



ISS - Introduction



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<http://www.issystems.com>

SELF ACQUAINTANCE



We, *International Security & Safety Systems*, are pleased to introduce ourselves as a specialized company in the field of safety and security systems.

Established in 1989 in Cairo, we were able to attain a well-reputed name in our field of activities all over the Arab Republic of Egypt.

We offer consultation, fabrication, design, supply, installation, commissioning (*Includes programming in integrated systems*) and maintenance in our fields. Utilizing international codes and techniques, combining strict implementation along with flexibility to achieve customer satisfaction.

The specialization aspect renders powerful and sure design and technique. Protection, detection and control are implemented with a strong body of engineers and one company philosophy.

THE ISS GROUP

ISS – Foam Supplies: With the profound expertise within the company, ISS has established a manufacturing facility for foam concentrate and hardware manufacturing. For the first time in the country of Egypt and the continent of Africa, AFFF and AR-AFFF foam concentrates as well as foam hardware equipment is being produced at El Obour City, Cairo.

ISS – GSS: A sister company specializing in the same fields having its headquarter of operation located in *Jeddah*- Saudi Arabia by the name of *GSS - Gulf Star Security & Safety Systems* provides firm grounds all over Saudi Arabia.

INTERNATIONAL PARTNERS



To put everything in perspective, the following section describes our fields of operation as well as the companies we represent either as a Sole Agent in Egypt or as an Authorized Distributor in the specific field as well as their origin and their Web sites:

Fire System:

Fire detection:	ZETA ALARM SYSTEMS	UK	www.zeta-alarms.co.uk
Fire detection & Voice evacuation:	HONEYWELL	USA	www.gamewell.com
Fire & Gas PLC's & Controls:	SAFETY SYS TECH.	USA	www.safetysys.com
Fire & Gas PLC's & Controls:	ALLESTEC CORP	USA	www.allestec.com
Flame detection:	SPECTREX	USA	www.spectrex-inc.com
Gas detection:	GMI /MACURCO	USA	www.gmiuk.com
Heat Sensing Detection:	PROTECTOWIRE	USA	www.protectowire.com
Sprinkler & Valves & Hydrant:	CENTRAL SPRAYSAFE	USA	www.centralsprinkler.com
Foam Systems:	CHEMGUARD INC.	USA	www.chemguard.com
Gas systems (FM200):	PYROCHEM	USA	
Gas systems (Inergen/Co ₂):	WORMALD – ANSUL	UK	www.ansul.com
Fire extinguishing Local Applications:	FIRETRACE	USA	www.firetrace.com
Hose reels & racks:	ELKHART BRASS	USA	www.elkhartbrass.com
Valves and Actuator:	OCV	USA	www.controlvalves.com
Fire pumps- UL/FM -:	R-B INC.	USA	www.rbpump.com
Fire pumps –	ARMSTRONG	UK	www.armstrong.com
PLC's & TUV Control Equipment:	HIMA	GER	www.hima.com

Security System:

Intruder Detection:	Honeywell	USA	www.security.honeywell.com
Closed Circuit T.V.	Honeywell	USA	www.honeywellvideo.com
IP Broadcasting Surveillance:	Axis	SDN	www.axis.com
IP Surveillance Control Stations:	Milestone	USA	www.milestonesyste.com
Fiber optic Video & Data Transmission	Teleste	FNL	www.teleste.com
Access Control:	CEM	UK	www.cemsys.com
Access Control:	IEI	USA	www.ieib.com
Biometric Access Control:	RECOGNITION SYSTEMS	USA	www.recogsys.com
Video Transmission Systems:	ALPHA SYS. LAB	USA	www.aslrwp.com
Outdoor Security:	RACON	USA	www.racon.com

SECTION III
Detailed ISS Reference List
In **PETROLEUM &**
AEROSPACE Sector Projects

Table of Contents:

AEROSPACE:

1. Egyptian Civil Aviation Holding Company.

PETROLEUM:

- NEW!!*** 1. Melrose Petroleum Company.
- NEW!!*** 2. Petroleum Pipelines Company
3. Aguiba Petroleum Company Helipad Project.
4. Amerya Metering Station – BAPETCO -
PETROJET.
5. Misr Petroleum Company
6. General Petroleum Company
7. “Trans Gulf Project” -Petroleum Pipeline
Company - PETROJET
8. Arab Petroleum Pipelines Co. “Sumed”
9. Bechtel Overseas CO. – Intergen –
10. Suez Petroleum Manufacturing Company.



A. The Aerospace Sector:

1. Egyptian Company for Civil Aviation & Aerospace Navigational Services

The new holding company now incorporates 3-Major companies providing full control over all Airports within the country of Egypt. Even more, the company sets the standards for any Aerospace-Service providing company. Now ISS-Foams have been deployed at all Egyptian airports providing the last order for 40-Tons of AFFF foams as strategic stock. Our foams have easily passed the ICAO, have been approved by the most recognized international certification body the **Underwriters Laboratory** and have proven by far environmentally safer than competitive agents. The order is a start of a new sector covered by ISS, it is expected to have other Aerospace-Service providing companies to follow in the giant footsteps of the Egyptian Civil Aviation Services Holding Company like Marsa Alam and similar.



B. The Petroleum Sector:

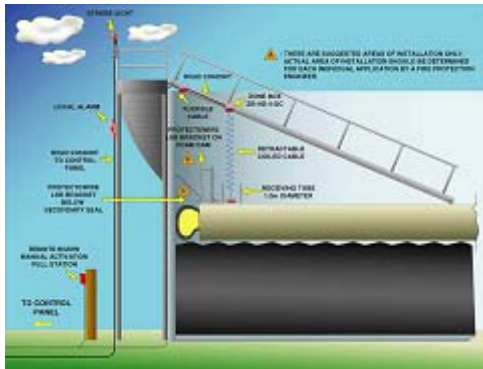
1. MELROSE PETROLEUM COMPANY

Merlon is an oil and gas exploration and production company with interests in Egypt and in the USA. Merlon is the Company's partner and the operator of its properties in the Nile Delta region of northern Egypt. Based on information currently available to Melrose, the Scotland-based multinational petroleum company, net entitlement proved plus probable reserves attributable to Merlon's interests in Egypt as at 31 December 2005 are estimated by Melrose to be approximately 125 Bcf of gas and 1.3 MMbbls of oil and condensate. Average net daily production from these interests in the year ended December 31, 2005 amounted to 16.6 MMcfpd of gas and 158 bpd of oil and condensate. The new site was established at Mansoura, Egypt.

After the acquisition, local Merlon officials along with Melrose Officers chose ISS for designing a challenging Fire Fighting System for the plant. The plant consisted of 3 fuel tanks, a process area with complex piping system and a knockout drum.

The initial design included a number of options due to the nature of the existing dike area which demanded versatility in the use of the codes alongside special discharge equipment. Foam was the basic extinguishing agent, and for the dike automatically water-oscillating foam monitors were chosen to supply the foam without human intervention.

For phase one, for each fuel tank, the detection system included two rings of linear heat detection cables, two high-speed triple-band explosion proof flame detectors incorporating sealed-electronics and a deluge-operated foam system using foam makers as the discharge devices. The main controller used was the state-of-the-art E3 FCI Addressable Analogue Control Panel and the unlimited expandability and versatile I-O configuration capabilities rendered ease and simplicity in design interfacing all the sensors to input modules and utilizing output modules for the release of the deluge valves keeping in mind the expansion possibilities that are to come in the future.



The tanks were of floating roof type wherein retractable cables are to be used in conjunction with the linear sensing cable to allow free movement of the sensor cable along with the roof. The first ring rated at 88°C provided the trigger to the cooling system whilst the second, rated at 105°C triggered the foam discharge.



2. PETROLEUM PIPELINES COMPANY

The MAX Loading Station is one of the oldest loading stations located in Alexandria Egypt. The station incorporates highly flammable vapor vessels, fuel pumps, HV switchgear room, chemical laboratory and more.

The project requirement was for clean agent and carbon dioxide extinguishing systems for the control rooms, flame and gas detection systems for the pump station, chemical laboratory and fuel loading area.

Incorporated in the project was the SafEye 200 Series Open Path Gas Detector is a self-contained, fast response optical gas detection system. It detects combustible gases at concentrations lower than the explosion limit (LEL) over a "Line of Sight" of up to 460 ft. (140 m) long.



SafEye is the preferred system for offshore oil companies because it is immune to false alarms caused by partial blockage and extreme weather conditions (fog, rain, snow) and direct or reflected sunlight, flame and other black body radiation sources.

The SafEye system can be factory calibrated to a gas mixture most probable to leak in a specific location. This results in the most accurate gas concentration measurement.

The SafEye is fully functional in heavy fog, rain, etc, that results in up to 90% of the signal obscuration. In a North Sea offshore installation, tested for over six harsh winter months which included very dense fog, snow and rain, the SafEye was fully operational at all times.

SafEye is built for reliability and continued operation under all types of extreme environmental conditions. This is the field experience, which is demonstrated by the SafEye operational installations, ranging from the very humid and hot Far East to the wet and cold North Sea to the dry and cold slopes of Alaska.

The SafEye, due to its special optics design, provides for a misalignment tolerance of $\pm 1^\circ$ in all directions and is protected against false gas reading and alarms.

The SafEye unique flash source gives a very powerful radiation signal for a very short time, less than one millisecond at pre-selected intervals. This patented feature enables the detector to address only the high intensity and ultra fast signals that correspond to fast changes in gas concentration, while ignoring all other background radiation.

3. AGUIBA PETROLEUM – RED SEA RIG HELIPAD

The site was one of the most challenging for ISS corps of engineers. In the middle of the Red Sea closer to Hurghada, and a difficult to reach and highly hazardous Heli-Pad. ISS was to design a system that would provide Manual Fire Suppression of the Heli-Pad utilizing Fire Fighting Foam Concentrate.



What was the first challenge? Well the facility had no power!! Any system was to be design using mechanical discharge in mind. There was not electrical parts within the system to be put in mind as there was no mains for them.



What was the second challenge? The facility was existing and running. The spot was obviously hazardous, the location was not very helpful - in the middle of the red sea.

What was the third challenge? It was first required to provide a local-application system as per NFPA requirements for the helipad alone, however afterwards it was deducted that with the versatility that ISS manufacturing engineers can provide, the client decided that the entire rig could be covered in terms of Fire Protection.



Ingenuity intervened. Without need for power source, without including any electronic components, following the international codes of Suppression Systems for Heli-Pads ISS installed a Quantity of 2 Stand-Alone Premix Station using Nitrogen-Pressurized Cylinders as the expellant gas modules, a local Nitrogen cylinder as the main initial actuation unit and large 3,500 gallon premix tank with 3% UL-Listed AFFF foam concentrate all locally assembled. Finally Discharge Monitors fitted with High-Flow Nozzles acted as the discharge device.

The tanks had a premixed solution of 97% of water and 3% of 3% AFFF foam concentrate manufactured at ISS facilities at el Obbour city. The tanks have been design in such a way to be filled in minimal time and effort via a single person without the need of transferring anything to shore.

The system operates in a such a simple manner from the standpoint of a user but a sophisticated technique had to be put into the design of the system to ensure proper operation and complete coverage of the Helipad.



As shown on the left each water-oscillating monitor had a local highly-pressurized expellant-gas cylinder which when operated drives a sensing line which in turn operates the the main set of Nitrogen Cylinders (shown below) which act as the main expellant set for the main Premix Tank.

For a single man, all that is required it to manual open this little cylinder with minimal effort and a 3% AFFF foam solution is then discharged unto the piping network and slowly slid on the Heli-Pad.



4. Amerya Metering Station – BAPETCO - PETROJET

The new Gas Metering Station at Amerya – Alexandria had *giant* Petrojet provide a turnkey project for the entire gas pipeline project. Starting from Meleiha – Marsa Matrouh all through the deserts to reach El Amerya-Alexandria where the 450-kilometer pipeline gas flow and consumption was metered. ISS provided the latest in Fire Detection Technology by installing a **Gas Detection System** using Open Path Infra Red Detectors over the metering station. The system consisted of Open-Path Hydrocarbon Gas Detection of 140 meters range, Hydrogen Detection for Battery Rooms and standard detection for the control room. The EXD rated, environmentally sealed, sun blind Open Path Detectors provided the perfect solution for Hydrocarbon Detection for the site as the standard spot-type detectors would have been in excess of 100 units. With a simple installation procedure and the latest in Infra-Red technology, the system provided two ppm-levels of gas detection for a harsh-outdoor environment without being affected by wind, sun, fog or any other environmental aspect.

5. MISR PETROLEUM

The New Loading Bay at Suez Fuel Boundary had ISS perform the demanding Fire fighting and Automatic Extinguishing Control System. The project had all the technical strengths of ISS shown in Explosion proof detection from flame detector, heat detectors, siren all interfaced to an Intelligent Controller with simple command and control interface. All products had the required approvals and controlled a Foam System utilizing the best in Foam Discharge Design for minimal complexity and maximum efficiency. The total value was awarded for 1.4M Egyptian pounds

6. General Petroleum Company RAS GHAREB PROJECT:

The project that includes the petroleum giants PETROJET and GPC is even yet underway. ISS has been awarded the supply & erection of the Redundant Foam Pump Skid and the Foam Monitors. A challenging project in which ISS has proven the high standard Engineering Body to provide all the answers to the tough standards of the project like Ingress Protection and Redundancy.



7. "TRANS GULF PROJECT" Petroleum Pipeline Company - PETROJET

The renowned Trans Gulf Project by Petroleum Pipeline Company provided as turnkey project to *giant* Petrojet had four main sites across the Gulf of Suez. Sites at Wady Fyran, as Budran, Ain EL Sukhna were to be protected by **Carbon Dioxide and FM200 Fire Fighting System** for the control rooms. ISS provided design and supply for the project for over 100 Carbon Dioxide cylinders distributed over 15 rooms. Hazards ranged from Control Equipment, Power Transformers, Medium and Low Tension Rooms and Battery Rooms. The detection system utilized standard heat and smoke detectors, EXP Hydrogen detection, double knock detection and control system using automatic and manual modes of operation. The engineering design provided the most specific details for system installation for the contractor including A to Z system design following the toughest International Codes and leaving no installation detail un-mentioned. A complete design Criteria, Design Drawings, System Philosophy and Specifications book provided the total turnkey solution for system installation without needs for third-party reassurance of the validity of calculations and standards.

8. Arab Petroleum Pipelines Co. "Sumed":

ISS provided **Foam Fire Fighting Pump Skid System** for the company utilizing two **Foam Pump Skids**, two **Atmospheric Foam Concentrate Storage Tanks**, to provide a Foam System for the fuel tanks at site. The generation of foam for the tanks utilized the latest in foam discharge equipment for fuel tanks and dikes using **High-Back Pressure Foam Makers** at 225 gpm flow rates, two **Monitor Nozzles** at 1000 gpm flow rates to discharge the **20-tons** of 6% AFFF. The engineered products supplied by ISS and manufactured by Chemguard were the *best-of-the-bid* for the huge company and the system was to prove easy-to-install. The un-matched approvals provided for the components at the competitive prices were to provide *Technical* and *Financial* decision makers to chose ISS for the job.

9. BECHTEL OVERSEAS COMPANY – INTERGEN – Egypt Boot Sidi Krir 3&4:

ISS provided its **EGY-C303 3% AFFF foam** - blended in Egypt in their manufacturing facilities- at AL-OBOUR Industrial area - underlicense from CHEMGUARD-USA to protect this huge investment .

10. Suez Petroleum Manufacturing Company:

ISS provided **Carbon Dioxide Fire Fighting System** for the Transformer and Power Rooms.

SECTION IV

Detailed ISS Reference List on **Industrial Sector** Projects

Table of Contents:

- NEW!!* 1. Sanofi-Aventis Medical Warehouse**
- NEW!!* 2. United Sugar Company of Egypt**
- NEW!!* 3. Kapci Coats & Painting**
- 4. Kraft Foods Factory Egypt**
- 5. Pachin-Al OBOUR Industrial area.**
- 6. DSM – Anti-Infectives – Al Khanka**
- 7. SC Johnson Wax .**
- 8. Savola Oil Factory.**



After the success of acquiring the tough approval of the World-renowned Insurance Company - FM Global in the Kraft Foods projects (details to follow in section 4), ISS was nominated by FM-Global to provide the expertise in relative codes and standards to provide a complete package including design, fabrication, erection, testing and commissioning of Sprinkler and Standpipe Systems for the new Warehouse for Medical Leaders - Sanofi-Aventis. Based in France, the company expressed their interest to work with ISS after high-recommendation provided by FM-Global specialists.

1. Sanofi-Aventis:

Requirements:

The new warehouse had an area of 1,000 sqm with ceiling height of, yet the biggest challenge came when designing the sprinkler system piping network for one of the most unorthodox ceiling patterns that the warehouse possessed. The challenge not only came from the complexity of the ceiling that had beams in two directions crossing at uneven patterns, but also was due to the pressure of the manufacturing facility to accommodate the most available storage space.

Systems Summary:

Sprinkler System:

The system comprised of 1,200 sprinkler heads between upright and pendant to accommodate the complexity of the ceiling and yet provide the client with maximum storage space along side 6 alarm check valves and a UL/FM approved fire fighting pump package rated at 1,500 gpm @ 8 bar.

Detection System:

A single Fire Detection Controller is to be installed. The controller would have the 3 detection loops with almost 2250 smoke detection heads installed.

Project Numbers:

The project total was for approximately 1,500,000 Egyptian pounds.

Third Party Commissioning Company:

The project is undergoing the installation phase and expected to be commissioned and approved by FM Global France.





Keeping in line with the strategic focus of the Savola Group and the United Sugar Company (USC) of looking for opportunities for growth and investment in the region of the Middle East and North Africa, the USC Board and Shareholders have approved the participation of USC as the majority investor (51%) in the Red Sea Project to build a 600,000 MT per year modern sugar refinery in Egypt.

The refinery will be installed in Al-Sokhna new port some 50 Km south of Suez City. It will produce 450,000 MT/ year of granulated sugar for local and export market and 150,000 MT / year of liquid sugar in the form of Medium Invert Syrup.

And who else to be assigned the job for designing and installing the life safety system in a period of 6-months than ISS.

2. United Sugar Company:

Requirements:

After the much success shown Savola Oil Factor (Section 8), flexibility and knowledge-base of codes and standards differentiated ISS from other vendors. The refinery's critical economic and social position was also taken into consideration. All led finally to ISS being awarded the job.

Systems Summary:

Detection System:

A single Fire Detection Controller is to be installed with 4 detection loops, and approximately 400 detection points with a mixture of smoke, heat and HSSD sensors.



Water monitors: For the bulk-storage warehouse having ceiling of 12 meters high, special water-oscillating monitors are installed with twin-steel ladders for every monitor installed all behind a steel sheet for protection in case manual control over the monitor oscillation is required.

Pump Package: A fully monitored UL/FM fire pump 1,600 gpm @ 8 bar pressure.

Project Numbers:

The project total was for approximately 3,500,000 Egyptian pounds.

PROJECT PROFILES – INDUSTRIAL SECTOR

The success of the Life Safety System designed for Pachin (Section 5 to follow) was not to be denied. The next Paints, Coatings and Chemicals giant KAPCI – located in Port Said Area called on ISS to perform the design of the Life Safety System. Kapci was established in 1985 as a private company only devoted for the production of car refinishes till 1999 when they started producing one of the most hazardous chemical in the world today - Nitrocellulose. Kapci holds a market share of more than 80% of the local car refinishes in Egypt. In addition to the company produces decorative paints and wood finishes.

3. Kapci Coats and Painting:

Requirements:

There was no competition. The excellent job performed at Pachin made the choice easy.

Detection System: A total of four addressable analogue control panels connected to one PC Graphics package for handling about 1,000 analogue points, 13 Gas control panels, 70 advanced triple spectrum infra red flame sensors, and 30 sprinklers interface units.

All sensors, inputs, manual stations and annunciation equipment were to be Explosion Proof.

Understanding the extremely high-flammability and instability of Nitrocellulose, the design called for the high-speed Triple Band Infra Red Flame Detector which provided a stable and quick response time of up to 0.2 seconds. Moreover, the patented Triple IR design offers two to three times the detection distance of any conventional detector.

In non-hazardous areas where still some vapours might be present, the new Mini-series of flame detectors were utilized.



Foam System: A system comprising of eight bladder tanks 700 gallons each, eight *ultra-wide* foam proportioners providing a revolutionary solution for the 5,300 m² finished product warehouse, 2 water-oscillating foam monitors for the tank farm area that are electrically- triggered via the fire detection system, 1 foam trolley and 6,000 gallons of ISS's UL-Listed AR-AFFF foam concentrate.

Pump Package and Water Mains: A main fire loop 8 Km length, 4,000 sprinkler heads and a fully monitored UL/FM fire pump 2000 gpm @ 8 bar pressure.

Project Numbers: The project total was for approximately 7,000,000 Egyptian pounds.

Third Party Commissioning Company: The project is to be fully tested, commissioned and approved by a third party insurer yet to be decided.



Giant Kraft Foods International set it with a mission to complete local presence in one year. The challenge included so many criteria including the design and installation of a Life safety system combining both state-of-the-art systems and the tough approval of their Insurance Company FM Global. ISS was up to it.

4. Kraft Foods Factory Egypt:

Requirements:

The competition was tough. After ISS had presented a comprehensive design package including hydraulic calculations and design drawings, came the requirement to get FM Global approval on the package. In minimal negotiations, the approval was granted. Then came the tougher part where the package was released for a bid. ISS was up against tough competition from Internationally renowned companies like Siemens International, ABB Egypt and others. Still the expertise and strong knowledge of Life Safety Systems enabled ISS to be granted the job.

Systems Summary:

Detection System:

A single High Rise Fire Detection and Voice Evacuation Controller is to be installed. The controller would have the 12 detection loops, 12 multiplexed voice controlled circuits with independent annunciation per zone and digital voice messaging as well as all call messaging options installed.

Pump Package and Water Mains: A main fire loop 3 Km length, 4,000 sprinkler heads and a fully monitored UL/FM fire pump 1,600 gpm @ 8 bar pressure.

Project Numbers:

The project total was for approximately 3,500,000 Egyptian pounds.

Third Party Commissioning Company:

The project is to be fully tested, commissioned and approved by FM Global Germany.



With the widely known range of products and services supplied by ISS, many clients have found a total key solution in the engineering service and highly specialized body of ISS. Follows are briefings on four major projects.

5. Pachin El Obour Factory Project:

Requirements:

It was required to provide a total turnkey solution for an industrial fire detection and fire fighting system with the highest design codes and standards. Pachin, a leading paints manufacturing company in Egypt and the Middle East, was in the process of establishing a one of the biggest paints and chemical manufacturing facilities in the middle east (almost 40 acres). Understanding the hazards involved in this industry, Pachin officials new they had to render the assignment of design, supply, installation and testing to a trustworthy company with highly qualified techniques and knowledge basis. ISS was awarded the project when it introduced the latest technologies in the fields of fire detection and fire fighting.

Systems Summary:

Detection System:

A total of four addressable analogue control panels connected to one PC Graphics package for handling about 1,000 analogue points, 13 Gas control panels, 55 advanced triple spectrum infra red flame sensors, 25 beam smoke detectors, 11 gas metering systems and 30 sprinklers interface units.

CCTV System: Integrating a CCTV system for visual alarm confirmation and foam system triggering for the Tank farm.

Foam System: A system comprising of eight bladder tanks 700 gallons each, eight *ultra-wide* foam proportioners providing a revolutionary solution for the 5,300 m² finished product warehouse, 2 water-oscillating foam monitors for the tank farm area that are electrically- triggered via the fire detection system, 1 foam trolley and 6,000 gallons of AR-AFFF foam concentrate.

Pump Package and Water Mains: A main fire loop 8 Km length, 4,000 sprinkler heads and a fully monitored UL/FM fire pump 2000 gpm @ 8 bar pressure.

Project Numbers:

ISS took the challenge of finishing the entire project from design, supply, erection and testing in six months, and has met it.

The project total was for approximately 6,000,000 Egyptian pounds.

Third Party Commissioning Company:

The project was fully tested, commissioned and approved by a third party company: Beaura Veritas – Egypt. The document is attached.



A Complete packaged Fire Detection can only be supplied by ISS. With a well-based engineering body, systems integration is available at ISS by combining the best in detection from manufacturers like SPECTREX, GMI and others to the best in control like GAMEWELL and ANSUL all under one reliable installer – ISS.

6. DSM ANTI-INFECTIVES:

Requirements:

It was required to provide a total turnkey solution for an industrial fire detection A combination of smoke, flame, gas, leakage detection system all combined under a single controller station. DSM, a leading dis-infectives manufacturing company in Egypt and the Middle East, was in the process of renovating the Khanka factory with audits from Holland providing mandatory establishments of a total solution of Fire Detection System that would be able to protect against hazardous gases, vapors, smoke and overheating within the facility. ISS was the only company that got the approval from the Dutch owner DSM-International and was awarded the contract. The option of later providing a complete Fire Fighting System for the factory with a total solution provided by ISS using preaction and standard deluge system was one of the issues that helped in making the decision. The factory is expected to install a 3.5M Fire Fighting system later this year and will indulge ISS in the design of the system and if successful, the turnkey job.

Systems Summary:

A total of 300 detection point ranging from standard Flame Detectors, IR³ triple spectrum EXD flame detectors, UV/IR double band flame detectors, LPG/Hydrogen/Oxygen gas metering system all under the umbrella of a sophisticated multi-tasking Intelligent Control Panel was installed.

Project Numbers:

The project total was for approximately 800,000 Egyptian pounds.

Third Party Commissioning Company:

The project was fully tested, commissioned and approved by DSM-International SHE management bureau.



The high level of engineering available within the ISS body provides clients with tough third party insurance agencies the complete solution with ultimate compromise.

7. SC Johnson Wax Factory Project:

Requirements:

The US-based company SC Johnson Wax, located at the Cairo-Belbies Road, requested a fire fighting contractor who would fully understand their third party insurer, apply the most strict of fire fighting codes and at the same time establish a sense of security with the application of heavy duty equipment for protecting the factory against hazards. Dealing in items like aerosols this was no easy job. ISS provided protection to large aerosol warehouses in the factory using the latest in sprinkler head technologies by the new ESFR sprinklers.

Systems Summary:

Water Tank and Pump House: ISS contracted for the 1000m³ water tanks as well as the underground pump house. The tank was reserved solely for fire fighting and the old tank was utilized for drinking water.

Detection System: The latest in Fire Detection was applied a Central Analogue Controller interfaced to 300 analogue heads, the pump operation and the EXD flame sensors installed at the gas house. An online printer and two serial repeaters provided data archiving to all events to the system including operations of any hose or sprinkler system in the factory. A sophisticated evacuation signaling system was also applied providing evacuation of related sectors close to the hazard detected without interruption of the manufacturing process.

Kitchen Hood System: ISS installed the latest ANSULEX – Kitchen-Hood-Protection-System at the hospital. The system was fully monitored by the Fire Detection System.

Water Cooling System: For the Kerosene tanks, a monitored deluge water system was installed with a hazard-scenario for cooling tanks and adjacent ones in case of sprinkler operation. ISS installed additional water-oscillating monitors for the tank farm.

Foam System: ISS installed a protection system consisting of a single 800 gallon bladder tank using the *ultra-wide* foam proportioner providing a revolutionary solution for the Process Building.

Pump Package and Water Mains: A main fire loop 3 Km length, 900 sprinkler heads and UL/FM fire pump 2000 gpm @ 8 bar

Project Numbers:

The project total was for approximately 2,000,000 Egyptian pounds.

Third Party Commissioning Company:

The project was fully tested, commissioned and approved by a third party company: International Risk Insurance – Germany.



The performance of ISS leads to high-confidence to all clients.

8. Savola Oils Factory Project:

Requirements:

The KSA-based company Savola Oils, located at the 10th of Ramadan City, was in search of a fire fighting contractor who would provide a similar system as the one installed at the Factory located in Saudi Arabia. GSS being the contractor who performed the job in KSA, ISS was called upon to provide a similar system. Hazard Management LTD – UK was the client's insurer for this project and provided ISS with an appreciation letter after completion of the job.

Systems Summary:

Detection System: ISS installed a conventional B.S. detection system covering the entire factory. A repeater unit with full control was also installed at the gatehouse. The controller accommodated 40 zones of detection with up to 450 detection heads.

Foam System: ISS installed a protection system consisting of a single 800 gallon bladder tank for the Process Building.

Pump Package and Water Mains: A main fire loop 1.5 Km length, 2000 sprinkler heads and a fully monitored B.S. fire pump 2000 gpm @ 8 bar pressure.

Project Numbers:

The project total was for approximately 1,300,000 Egyptian pounds.

Third Party Commissioning Company:

The project was fully tested, commissioned and approved by a third party company: Hazard Management LTD – Germany.

SECTION V
Detailed ISS Reference List
on **Tourism and Hotels**
Sector Projects

Table of Contents:

- 1. Taba Beach Resort – Taba.**
- 2. Semiramis Intercontinental – Tahrir Square.**
- 3. CairoTel/MaadiTel - Maadi.**
- 4. Queen Sharm – Sharm El Shiekh**
- 5. Cosmo Politan Hotel.**
- 6. Al Murgan Resort – North Coast.**
- 7. Al Sultan Gardens – Sharm El Shiekh**
- 8. Morgan Land – Saint Catherine.**



1. Taba Beach Resort - Taba:

Introduction:

The huge complex resort – Taba Beach – required a Fire Detection, Life Safety and Sprinkler System for the entire complex. With different hazards allocated in large distance and areas, this was a real challenge to any Fire Fighting Designer. From specific reaction Sprinkler Heads, standard response Sprinkler Heads, Deluge operation valves and standard OS&Y valves, the project had all a Fire Fighting Contracting Company would be able to supply.

Project Details:

A technically challenging scope of supply and commissioning of Fire Fighting and Life Safety Equipment was met by ISS. A dedicated Life Safety and Monitoring System was supplied to provide a single channel monitoring of valves located at different locations of the resort. At a glance, the Security Offer can identify the valve that is closed, open or operating. About 200 valves were monitored by the system and each valve had its own technical name that allocated it in the Fire Fighting network.

2. Semiramis Intercontinental – Tahrir Square

Introduction:

Facing difficulties with security guards at one of the largest hotels in Cairo, Semiramis Intercontinental looked for ISS to provide a state-of-the-art Security Guard Performance Monitoring System to evaluate as well as monitor their Security Guards in performing their well-laid duties and cycles. A reporting system was required to provide the time of attendance of the guard, assurance that the guard has performed his cycles on time and provide a printout at the end of each month with all guard activities within the premises.

Project Details:

ISS provided the ultimate in Guard Tour System – The Jackson Barnes Checkpoint System. The system had over 30 checkpoints over which a guard had to punch his presence at the specific point. At the end of the day, week, month or at any time, the Security Chairman and the HR Manager now have the chance to evaluate each guard's performance and timing.



3. CairoTel & MaadiTel Hotels:

Introduction:

The giant Maadi Chain Hotels required a Fire Alarm and Life Safety System to protect their over 140 rooms. The ultimate challenge ISS met was the retrofitting of the Fire Detection System where a precise schedule had to be not only laid out but also met. The high occupancy hotel had almost 90% average occupancy which met that retrofitting works had to be done upon a specific work plan without any guest disruption. ISS displayed its best in project management and met the deadline providing a complete Addressable Analogue Fire Detection System for 120 rooms with Voice Evacuation System without the least disruptions for the hotel guests.

Project Details:

A complete Analogue Addressable System providing early smoke detection along with sectorized Voice Evacuation System to provide audible alerts for dedicated sections related to the specific location of the Fire Incident and following a designed evacuation plan as per each Fire Scenario. Each point of detection on the system was identified by its specific room number to make it easy for security officers to quickly head to the room with the fire-reporting incident.

4. Grand Sharm Casino Project:

Requirements:

It was required to provide a sophisticated CCTV system for the biggest Casino yet to open in Egypt – Grand Sharm Casino in Sharm El Sheikh. The French owner had a predetermined list and quantity of equipment and had bidders provide their best designs for the job. ISS provided the most advanced yet simple design and was accepted from five other competitors despite being number five financially.

Systems Summary:

Matrix and Dome System: Five high speed domes with masking and privacy, 44 high resolution 1/2" color cameras in dome enclosures and a 60 input camera matrix with two secondary keyboards and audio relay follower.

Multiplexing System: 10 real time color quads with 10 monitors were dedicated to monitor the games.

Recording: Keeping in mind the nature of the business, ISS provided real-time 24 recording system utilizing over 40 VCR's as a daily proof system. Recording included audio recording with the source being highly sensitive discreet microphones.

Project Numbers:

The project total was for approximately 650,000 Egyptian pounds.

5. Queen Sharm- Sharm El Shiekh:

Introduction:

Up an running, ISS provided the complex Analogue Fire Detection System supplied by Zeta Alarms. Many keys had to be put in mind in terms of flexibility of design, expandability, simplicity of the human-machine interface and others.

Project Details:

A complete Analogue Addressable System providing early smoke and heat detection.

6. Ameera Beach Resort- Ras Sudr:

Introduction:

The close relationship of ISS with giant contractors like Bin Laden enabled the build of trust to its utmost.

Project Details:

A complete Analogue Addressable System providing early smoke and heat detection and Life Safety Systems including Fire Pumps and Handline Hoses.

Project Numbers:

The project total was for approximately 1,650,000 Egyptian pounds.

SECTION VI

Detailed ISS Reference List on **INERGEN** Gas System Projects

Table of Contents:

- 1. MobiNil Project.**
- 2. Ministry of Finance Projects.**
- 3. Paint & Chemical Industries Co. Project.**
- 4. General Petroleum Project.**
- 5. Egyptian Org. for Standardization**



1. MobiNil Project

Introduction:

MobiNil is the leading cellular-service-provider in the country of Egypt. The company awarded ISS the gas suppression system for the *main switch* and *IT* rooms. Although the specifications initially put down by France Telecom to have FM200 gas, ISS brought forward the clear advantages of Inergen over FM200, and through the highly trained technical body of ISS was able to shift the specifications to Inergen gas. The main concern of the MobiNil officials was the refill time which was negligible compared to the refill time for the FM200. This is because the Inergen gas is readily filled in the country of Egypt under license from *Wormald UK*, while the FM200 is not filled in the country under license. The competition was high, but ISS was chosen for a number of reasons, the first being the technical superiority of the company and second was the punctuality factor.

Project Details:

The main switch utilized **39** Inergen cylinders size: 12.68m³ for room void and under raised floor protection. The air-conditioning system provided air-intakes via grill openings in the raised floor. Consequently the detection system was designed to trigger the air-conditioning system to stop in order for the grills to act as a gas lead from the room void to the raised floor area where all power, data and telecom cables were present. Similarly the IT room utilized **18** Inergen cylinders size: 12.68m³ for room void and under raised floor protection.

2. Ministry of Finance Projects

Introduction:

One of the most growing ministries in Egypt, The Ministry of Finance has taken ISS as its partner in protecting its server rooms. Like the MobiNil project, the initial order came for a project that was specified for FM200 gas. The availability and professionalism of ISS engineers produced a greatly appreciated impression on the Ministry officials. A seminar was held at ISS headquarters showing the differences between Inergen and FM200 as well as the actual test of the gas and its affect on human beings. The fact that FM200 tests on human beings not being documented as compared to that of Inergen was the major reason on shifting the specifications towards Inergen gas.

Project Details:

ISS has installed over **300** cylinders of different sizes for the Ministry and the biggest site, the Agouza building, had alone 30 cylinders over 10 rooms protecting the main server and computer rooms in the building. Other locations distributed all over the country like



3. Paints and Chemicals Industries Company Project

Introduction:

Paints and Chemical Industries Company "PACHIN" is the market leader in domestic and industrial paints and chemicals manufacturer in Egypt. The company invested 140+ million Egyptian pounds in a new manufacturing plant of 40 acres in the Obbour City. The plant is also expected to produce raw materials for the paints industries.

Project Details:

ISS has installed **18** cylinders to cover six rooms in the Factory Utility Building. The building is considered to be the most critical one in the factory as it includes the two main power plants for all the manufacturing buildings, the server room, the quality control room, the main compressor room, main blower room and the main laboratory. The cylinders utilized directional valves for the six rooms, all triggered electrically via addressable gas control panels. This was a very challenging project for ISS due to its complexity and extensive works for calculating gas flows and piping diameters for each room from one Inergen source. However, ISS managed to design, supply, install and test it in two months time.

4. General Petroleum Project

Introduction:

The public sector petroleum company General Petroleum Co "GPC" had much concerns when designing a clean gas system for *environmental* issues. Due to the new regulations informed by the Egyptian Chamber of Health, Environment and Safety, the gas chosen had to be the most environment friendly and to have no EPA conflicts. Introducing the ODP and environment friendly Inergen gas, ISS was able to set forth the solution for the client as well as providing well organized installation techniques with minimal times and changes.

Project Details:

ISS has installed **10** Main cylinders & 10 spare cylinders size 12.4m³ to cover the main server room at the headquarters. An air-conditioning shutdown system was also applied for this project.

7. Egyptian Org. for Standardization :

An underconstruction project with more than 60-Inergen cylinders –utilizing the newest 200 bar Systems (16.8 M3)

SECTION VII
Detailed ISS Reference List
In **Security & Surviellance**
Systems Projects

Table of Contents:

- NEW!!*** 1. ENPPI Project.
2. MobiNil Project.
3. The Embassy of the Federal Republic of
GERMANY.
4. Grand Sharm Casino Project.
5. Noor Group Project.
6. American University in Cairo Project.
7. Linkdotnet Project



1. ENPPI Project:

Requirements:

Required to provide a WAN controlled Access Control System for MobiNil Egypt, the number one cellular phone service provider in Egypt. Also to incorporate badging and remote site surveillance from one central location. With the size of the MobiNil corporation, a medium-sized system was not to be recommended, so ISS provided the total solution via a networked Access Control system with unlimited expansion possibilities.

Systems Summary:

Main Control and Badging Station: A Windows NT based station with file server controls over six remote sites linked via E1 interfaces and modems, a card badging station for magnetic stripe cards with card encoding and remote commanding modules for direct door opening of any door at any site.

Distributed Database: A database accommodating up to 70,000 users, photo and unlimited additional fields per user, card flags and event history with audit trail per single user.

Server Rooms Protection: Protection via anti-passback feature linked to a gas extinguishing system (*also provided by ISS*) to release the door in case of alarm.

Project Numbers:

The project total was for approximately 1,800,000 Egyptian pounds.

Other Links:

Web: http://www.cemsys.com/English/News/Press/2000/PR_Mobinil_Content.htm



2. MobiNil Project:

Requirements:

With five different companies operating in a single building and managed by five different project managers, the requirement was for a LAN-ready solution with integrated badging, and web-based login.

Systems Summary:

Main Control and Badging Station: webEntry™ II Pro is an Access Control System that is managed, controller and operated over the Internet. webEntry™ II Pro takes advantage of web-based technologies to provide a low-cost, easy to install and easy to manage access control system, as well as offering additional features including, ID Badging, Graphical Alarms Display and External Systems Control such as CCTV.

Unlike traditional access control systems, webEntry II Pro does not require a dedicated PC or special access control software installed. Instead, the webEntry II controller uniquely combines a Web server interface and access control functionalities into one unit allowing the user to administer the system and receive remote notification of events and alarms via their web browser. You can even open a remote door over the internet!

The system incorporated a fully-feature badging system with the new SP35 badge printer, a live photo-capture using the built-in personnel badging system.

Turnstile And Time and Attendance: Two lanes of main entries where installed utilizing half-height fully monitored turnstile gates with in/out readers. The system provided the perfect tool for the HR manager to easily monitor hours and activities of all users.

Fire Alarm Interface: All doors where interfaced to the fire alarm system to release in case of fire.

Project Numbers:

The project total was for approximately 200,000 Egyptian pounds.

Other Links:

Web: <http://www.cemsys.com/system.php?id=3>



3. The Embassy of the Federal Republic of GERMANY:

Requirements:

The Embassy Security Officials were looking for a **NIGHT** Vision Perimeter Surveillance System. A system was installed there with only three cameras but at night-time the visuals were not adequate due to low performance of the surveillance cameras. One camera had to be mobile with controlling stations to be duplicated at two separate locations. ISS took the challenge and offered the ADEMCOVIDEO equipment, one of the largest USA suppliers of CCTV knowing that the best fit application would be only met by the USA-based company. Although other vendors provided German-based vendor solutions, ISS was awarded the job with the USA-based system.

Systems Summary:

Camera Stations: ISS introduced the **Infra Red** night vision illuminators along with the state-of-the-art SONY DCS590 day/night mechanical switchover color/monochrome cameras. Each camera had a 5-meters post, twin Infra Red illuminators, a dedicated 5-50 zoom lens, an environmental housing and a twilight switch to operate the IR lamps only when needed to preserve the lifetime of the lamps.

Image Control Station: A multiplexed image was provided for the cameras displayed over 19" **Very High Resolution** monitors and the SONY cameras provided the night vision features with very high sensitivity changeover to black and white in darker moments of the day providing a black and white image at night.

Motor Control Station: Two Stations were provided for the main guards and the secondary-nighttime guard. Control are only enabled for the nighttime guards when the day time guards leave the premises.

Project Numbers:

For Non-Disclosure agreements, the amount cannot be mentioned.



4. Grand Sharm Casino Project:

Requirements:

It was required to provide a sophisticated CCTV system for the biggest Casino yet to open in Egypt – Grand Sharm Casino in Sharm El Sheikh. The French owner had a predetermined list and quantity of equipment and had bidders provide their best designs for the job. ISS provided the most advanced yet simple design and was accepted from five other competitors despite being number five financially.

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Multiplexing System: 10 real time color quads with 10 monitors were dedicated to monitor the games.

Recording: Keeping in mind the nature of the business, ISS provided real-time 24 recording system utilizing over 40 VCR's as a daily proof system. Recording included audio recording with the source being highly sensitive discreet microphones.

Project Numbers:

The project total was for approximately 650,000 Egyptian pounds.



5. Noor Group Project:

Requirements:

The client requested a sophisticated a highly secure Access Control System utilizing biometric identification combined with a PC-based proximity card system. ISS was the only vendor to provide the solution for a man-trap technique with a “triple-and” verification system (biometric, card and pin) for the server area.

Systems Summary:

Server Room: 1- external ruggedized hand-reader, 1- internal hand reader, 4 in/out proximity readers with pin code, mantrap for two doors providing one close-other-to-open philosophy.

Main PC Station: A Windows based station integrated with a high resolution multiplexed camera system providing manual PC-release for investors without cards, database keeping for 20,000 users, personnel presence reports and log reports with Graphical Mimic site representation of alarms.

Project Numbers:

For Non-Disclosure agreements, the amount cannot be mentioned.

Other Links:

Web: http://www.cemsys.com/English/News/Press/2000/PR_Noor_Content.htm



6. American University in Cairo Project:

Requirements:

Provide Video/Alarm Verification over existing LAN/WAN. The system to provide visual verification of temperature rise, intrusion detection and fire detection to existing server rooms in the university. Via existing LAN/WAN five users can log on to the video servers and view the status of the air conditioners and server racks or be automatically notified by signaling the video stream through the LAN/WAN to the five users. One user to have the capability to view four sites simultaneously via either LAN or WAN.

Systems Summary:

CCTV LAN/WAN Transmitters: Windows NT based video servers have been provided to provide video packets to be transmitted over TCP/IP communications. Each server to have eight cameras and integrate alarm inputs form temperature and motion sensors to provide automatic notification of users of alarm. At the same time, each server provides automatic recording of events with a logical relationship to notify users.

Single Site Receiver Stations: Each user has a single site receiver station software installed over their authorized laptops to provide them with video monitoring of the server rooms at any time the want, download recorded events from the video server and be notified via the transmitter of alarm incident whether due to temperature rise or intrusion detection.

Four Site Receiver Station: A four-site receiver station was supplied to simultaneously view all server rooms ate the same time providing 24 hour surveillance of the server rooms.

Project Numbers:

The project total was for approximately 100,000 Egyptian pounds.

Other Links:

Web: <http://www.aslrwp.com>



7. Linkdotnet Project:

Requirements:

The client requested a sophisticated a highly secure Access Control System with a PC-based proximity card system. ISS was the only vendor to provide the solution for the Vending Machine to provide free vending for enrolled users and accounting for each user's consumption.

Systems Summary:

Readers: 16 Info Prox Readers, the world's smallest reader with built in LCD display and keypad introduced for the first time in the country of Egypt.

Main PC Station: A Windows based station integrated with a high resolution multiplexed camera system providing manual PC-release for investors without cards, database keeping for 20,000 users, personnel presence reports and log reports with Graphical Mimic site representation of alarms.

Project Numbers:

The project total was for approximately 150,000 Egyptian pounds.

SHORT LIST PROFILES – OUR FOAM AGENT USERS



- 1. EGYPTIAN CIVIL AVIATION HOLDING COMPANY,**
- 2. CAIRO OIL REFINING COMPANY,**
- 3. BECHTEL OVERSEAS,**
- 4. CHEVRON TEXACO OVERSEAS,**
- 5. HALLIBURTON OVERSEAS COMPANY,**

& G R O W I N G