, installation, programming, testing, and commissioning of all fire alarm and fire suppression systems, including foam and FM-200, at the Al Riassa Building. The systems will be powered by an Intelligent Network.

An equally prestigious project entrusted to our Madinah branch is the city's Al Haram Shopping Center, which features close to 300 stores and around 250 hotel rooms. Today our teams are upgrading all fire suppression and fire alarm systems at this landmark mall. The project entails the design, programming, testing, and commissioning of the systems, all linked together through an Intelligent Network.

Other major projects of the SAS Madinah branch include the full scope of fire alarm systems at the Al Mohesin Palace, as well as the main fire alarm system for all student rooms and electrical and mechanical areas at the Islamic University Oussoul Al Din College.

In the course of 2013, the Madinah branch completed a number of large-scale projects. They included a complete upgrade of fire protection systems at the Madinah Oberoi Hotel; the maintenance and integration of fire protection systems at all SEC power substations in Madinah and Yanbu; and a full upgrade and integration of the fire alarm system at the Elaf Taiba Hotel.



Seminars, conferences, and exhibitions

In keeping with our strong commitment to continued professional advancement, we organized or participated in numerous seminars, trainings, presentations, and conferences throughout 2013. We also maintained a strong presence at several prestigious regional and international trade exhibitions, familiarizing visitors with our latest products and systems.



Presentation for Civil Defense, Abha.



Novec 1230 seminar, Hotel Crown Plaza, Jeddah.



Fire Protection Systems Exhibition, Al Khobar.



Fire Suppression seminar, Madinah Al Munawara.



Third SFPE SAC Fire Technology Conference and Exhibition, Al Khobar.



Novec 1230 seminar, Marriott Hotel, Riyadh.



Sauter seminar, Le Meridien Hotel, Jeddah.



A scene from the Novec 1230 seminar, Jeddah.



Novec 1230 seminar, Hotel Sofitel, Al Khobar.



Training in Invoicing and Cash Flow Management, SAS Jeddah.

Team of the Year: SAS Riyadh

They coined the phrase “Synergy Attains Success” (“SAS”). They treat one another as family members. And they are renowned for delivering an outstanding level of customer service. Meet the hard-working, dedicated staff of our Riyadh branch, which has been voted as the SAS Team of the Year.

It is, first and foremost, the internal cohesion of this team that enables it to plan ahead and strategize, come up with expert solutions to day-to-day work challenges, manage things seamlessly, and deliver projects on schedule, to the full satisfaction of contractors and clients. Such attributes are what make for a great reputation, and it comes as no surprise that our Riyadh branch was awarded several new, high-profile contracts in 2013. The roster of clients, which includes distinguished names such as SABIC, Nobu Hotels, and the Saudi Aviation Technical College, makes us all feel privileged for the opportunity to be entrusted with their projects.



SAS General Manager Hovig Kurkjian (far right) presenting the Team of the Year Award to members of the Riyadh staff.

The high level of synergy among our Riyadh teams is also what enables them to think outside the box, to focus continually on providing superlative quality and service.

Toward this goal, our Riyadh colleagues enthusiastically participated in a number of advanced management and product trainings in 2013. But they went one step further. In their ongoing effort to optimize efficiency and provide cost savings for our clients, they launched two in-house workshops, for manufacturing specialized Fire Alarm Modules Boxes (FAMCs) as well as DDC panels.

By naming our Riyadh branch the SAS Team of the Year, we all join to celebrate their accomplishments, which reflect a singular commitment to excellence embraced by the SAS family as a whole.

Major completed projects, 2013

Project	Description	Contractor	Location	Owner
King Abdullah Financial District 4 substations #8193 and 8194 - 132/13.8 kV	Fire protection system	Al Fanar	Riyadh	SEC-COA
King Abdullah Petroleum Studies and Research Center (KAPSARC)	Fire protection system	M.R. Al Khathlan	Riyadh	Saudi Aramco
New 132/13.8 kV Substation, #8160, in Rabia area	Fire protection system	Al Toukhi	Riyadh	SEC-COA
New 132/13.8 kV Substation, #8146, in Khaleej area	Fire protection system	Al Babbain	Riyadh	SEC-COA
New 132/13.8 kV Substation, #8153, in Salie area	Fire protection system	Al Babbain	Riyadh	SEC-COA
New 132/13.8 kV SS, #8701, at Al Kharj Military Base	Fire protection system	Al Fanar	Riyadh	SEC-COA
New Rafha Substation	Fire protection system	Delta	Riyadh	SEC-ER
New Hiteen 380/132 kV SS at Central Region Telecommunications Control Center (CRTCC) Building	Fire protection system including Novec 1230, hydrant, and sprinkler systems as well as pumps	Al Fanar	Riyadh	SEC-COA
King Faisal Specialist Hospital and Research Cent.	Fire protection system	Hazem & Brothers Contracting & Trading	Riyadh	King Faisal Specialist Hospital and Research Cent.
Al Qurtuba Substation #8201	Fire protection system	Al Toukhi	Riyadh	SEC-COA
Rabigh Power Plant 2	Firefighting and fire alarm systems	Doosan	Rabigh	SEC-WOA
SWCC Shuqaiq AWTF	Firefighting and fire alarm systems	Timna	Shuqaiq	SEC-SOA
Archive and Annex offices at new corporate headquarters	Firefighting and fire alarm systems	M. Binladin		Private
Najran 132/33 kV Substation	Firefighting and fire alarm systems	Al Mashariq	Najran	SEC-SOA
Jeddah North Substation	Firefighting and fire alarm systems	Al Osais	Jeddah	SEC-WOA
Islamic Development Bank	Replacement of Halon with FM-200 system	Islamic Development Bank	Jeddah	Islamic Development Bank
Jubail Export Refinery	Firefighting and fire alarm systems	Rotary Engineering Limited (Singapore)	Jubail	SATORP

Project	Description	Contractor	Location	Owner
Reinforcement of Qurayyah Power Plant	Firefighting and fire alarm systems	SSEM	Qurayyah	SEC-ER
Batha Quraish and ICY 6 Substation	Firefighting and fire alarm systems	Areva		SEC-WOA
KEC 1 and KEC 2 substations	Firefighting and fire alarm systems	ABB		SEC-COA
Reinforcement of Hail 2 Power Plant	Firefighting and fire alarm systems	Al Fanar	Hail	SEC-WOA
Jazan Economic City 380 kV SS	Firefighting and fire alarm systems	Al Fanar	Jazan	SEC-COA
Sama Commercial Building	Firefighting and fire alarm systems	Johnson Controls		Johnson Controls
Ras Al Zaur Environmental Facilities	Firefighting and fire alarm systems	SSEM		SWCC
Mobily Shelter	Firefighting and fire alarm systems	Electrical Works Est.		Electrical Work Est.
Ashwaq Al Haram	Firefighting and fire alarm systems	PMDC		Private
Qaseem PP 3 Crude Oil Pipeline	Firefighting and fire alarm systems	Bemco	Qaseem	SEC-ER
Shoaiba Power Plant, Stage III - 110 kV substation	Firefighting and fire alarm systems	Sojitz	Shoaiba	SEC-WOA
Shamiyah 1 and 2 substations	Firefighting and fire alarm systems	ABB	Makkah	SEC-WOA
Riyadh Power Plant 10	Firefighting and fire alarm systems	Bemco International	Riyadh	SEC -COA
Shoaiba Power Plant, Stage III	Firefighting and fire alarm systems	Alstom Power	Shoaiba	SEC-WOA
Saudi Aramco Luberef	Kaba turnstiles		Jubail	
D.I.E.-4 substation	Fire protection			SEC
Hafer and Manifa substations	Fire protection and fire alarm systems		Eastern region	SEC
ArcelorMittal Tubular Prod. Mill	Fire protection and fire alarm systems		Jubail	
EVA Plant	Security systems			Sipchem
Qurayyah Power Plant	Security systems		Qurayyah	SEC
The Oberoi Hotel - Madinah	Complete upgrade of fire protection systems including 57 FM-200 systems and fire alarm panel network, and installation of Global Fire Graphic software for entire building	The Oberoi Hotel - Madinah	Madinah	The Oberoi Hotel - Madinah
GE Offices	Supply and installation of security system		Riyadh	GE
Holiday Inn Meydan Hotel	Installation of BMS network		Riyadh	Holiday Inn

Project	Description	Contractor	Location	Owner
SEC maintenance	Maintenance of all fire protection systems, including foam, FM-200, CO2, sprinkler, and deluge systems with all pumps and compressor equipment. Linking of all systems with main fire alarm system	Arabian Bemco	Substations throughout Madinah and Yanbu	SEC
Elaf Taiba Hotel	Upgrade of all fire alarm systems including all interfaces with other systems	SBG (Advanced Vision)		Elaf Taiba Hotel
Radisson Blu Hotel	Complete BMS upgrade		Riyadh	Radisson
Relocation of Massaa BMS Control Room	Relocation of existing Massaa BMS Control Room due to Mataf expansion project at Makkah Holy Haram	SBG-PBAD	Makkah	Al Riassa
Reinforcement of Qaseem Power Plant, Extension III	Design, supply, testing, and commissioning of HVAC control system including field devices, equipment control panels, and BMS with management software	Bemco	Qaseem	SEC
Qurayyah Combined Cycle Power Plant, new buildings	Expansion of control system, in-house manufacturing of ventilation units and control panels, installation, supervision, testing, and commissioning	Bemco	Eastern region	SEC
MOI integrated facilities	Supply, testing, and commissioning of standalone DDC controls for HVAC	SBG-Vision	Over 100 sites in central, western, and eastern regions	Ministry of Interior
Shoaiba Power Plant, Stage III	Security systems		Jeddah	SEC
Saudi Ground Services	Security systems		Jeddah, Dammam, Riyadh, and Madinah	
Saudi Private Airline Terminal	Security systems		Jeddah	
Mena Railway	Security systems		Makkah	
Makkah Holy Haram Mobile Mataf	Security systems		Makkah	
Saudi Airlines Office Building	Security systems		Jeddah	

Major ongoing projects

Project	Description	Contractor	Location	Owner
King Khalid University - Male Campus	Fire protection systems	Guangdong Overseas Construction Group	Abha	Ministry of Education
Thuwal Town Substation - 110/13.8 kV	Fire protection system	Advanced Energy Contracting Company	Thuwal	SEC-WOA
Wali Al Ahad Substation - 110/13.8 kV	Fire protection system	Advanced Energy Contracting Company	Makkah	SEC-WOA
Arafat 2 Substation - 110/13.8 kV	Fire protection system	Advanced Energy Contracting Co.	Makkah	SEC-WOA
Modon Substation - 380/110/33/13.8 kV	Fire protection systems	Al Gihaz	Jeddah	SEC-WOA
Bani Malik	Fire protection systems	ABB	Jeddah	SEC-WOA
Rabigh 2 Housing	Fire protection systems	ABB	Rabigh	SEC-WOA
Iskan City 2	Fire protection systems	ABB	Jeddah	SEC-WOA
Al Eyse	Fire protection systems	ABB	Madinah	SEC-WOA
Ushaira	Fire protection systems	ABB	Taif	SEC-WOA
Yanbu II Power and Water	Fire protection systems	Saudi Archirodon	Yanbu	
Makkah North Substation (Tiaf Ext.) - 380 kV	Fire protection system	Al Toukhi	Makkah	SEC-WOA
Al-Nuzha 2 Substation - 110/13.8 kV	Fire protection systems	Alstom - Areva	Makkah	SEC-WOA
Hindawiyah Substation - 110/13.8 kV	Fire protection systems	Alstom - Areva	Makkah	SEC-WOA
Tiyam 2 Substation - 110/13.8 kV	Fire protection systems	Alstom - Areva	Madinah	SEC-WOA
Haramain High-speed Railway 380 kV - 6 substations	Firefighting and fire alarm systems	Al Fanar	Makkah, Jeddah, and Madinah	SEC-WOA
Iskan 132/33/13.8 kV (Al Hisma SS)	Firefighting system	Al Gihaz	Jeddah	SEC-SOA
King Khalid University - 2 substations	Fire protection systems	Al Gihaz	Abha	SEC-SOA
Qurayyah IPP	Fire protection systems	Al Fanar	Qurayyah	SEC-EOA
Reinforcement of Hail II Power Plant, Extension III	Fire protection systems	Al Fanar	Hail	SEC-WOA
Rafha Power Plant Extension	Fire protection systems	SSEM	Rafha	SEC-SOA

Project	Description	Contractor	Location	Owner
New Headquarters Archive & Annex Offices	Fire protection systems	M. Binladin	Jeddah	Private
King Khalid University College of Language and Translation	Fire protection systems	Al Rashid	Abha	Private
Jeddah North Substation	Fire protection systems	Al Osais	Jeddah	SEC-WOA
Rabigh Power Plant 2	Fire protection system	Doosan	Rabigh	SEC-WOA
Marafiq Yanbu IWTP II	Fire alarm and fire protection system	SETE Energy	Yanbu	SETE Energy
SEC - Western Region maintenance	Fire protection maintenance	SEC-WOA	Western region	SEC-WOA
Reinforcement of Hail 2 Power Plant	Fire protection system	Al Fanar	Western region	SEC-WOA
Qatif Substation	Fire protection system			SEC
Qaisumah Substation	Fire protection system			SEC
Saudi Aramco security	Security barriers		Dhahran, Abqaiq, Jeddah, and Ras Tannura	Saudi Aramco
TASNEE maintenance	Maintenance services for fire alarm, firefighting, and security systems		Jubail Industrial City	TASNEE
SIPCHEM maintenance	Maintenance services for fire alarm, firefighting, and security systems		Jubail Industrial City	SIPCHEM
Al Riassa Building – plot 3a138	Installation, design, programming, testing, and commissioning of all fire suppression (FM-200) and fire alarm systems with Intelligent Network	Juffali Air Conditioning, Mechanical, and Electrical Company (JAMED)	Madinah	SEC-COA
Al Haram Shopping Center	Upgrade, design, programming, testing, and commissioning of all fire suppression (FM-200) and fire alarm systems with Intelligent Network	Hosn Al Karama Contracting Company	Madinah	General Presidency of the Two Holy Mosques
Al Mohesin Palace	Design, installation, programming, testing, and commissioning of fire alarm systems	Al Mohesin Palace Contracting Company	Madinah	Private
Construction of 115/13.8 kV Khafji Substation #5	Fire protection system	AEC	Khafji	SEC-ER

Project	Description	Contractor	Location	Owner
Islamic University Oussoul El Din College	Programming, testing, and commissioning of main fire alarm system, covering all student rooms and elec./mech. areas	Alia Electromechanical Company	Madinah	Islamic University
King Abdullah Financial District substations #8191 and 8192 - 132/13.8 kV	Fire protection system	Al Fanar	Riyadh	SEC-COA
King Abdullah Financial Center Substation #9020 - 380/132/13.8 kV	Fire protection system incl. Novec 1230, hydrant, and sprinkler systems and pumps	ABB	Riyadh	SEC-COA
King Abdullah Petroleum Studies and Research Center (KAPSARC)	Upgrade of fire protection system	M.R. Al Khathlan	Riyadh	ARAMCO
Central West Interconnection: Qaseem-Madinah	Fire protection system incl. Novec 1230, hydrant, and sprinkler systems and pumps	Alstom	Riyadh	SEC-COA
Qaseem 3 Substation #9029	Fire protection system incl. Novec 1230, hydrant, and sprinkler systems and pumps	Al Toukhi Company	Riyadh	SEC-COA
Al Muzahmiah Substation #8522	Fire protection system	Al Osais Company	Riyadh	SEC-COA
Tabarjal Qurayyat Substation Interconnection Part 2 - 132 kV	Fire protection system incl. Novec 1230 and water deluge systems	Al Toukhi Company	Tabarjal	SEC-ER
Huraymala Substation #8068	Fire protection system	Alstom	Riyadh	SEC-COA
Al Rossan Substation #8606	Fire protection system	Alstom	Riyadh	SEC-COA
Baqaa Substation #8911	Fire protection system	Alstom	Riyadh	SEC-COA
Power Plant #9 Transmission Room	Fire protection system	Arabian Bemco	Riyadh	SEC-COA
Oraija Substation #9016	Fire protection system incl. Novec 1230, hydrant, and sprinkler systems and pumps	Al Babbain	Riyadh	SEC-COA
Khamsin Al Dawaser Substation #8783	Fire protection system	Nour Energy	Riyadh	SEC-COA
Extension work at National Guard (SS #8093), Al Azim (SS #8918), and Al Hait (SS #8922)	Fire alarm systems	Alstom	Riyadh	SEC-COA

Project	Description	Contractor	Location	Owner
New 132/13.8 kV SS, #8169, Al Rabwah area	Fire protection system	Saudi Services Company (SSC)	Riyadh	SEC-COA
New Rafha Substation reserve system	Fire protection system	Delta	Riyadh	SEC-ER
New Headquarters of Ministry of Education	Fire protection system	Saudi Oger	Riyadh	Ministry of Education
Construction of West Buraydah Substation #8840	Fire protection system	AECC	Riyadh	SEC-COA
Construction of 110/13.8 kV King Abdullah Waqf (Al Fath) Substation	Fire protection system	AECC	Madinah	SEC-WOA
Construction of Al Kadrh (Abu Sadad) 132/33/13.8 kV Substation	Fire protection system	AECC	Southern region	SEC-SOA
Construction of Wadi Al Dawaser 380/132/13.8 kV BSP (#9701)	Fire protection system incl. Novec 1230, hydrant, and sprinkler systems and pumps	Al Babbain	Riyadh	SEC-COA
New 380/115/33 kV RIC Substation #2	Fire protection system incl. Novec 1230, hydrant, and sprinkler systems and pumps	Al Babbain	Eastern region	Royal Commission for Jubail and Yanbu RIC
Saudi Aviation Training Center	Fire protection system	Youssef Maroun Contracting Company (YMC0)	Riyadh	Technical and Vocational Training Corporation
Ministry of Water Substation #8135	Fire protection system	Delta	Riyadh	SEC-COA
Power Plant #9 Block E	Upgrade of firefighting system	SEC	Riyadh	SEC-COA
King Abdulaziz Port Dammam KAAP 115 kV Substation	Fire protection system	Delta	Riyadh	SEC-EOA
New Al Kharj Military Base 132/33/13.8 kV Substation #8716	Fire protection system	Delta	Riyadh	SEC-COA
Saudi Aviation Training Center	BMS		Riyadh	
Nobu Hotel	BMS and CCTV	Al Sharqawi	Riyadh	Al Anoud
Seashore	Integrated security systems, radar and boat	SBG	Jeddah	MOI
National Commercial Bank maintenance	Maintenance of CCTV system including 170 cameras, 23 DVRs, 23 monitor screens, and AC system including 150 doors	National Commercial Bank	Riyadh	National Commercial Bank
MIG Tower	BMS	ATS	Riyadh	MIG

Project	Description	Contractor	Location	Owner
SABIC Technology Center	Complete upgrade of public address system		Riyadh	SABIC Technology Center
Panda Hypermarket	BMS	YMES	Dawadmi	Panda
Panda Hypermarket	BMS	YMEs	Hafr Al Batin	Panda
Panda Hypermarket	BMS	YMES	Jubail	Panda
Panda Hypermarket	BMS	YMES	Assir	Panda
MOI car-camera maintenance	Maintenance of secret surveillance cameras and management system installed in MOI cars	MOI	Riyadh	MOI
Qaseem Power Plant III	Security	Arabian Bemco	Qaseem	SEC
Qurayyah Power Plant	Security	Arabian Bemco	Qurayyah	SEC
Saudi Ground Services	Security	Saudi Airlines	Jeddah	Saudi Airlines
Jubail Export Refinery, Package 10	Security	Sumitomo	Jubail	SATORP
Makkah Holy Haram	Relocation and installation of CCTV cameras	SBG ABCD	Makkah	Al Riassa
Makkah Holy Haram Ablution and Toilet facilities	Security	M. Binladin	Makkah - four locations	Al Riassa
Government hospitals	Security	Ministry of Health	Various sites	Ministry of Health
Shoaiba II Combined Cycle Power Plant	Security	Daelim	Shoaiba	SEC
King Abdulaziz International Airport	Installation of integrated fire alarm, sound, and IP-CCTV systems, including 200 cameras, Very Early Smoke Detection Apparatus (VESDA), and BIAMP Networked Media System	ICAD	Jeddah	Civil Aviation Authority
Makkah Holy Haram Ablution and Toilet facilities	Design and supply of building management system integrating various systems including UPS, escalators, water-mist systems, and central battery system	M. Binladin	Makkah - four locations	Al Riassa

Our clients

ABB Contracting Co.
Abdulrahman Al Rashid (ARTAR)
ABV Rock Group
Advanced Energy Company (AECC)
AECC
Al Arrab Contracting
Al Babbain
Al Dhaliliya
Al Essa
Al Fanar
Al Fozan
Al Gihaz
Al Haram Hotel
Al Latifia
Al Mabani
Al Mandarya
Al Mashariq
Al Mohesin Palace Contracting Co.
Al Moussa
Al Naba
Al Osais
Al Rashid Trading & Contr. Co. (RTCC)
Al Rayada
Al Riassa
Al Saad Contracting
Al Saadeh
Al Sawaed
Al Sharq Office Co.
Al Sharqawi
Al Toukhi
Al Yamama
Alia Electromechanical Co.
Alstom
Anwar al Madinah Movenpick Hotel
Arabian Bemco
Arabian Castle and General Contracting
Areel
Areva
Ashi & Bushnaq
AUVA

Bank Aljazira
Baud Telecom Company (BTC)
Bemco International
BTC

Ceitcon
Consolidated Contracting Co. (CCC)
CREET

Daelim
Dar al Iman Intercontinental Hotel

Dayim Punj Lloyd
Delta
Dhaliliya
Doosan Heavy Industries & Const.
Drake & Scull
Dulb Trading

Elaf Taiba Hotel
Electrical Works Est.
Electro Technique Arabia
El Seif Engineering Contracting Co.
ETA Star/Unistar
Ettimadat Contracting

Farafro
Fawaz Al Hukeir Est.
First Saudi Co.
Fuel Technology Co.

General Dynamics
General Electric
Guangdong Overseas Const. Group Co.

Haif
Hanwha Engineering and Construction
Hashem Co.
Hazem and Brothers Trading Co.
Hidada Contracting
Hilton Towers
Hitachi Plant Technologies
Holiday Inn
Hosn Al Karama Contracting Co.
Hyundai Engineering
Hyundai Heavy Industries

IBS Co.
ICAD
Intercontinental Hotel
Iscosa
Islamic Development Bank

JAL International Co.
JAMED

Kabbani Group
KADI Trading & Contracting Co.
Karam al Hejaz Hotel
KEC International
KFMC
King Abdulaziz City for Science & Technology

LADA Trading & Contracting Co.

Madinah al Nasr
Madinah Oberoi Hotel
Marafiq
MEP Solution Road
Meridien Hotel Madinah
Ministry of Defense & Aviation
Ministry of Health
Ministry of Higher Education
Ministry of Interior
Mohammad Bin Laden
M. R. Al Khathlan
M/S Al-Khonaini & Partners
Musharabia MCC

Nahdet Al Emaar
Nahil
Najm Al Jazirah Contracting Co.
National Commercial Bank
NCC T & D
Nesma & Partners
Nobu Hotels
Nour Energy

Oberoi Hotel
Orascom
Othaim Market

Petro Rabigh
Plus Pro
PMDC
Private Affairs of Custodian of Holy Mosques

Rabigh Refining and Petrochemical
Radisson Blu Hotel
Rakan
Rotary Engineering
Royal Commission Yanbu & Jubail
RTCC

SABIC

Safari Co.
SALEC
Saleh Ali Hasan Hammouda
SALMOC
Samsung Engineering
Sarco
Saudi Airlines
Saudi Aramco
Saudi Archirodon
Saudi Binladin Group
Saudi Constructioneers
Saudi Electricity Company-COA
Saudi Electricity Company-EOA
Saudi Electricity Company-WOA
Saudi Oger
Saudi Services Company (SSC)
Saudi Services for Electro-Mech. Works
Saudi Telecommunication Co. (STC)
Saudi Technical Ltd.
SBG-ABCD
SBG-PBAD
Sete Energy
SICE
Siemens
SIPCHEM
SITE Technology
Sojitz
SSEM
Sumitomo
SWCC

Tacoma
TASNEE
Technical and Vocational Training Corp.
Techno
Transad

Unistar

Youssef Maroun Contracting Co. (YMCO)



Our strategic partners

Name	Country	Product
Axis	Sweden	CCTV
Bodet	France	Master clocks
Bosch	Germany	PAS
Duran Audio	Holland	Sound systems
ForeVision	Saudi Arabia	Car-plate recognition
G+M	Switzerland	PAS and MCS
Geutebruck	Germany	CCTV alarm management
Interflex-TBS	Germany	Access control
Johnson Controls	USA	BMS
Kaba	Germany	Access control
Kidde Fire Systems	USA	FM-200, CO2, Novec 1230 fire protection systems, kitchen hood systems
Leoni	Switzerland	Cables
Le-vi	Germany	Security, surveillance, access control, T&A, audio & video, and lighting systems
Marioff	Finland	Hi-Fog water mist systems
Maxxess	UK/US	Security management systems
National Foam	USA	Foam systems for fire protection
Neumann	Germany	Intercom systems
Notifier (Honeywell)	USA	Fire alarm/gas alarm systems
QCS	USA	Security systems
UTC Fire & Security	USA/Holland	Fire alarm systems
Vicon	USA	CCTV



Our suppliers

Name	Country	Product
Arecont Vision	USA	CCTV (IP)
Automatic Systems	Belgium	Physical security
CAME	Italy	Gate entry components: road blockers, barriers, bollards
Chemguard/Ansul	USA	Foam systems for fire protection
Cohu	USA	CCTV
EST Edwards	Canada	Fire alarm systems
Fibernetix	Denmark	CCTV
Fracarro	Italy	TVS
GE/UTC	USA	CCTV and ACS
Genetec	Canada	Security systems
Giacomini	Italy	Fire protection systems
Global System Technology	UAE	Fire protection systems
Guardian	Saudi Arabia	Road blockers and sliding gates
HD Fire Protect Pvt.	India	Fire protection systems
Kennedy/Muller	USA	Gate valves
Legrand	France	Enclosures
Milestone	USA	CCTV
Mircom	Canada	Fire alarm/gas alarm systems
Morex	USA	Fire protection systems
Nanodems	Turkey	Integrated security mgmt. software
NLSS	USA	CCTV
ONSSI	USA	CCTV
Remsdaq	UK	FO equipment
Retrotec	Canada	Room integrity systems for fire protection
Riello	Italy	UPS
Sauter Controls	Switzerland	BMS
Siemens	Germany, Switzerland	BMS
Spectrex/Detronics	USA	Flame detectors
Stratech	Singapore	Security Systems
Tyco (Ansul)	USA	Fire protection systems
Viking	USA	Fire protection systems
William Eagle	UK	Fire protection systems



Year in Review
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