



SOLAS MARINE SERVICES GROUP

SYSTEM INTEGRATOR

www.solasmarine.com



SOLAS Marine Services Group is a diversified business house that commenced its operations in the year 1988. It was first established in Sharjah, United Arab Emirates to meet the growing demands of professional services in the field of Life Saving Appliances (LSA) and Fire Fighting Appliances (FFA) along with Safety Equipment in Marine Industry.

ISO 9001
ISO 14001
OHSAS 18001
BUREAU VERITAS
Certification



Over the years, Solas Marine Services has evolved as a major service provider in the region not only for LSA and FFA but also diversified into new areas like System Integration, Fire Safety & Life Support Systems, Telecommunication, Helicopter Deck Packages for Industrial, Marine and Oil & Gas Industry.

Solas Marine Group represents many reputed international principals who are known for their quality and reliability. When safety is the concern, we do not accept any compromise. This is reflected in our choice of the agency representation and post sales services. The supply of equipment and services are in compliance with international regulatory standards.

SYSTEM SUITABLE FOR OFFSHORE



SYSTEM SUITABLE FOR MARINE



SYSTEM SUITABLE FOR HELIDECK



SYSTEM SUITABLE FOR LAND RIGS



SYSTEM SUITABLE FOR OIL & GAS



ENVIRONMENT, FIRE SAFETY & LIFE SUPPORT

High Pressure CO2 System, Clean Agent System, Inert Gas System	4
Wet Chemical System, Dry Chemical System, Enclosure Integrity test	5
Foam Monitor System (FMS), DIFFS, Mud Process Area Foam System	6
Water Sprinkler System, Deluge System, Water Mist System	7
External Fire Fighting System, Fire Pump Skid, Fire Main System	8
Premix Foam System	9
Breathing Air Cascade	10
H2S Capsule / Safety Shelters	11

HELICOPTER DECK PACKAGE

Aluminium Helideck, Perimeter Safety Net, Landing Net	12
Helideck Lighting System	13
Helicopter Refueling System, Complimentary Media, Helicopter Crash & Rescue Equipment	14
Helideck Monitoring System (HMS), Air Band Radio, Non Directional Beacon	15

SAFETY & INTEGRATION

Fire Detection System	16
Gas Detection System	17
Integrated Fire & Gas Detection System	18
Emergency Shutdown System, SIMOPS	19
Wireless Gas Detection System	20

TELECOMMUNICATION

PAGA System	21
GSM Phone System, VOIP PABX System, LAN-WAN System	22
CCTV System	23
Entertainment System, Intrusion Alarm	24

INTEGRATED RIG MONITORING SYSTEM

Bulk Tank Monitoring System, Tank Monitoring System, Valve Control System	25
Water Tight Door Monitoring System, Leg Length Measurement System, Weather Monitoring System	26
Total Drilling Information System, Mud Related Information System, Choke Control Monitoring System	27

NAVIGATION

Foghorn, Navigation Lighting System, Fog Detector	28
BNWAS, ECDIS, Solar Powered Obstruction Light	29
Project Management, Training & Service	30
Our Partners, Our Clients	31

HIGH PRESSURE CO2 SYSTEM



Traditionally CO2 gas is used to extinguish fire. CO2 system has proved to be an economical replacement for old Halon installations. This gas mainly reduce the Oxygen concentration to extinguish the fire. Gas is stored in high pressure steel cylinders and used to extinguish the fire majorly in machinery and paint storage areas, Galley Ducts etc.

CLEAN AGENT SYSTEM

Chemical based FM-200TM, NOVEC-1230TM are low pressure systems, environmental friendly with lowest global warming potential. NOVEC-1230TM manufactured by 3MTM confirms suitability of this agent for the next 20 years without any environmental bans. It is also used for protection against electrical and electronic risks.



INERT GAS SYSTEM



Inert gases such as Nitrogen, Argonite and Inergen are effective gases used for fire extinguishing; the system is developed considering environmental protection which is a serious issue for human beings to survive. The system has been provided with a high level of safety to human beings, with no adverse influence to valuable equipment and property. The capability of pressure control on the discharge side allows the system to use as existing Halon replacement in many applications without replacing the existing piping.

WET CHEMICAL SYSTEM



Wet Chemical is used as a fire suppression agent in deep fat fryers, ducts, hoods and cooking surfaces. It is designed for quicker flame knockdown and faster suppression. The system is activated manually or automatically using fire detectors which provides signal to the control system causing the cylinder valve to open. Pressure that is stored in the cylinder propels the wet chemical agent through the system piping and nozzles. The system automatically shuts down the power source to appliances.

DRY CHEMICAL SYSTEM

Ships carrying liquefied gas and certain chemicals/agents in bulk shall be equipped with a fixed dry powder system ready for operation. The chemical used in the system is Sodium or Potassium Bicarbonate (BC). IGC/IBC requires dry powder systems to protect the entire deck area, cargo manifold, and connection areas from fixed monitors. In addition, the system should be capable of supplying dry powder to any part of the cargo deck from at least two sources i.e., hand hose or hand hose line/monitor.



ENCLOSURE INTEGRITY TEST

Enclosure Integrity tests are normally conducted to check possibility of gas leakage during system activation. Scalable equipment is available for testing small, medium and large areas. The equipment meets the NFPA-2001-ANNEX C, ISO 14520-ANNEX E, EN15004. Reports are provided on completion of the tests. The tests are charged based on the volume/area of the room.



FOAM MONITOR SYSTEM (FMS)

Foam / Water Monitors are used to discharge the foam calculated as per discharge capacity required to cover the protected area. The monitors are available with many options depending on the customer requirements like remote operated, self-oscillated, self-inducting or normal type.



DIFFS

Deck Integrated Fire Fighting System (DIFFS) consists of deck integrated nozzles, foam skid and release panels. The nozzles are installed flush with the deck top surface. When the system is released the nozzles will make an effective spray distribution of water / foam mixture to the entire protected area. The system can be with automatic activation mode when connected with the Fire detection system. Premix skids can be connected to the nozzles when installed on unmanned offshore platforms with automatic or remote operation.



MUD PROCESS AREA FOAM SYSTEM

Foam system is designed as per the Class rules and requirement to protect the Mud Pits and Mud Process Areas/Shale Shaker area of the Drilling Rig. The system consists of fixed nozzle, foam mixing equipment and foam tanks. Tanks can be of atmospheric or Bladder type based on customer requirement.



OCEAN VALOR

WATER SPRINKLER SYSTEM



Water based conventional sprinkler systems are employed in fire extinguishing for many years. Sprinkler systems mainly consists of pressurized fresh water tank, water pump unit, sprinkler nozzles, control valves and control panel. The system operates automatically when the temperature of protected area increases which results in bursting of sprinkler bulb to allow the water spray to protect the coverage area. Systems are designed based on Class requirement and also in accordance with NFPA Standards.

DELUGE SYSTEM

Deluge System consists of Deluge valve and discharge nozzles. The deluge system is installed for high flow of water or foam to protected space. The Deluge valves are activated by electrical, pneumatic and manual modes. Various configurations are available. Valves are also available in a variety of material construction. Skids are supplied for projects which are pre-piped, internally wired to reduce site installation time and provide protection for the valve and control assembly.



WATER MIST SYSTEM



Latest system hardware converts water in the form of fine mist and fog that requires less water with sufficient extinguishing power. Mist/Fog systems can also be used for electrical fires. Water Mist systems are available in Low, Medium and high pressure configuration. Local protection systems are suitable for small areas to be protected.

EXTERNAL FIRE FIGHTING SYSTEM

External firefighting system is fully integrated with the vessel's main engine. Dedicated diesel engine, electrical or hydraulic driver also may be used to avoid the impact from ship's operation to the FiFi system. The power is transferred to the pumps via remote operated clutch and necessary transmission. The water jet is created in the monitor outlet by pressing water at optimum speed through specially designed monitor nozzle. The system may also include self-protection deluge (Water Spray) with water taken from the FiFi pumps and / or various types of foam systems.



FIRE PUMP SKID

Fire Pump is custom built, available in various flow and pressure combinations. Common Skid consisting of high volume fresh water tank, foam concentrate tank, diesel driven fire pump, fuel tank, foam mixing equipment, controls and hose reels for land rigs operation which is easy for mobilization and deployment. Engine and pump makes are selected based on customer requirement and technical performance specification. Units are available with marine certification where applicable. Special units with NFPA Compliance and UL/FM Certification are provided for oil & gas application.



FIRE MAIN SYSTEM

Fire water main system consists of pump skids connected to piping network with hose reel stations and also foam monitors. Hose reel stations are mounted on metal stand for easy installation and hook-up for rigs. Various types of hoses, cabinets and nozzles are available and supplied as per customer specification.



PREMIX FOAM SYSTEM



Pre-Mix foam systems are normally used for unmanned locations and where there is no facility to provide continuous water from fire pump. The skid consists of Tank for water and foam solution, foam mixing equipment, main and reserve Nitrogen cylinders for actuation of the system. The system can be connected to self-oscillating foam monitors or DIFF systems. The system will be operated remotely or automatically from Fire & Gas Control Panel. Dedicated fire panels also can be provided based on customer requirement. Complete system available in safe area and Hazardous area equipment.



BALLAST WATER TREATMENT SYSTEM (BWTS)

Ballast water treatment system is a new IMO requirement to prevent introduction of invasive marine species into new environments by the ship's ballast water. The system is developed with versatile types for effective, reliable and economic solutions to meet IMO guidance and legislative Requirements. The system is available in three types, i.e. Ozone Disinfection Systems, Electrolysis with filter and Ultra Violet with filter. System is Modular and suitable for all types of configurations. Example in case of the pump room, where the requirement is for a hazardous area equipment, the system can be installed in Engine room with only ozone pipe penetrated into pump room.



BREATHING AIR CASCADE

Breathing Air Cascade packages are designed based on specific requirements such as QP, ARAMCO, ONGC, ADMA etc. High pressure breathing air cylinders are connected in series using SS-316 tubing. Manifolds are supplied with various types of quick couplers matching with self-contained breathing apparatus or escape devices for extended breathing time. The system is available with two options, decentralized or centralized types. Electrical and diesel engine driven compressors are supplied with above system.



H2S CAPSULE / SAFETY SHELTERS



H2S Capsule also known as Safety Shelter or Safety Refuge unit is a self-contained Containerized system designed for total number of occupant during H2S Release for Normally Unmanned Installation. The Capsule consists of main and emergency Breathing Air Supply system, Solar Panel for Power, Battery Bank and Radio Telemetry for Emergency Messaging. The Capsule has Air Lock for entry during High H2S Release and also has critical equipment, First Aid etc. stored inside the capsule.



HELICOPTER DECK PACKAGE

ALUMINIUM HELIDECK



Aluminium Helicopter decks are available for new building and retrofit projects where weight of the deck is a concern. Aluminium has advantages over steel with regards to weight, maintenance and corrosion resistance. Deck profiles are fire tested for steel to aluminium strength equivalency as per DNV requirement. Profiles made of aluminium plank sections which are joined to each other by tongue and groove without welding. The surface of the deck plank extrusions has ribs that are partly milled off in the transverse direction. Complete deck is supplied as knockdown kit which can be easily assembled at site and does not require any welding.

PERIMETER SAFETY NET

Safety net frames are generally made of aluminium and the net is galvanized steel with PVC coating or SS-316 wire. Retractable type or fixed type frames are supplied as per customer requirement. These nets are supplied with hinges and can be directly welded to the helideck side structure. Ready to install type safety net panels are supplied as per the existing net frames. These panels are constructed with 316 Stainless Steel wire and tube frames, which are extremely resistant to corrosion even in the harshest offshore conditions. Net Frame Panels are light-weight, pre-fabricated in any shape or size.



LANDING NET



Landing net prevent helicopters from sliding on offshore structures and seagoing vessels. The balanced strength of the net is a result of innovative knotless straight-line design and weaving method that prevents distortion. Landing net provide higher friction than traditional rope nettings, and will not deform or distort regardless of the weather. The Landing net meets the new 2.5 cm height restriction presented in the latest edition of CAA regulations CAP 437.

HELICOPTER DECK PACKAGE

HELIDECK LIGHTING SYSTEM



Helideck Lighting system consists of Perimeter Marking Lights, Flood Lights, Wind cone with illumination, Touchdown and positioning system (Lighted H and Circle marking System) is designed to fully comply with UK CAA CAP 437 standards for offshore helicopter landing areas. This system is installed to ensure visibility of the TD/PM circle and "H" during night and reduced visibility. This is also in line with the ICAO standard and recommended practices relating to offshore Helidecks.

STATUS LIGHT

Helideck Status Light System is used on offshore structures and seagoing vessels where it is necessary to inform the pilot if it is safe to land on the helideck or not. In case of dangerous situations like presence of any hazardous gas, the Helideck Status Light System will give a visual signal to the pilot not to land the craft. The system consists of one main and two repeater lights and a control panel. The system meets CAA regulations CAP 437.



FLOOD LIGHT

Floodlights are designed to provide adequate illumination of the whole area without glare to pilots or helicopter personnel in the area. The luminaries are designed for use in rough environments to meet the toughest conditions in the helicopter landing areas. The Lights are available for Safe area and Hazardous area applications.



PERIMETER LIGHT

Perimeter Lights are designed for use in rough environments to meet the toughest conditions in the helicopter landing areas. It consists of high-intensity light emitting diodes (LEDs). The result is a highly reliable perimeter light with correct light distribution and color temperature complying with ICAO and CAA regulations CAP 437. These are available for Safe area and Hazardous area applications.



WIND SOCK

Windsocks are rugged and solid construction, designed for use in rough environments to meet the toughest conditions in the helicopter landing areas. Luminaries are mounted in SS316L reflector with junction box.



HELICOPTER DECK PACKAGE

HELICOPTER REFUELING SYSTEM



Helicopter refueling systems are supplied according to customer requirements, conforming to international standards. The system can be composed with minimum of two transportation tanks, which are also used for storage. The tanks are manufactured according to ASME VIII and approved by DNV or ABS. The fuel tanks are made from stainless steel to eliminate maintenance and increase the lifetime of the tanks. Aviation fuel dispensing unit skid and related accessories are supplied as complete package.



COMPLIMENTARY MEDIA



Fire Extinguishers containing Dry Chemical Powder (minimum 45Kg capacity) and High Pressure CO2 Fire Extinguisher (minimum 18Kg capacity) are supplied. Portable fire extinguishers are also supplied as per customer requirements. In addition, optional Self-contained Twin Agent Skids are provided.

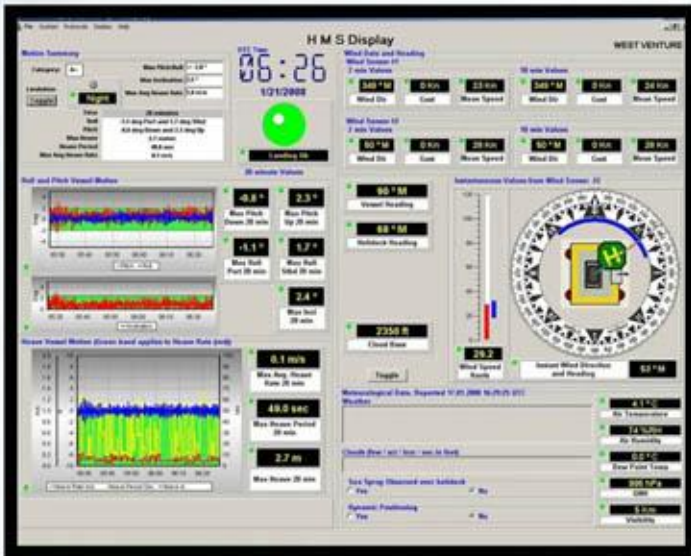
HELICOPTER CRASH & RESCUE EQUIPMENT

Standard Helicopter Crash rescue equipment are supplied in a storage cabinet and normally stored near helicopter deck entrance. Hand operated pneumatic metal cutting tool is supplied to larger helidecks. Complete equipment type and quantity meets the CAA regulations CAP 437.



HELICOPTER DECK PACKAGE

HELIDECK MONITORING SYSTEM (HMS)



Motion monitoring system is used to produce trend analysis that can be used to warn the pilot about abnormal motions. This PC based system gives the opportunity to graphically present all occurring vessel motions measured by the motion sensor. Meteorological instruments are commonly integrated to the software together with the motion sensor. The software displays the integrated instruments in real-time and also logs the data for future analysis. System can be tailor made to customer specifications.

AIR BAND RADIO

Air Band Radios Fixed and Hand Held types are used to communicate from offshore structures and seagoing vessels to helicopters. The advanced radios cover 118.000 - 136.975 MHz continuously in 25 kHz tuning steps. Hand held radios are intrinsically safe for use in hazardous area application.



NON DIRECTIONAL BEACON

NDB is an aviation or marine navigation aid with a radio transmitter. As the name implies, the signal transmitted does not include inherent directional information, in contrast to other navigational aids such as Low Frequency Radio Range and VHF Omni-directional range (VOR). The modular construction provides for ease of maintenance, troubleshooting and set-up. A variety of models are available from 25 to 1000 watts to meet virtually any operational requirement.



FIRE DETECTION SYSTEM



Fire detection and alarm system can be of conventional or analogue addressable type, depending on the customer requirements and governing authority rules and regulations. Various detectors are available like optical smoke, fixed temperature, rate of rise heat detectors, UV-IR Flame, IIR-Flame and CO detectors. Manual operated call points are available to initiate fire alarm manually. Field devices are available as weather-proof and explosion-proof types. Repeater panels are supplied for larger installation.

GAS DETECTION SYSTEM

Gas detection system depends on the customer specification, classification rules and regulations, and specific requirements such as QP, ARAMCO, ONGC, etc. The system is conventional type and can detect various hazardous and flammable gases. Most commonly used gases are H₂S and HC. Visual and audible devices are provided with optional public address and general alarm interface.



Repeater panels are available to view the detection and to check gas concentration at each sensor during any alarm state. The sensors control and repeater panels are available for hazardous area application and also with wireless integration option.

OCEAN VALOR

INTEGRATED FIRE & GAS DETECTION SYSTEM

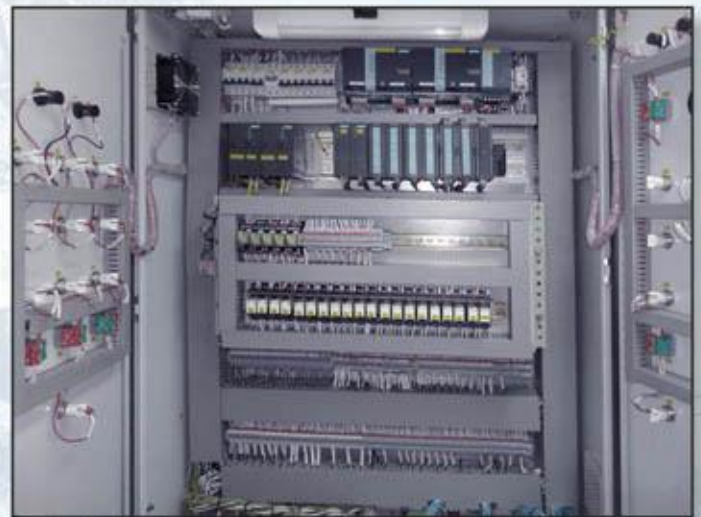


Drillsafe IFGS is an Integrated Fire and Gas Detection Interface Controller used for detection of Flammable and Toxic gases for marine and offshore application. The controller comes as standard with 4 Loop Addressable and 32 Channel Gas controllers with common display unit. The control panel is expandable based on individual application needs using I/O modules. Gas Controller range is from 8 to 152 sensor inputs and Fire Detection is 4 to 8 Loops. Panel has standard 8 and 16 relay outputs. Panel has networking option to add more racks in a common network.



EMERGENCY SHUTDOWN SYSTEM

Emergency Shutdown System also called as ESD System is installed for simultaneous shutdown of critical components during emergency. The ESD system comes with Basic Relay Model, PLC Model and SIL-2 Specification based on customer requirement. Complete Cause & Effect is prepared and system is designed/programmed accordingly.



SIMOPS

Simultaneous Operation System which is known as SIMOPS which is a combination and integration of Fire & Gas Detection, PAGA System, Wellhead Operation and Deluge systems. The system will consists of hardware designed to meet the Hazardous area requirement and will be tied in to the existing system or as standalone. Separate Pneumatic lines with regulator, control valves, Gas Sensors are provided to shut down the wellhead operation and activate the Deluge system in case of emergency.



WIRELESS GAS DETECTION SYSTEM

Wireless Gas detection system is basically standalone type system where a tri-pod is fitted with controller unit, Solar Panel, Audio-Visual alarm station and battery box. Each tri-pod transmits the signal to the main control panel located at Rig site or Camp office. In case of detection of gas in any one or more tri-pods the local alarm will start with concentration of gas displayed in the local controller and in the main control panel. The unit is expandable and works on 2.4 GHz frequency.



PAGA SYSTEM

The equipment is designed to meet the offshore standards and suitable for use in hazardous area, where applicable. The system is supplied with amplifiers fitted on single or double racks depending on the capacity and provided with PABX. It can also be used as intercom system, telephone system. Range of speakers, beacons are available with various configuration.



OCEAN VALOR

GSM PHONES



This is the latest communication technology for Marine and offshore industry. The handsets are Hazardous area certified by ATEX. We will create a full GSM network on board a ship or rig. In each deck a local cell will be positioned at several locations to ensure full coverage. Each local cell will be connected to the main server / control center via cable. In every room, office, work place, etc. we can mount a beacon. This beacon is in direct contact with the box via GSM and the position of each beacon is known by the control center. The phone is also used for Emergency Response.

VOIP PABX

Using latest communication technology we provide VOIP PABX Solution for Marine and Offshore industries with harsh environment equipment. System is capable of connecting multiple manufacturer handsets to work as one common system such as Cisco, Avaya, and Eaton etc. Weather proof and Hazardous area telephone systems are available based on area of installation.



LAN/WAN SYSTEM



LAN/WAN System has become essential part of marine and offshore industry. We provide complete cost effective networked solution including fire/flame resistant cabling where required. World's renowned manufacturer's servers are supplied based on customer requirement.

CCTV SYSTEM

Close circuit television system consists of display units, cameras, control and record system. PTZ and fixed cameras with wash and wipe facility are available for safe and hazardous areas. Control system consists of rack mounted system matrix, keyboards with joystick and recorder. IP and Analogue cameras are available.



OCEAN VALOR



ENTERTAINMENT SYSTEM



Marine entertainment system for living quarters consists of fixed or auto tracking satellite dish antenna, main distribution system including amplifiers, receivers and DVD players. It can be connected to public address system where auto muting is required.

Latest technology infotainment system with centralized control is connected to the satellite antenna. A single CAT-6 cable is used throughout the living quarters to perform multiple functions. The complete system is in HD format, uses reduced cabling and provides access to TV and radio channels, Video on Demand, Music on Demand, games, safety videos, e-mail and personal laptop connectivity. Its single monitor serves dual purpose – to watch movies and work as personal computer.



INTRUSION ALARM

Microwave Intrusion Link offers reliable, explosion proof-rated intrusion detection in the presence of flammable, combustible or ignitable materials. With a detection range of 328 feet (100 meters), the sensor is designed to operate at oil refineries, chemical and petrochemical plants, storage facilities and other sites where hazardous materials are handled, processed or stored.



BULK TANK MONITORING SYSTEM



Bulk tanks such as Bentonite, Cement are provided with Load cells and also with Radar Sensors for measuring the content mass. In case of load cells local hydraulic display can be provided based on customer requirement. All tanks can be monitored using the operated interface page in HMI. Valves can be operated using HMI.

TANK MONITORING SYSTEM

All tanks are provided with sensors which can be Ultrasonic, Radar, Pressure Type or Bubble type. The sensors are connected to the control panel and a HMI graphic show continues status of the tank. The user page has multiple units for the operator to understand the quantity and use for the calculation purpose. The system also connected to the valve control to open or close any valve at any time by authorized operator.



VALVE CONTROL SYSTEM

Ballast and Fuel tank valves are operated using the valve control panel. Solenoid valve panels are provided for the pneumatic operated valves and contacts provided for the electrical operated valves. The valve control system is part of IMMS and can monitor and operate individual valve or as common dump using the dump switch during emergency condition.



WATER TIGHT DOOR MONITORING SYSTEM



All water tight doors and hatches are provided with proximity or limit switches which can be weather proof or ex-proof equipment based on site condition. Status beacons are provided either side of the door for continues local indication of the door status. The system HMI page shows the status of any opening of doors and hatches which then can be closed when required.

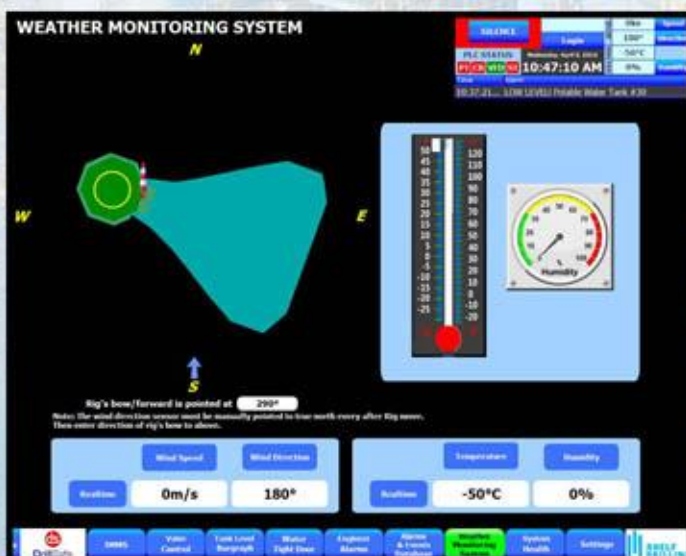
LEG LENGTH MEASUREMENT SYSTEM

For the old rigs which does not has the leg length measurement system Solas offers in house developed measuring device which is connected to the system and shows the depth and rigs leg length.



WEATHER MONITORING SYSTEM

Weather Monitoring is also linked to the IMMS and can be individual. The system monitors wind speed, direction, humidity, barometric pressure.



TOTAL DRILLING INFORMATION SYSTEM



This system provides accurate, up-to-the-second information on critical drilling parameters during drilling, tripping and other mud-sensitive rig activities. TDIS supplies rig personnel with important drilling data and relative alarm point settings in compact 19" Drillers TFT monitor unit designed for use on the rig floor. The system's configurable screens allow easy viewing of information in all conditions. Using the industrial mouse, alarm points, alarm acknowledgement and display operation parameters, such as active pits and pumps, can easily be set or modified when drilling conditions or rig operations change.

MUD RELATED INFORMATION SYSTEM

The MUD-PRO rig floor instrumentation system is a tried and proven data acquisition and management system. In use on all rig types, from the high spec drillship pictured above to truck mounted land rigs the system is rugged and simple to operate, yet has the power and flexibility to be extended to handle all situations.

Driller's Display in combination with LCD-readouts, tank-selector switches and alarm buttons, gives the the drillers a reliable and robust Mudvolume, Triptank, flowout system: An 19" Exi Drillers-monitor, controlled by a stainless steel industrial quality trackball gives a clear, crisp display even in bright sunlight. The unit is Atex certified for use in a hazardous area.



CHOKE CONTROL MONITORING SYSTEM

CCMS-PRO has Choke, Kill and Standpipe pressure data combined with an integrated Liquid Seal Monitor and SPM and stroke counter system. This in combination with very accurate and automatically scalable gauges with the trend and alarming module, all small changes can be notified in a split second.

A 19" Exi drillers-monitor installed at the Choke Control Unit, controlled by a stainless steel industrial quality trackball gives a clear, crisp display even in bright sunlight. The unit is Atex certified for use in a hazardous area.

A rack mounted PLC and server is mounted in a safe area, such as the SCR or MCC room. The unit includes a 19" display and enables all parameters to be monitored and troubleshooting to be effected.



FOGHORN

Fog Horn are durable, low maintenance and is suitable for installation in a Zone 1 hazardous Area. An efficient design using special amplifiers only require 3 stacked emitter to achieve the range of 2 NM. A 4th emitter and amplifier set provide the required secondary 0.5 nautical miles fog signal. This horn is completely independently operated and controlled, but integrated into one design. At the base of the horn the oscillator and termination panel is positioned, to provide an optimal sonorous output.



NAVIGATION LIGHTING SYSTEM

We provide complete Navigation Lighting system design including control panel, battery bank, power supply units including range of navigation lights as per rules and governing standards. Safe area and hazardous area lights are available for marine and offshore application.

FOG DETECTOR

Measures atmospheric visibility (meteorological optical range) by determining the amount of light scattered by particles (smoke, dust, haze, fog, rain, & snow) in the air that passes through the sample volume. A 42° forward scatter angle is used to ensure performance over a wide range of particle sizes. MOR is calculated by the user by converting the received signal strength (extinction coefficient, σ) using Koschmeider's formula, $MOR (Km) = 3/\sigma$.

Performance in all weather conditions was a design prerequisite for this Fog Detector. The sensor uses ATEX rated EEx housings and offshore marine grade sheathed cables to ensure all weather, Zone 1, IP66 certified performance. A sturdy aluminum frame painted with durable powder-coat paint is used to mount the housings and provide mounting to a customer supplied mounting pipe. Power and signal lines are protected with surge and EMI filtering to help guarantee uninterrupted service for the life of the sensor.



BNWAS



Bridge Navigational Watch Alarm System specifically designed to comply with SOLAS Regulation V/19 as amended by MSC.282 (86) requiring a BNWAS to be installed on all new and existing ships. The System comprises of either a bulkhead mounted or console mounted control panel with an on board PIR (Passive Infra-Red) movement detector.

ECDIS

Electronic Chart Display and Information System is MED approved by Det Norske Veritas providing "Intelligent iChart Innovation". System hardware, software, charts, training, updates to guarantee compliance with IMO SOLAS regulation. The iECDIS is pre-loaded with Jeppeson charts for global ENC coverage with multiple licensing options to suit your budget and operational requirements so you can start navigating immediately.



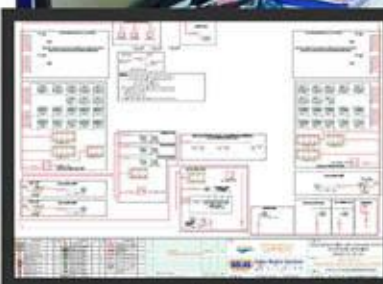
SOLAR POWERED OBSTRUCTION LIGHT



Solar Powered Obstruction Light, Aviation Marking lights are supplied with complete unit ready to install. These self-contained units normally are easy to install and operates without any charging power cables, controller etc. the units are suitable for hazardous area application and meet the required standards for intended use.

PROJECT MANAGEMENT

Solas Marine Project Management team provides complete package including system design, equipment support, installation of system equipment, testing and commissioning. Complete project is planned and scheduled in Primavera. Project installation complies with HSE and Quality procedures defined as per ISO standards. System related piping is provided with required flow calculation using various standards and software. Cables are installed as per cable schedule, power calculation and related standards. Where applicable complete design document is provided with required Classification Society approvals.



TRAINING

Solas Marine, one of the leading offshore safety equipment supplier and service providers, now extend the service by introducing Solas Academy for those who are interested to learn about project management, fire and safety systems etc. Solas Academy offers approved training accredited by internationally recognized body such as OPITO. We provide delegates with a professional training experience in a safe and controlled environment. Currently, we offer Basic H2S safety course approved by OPITO.



SERVICE

Solas Service Division provides after sales support for all the systems supplied which include annual maintenance, repair service and recertification. Our service stations are approved by all major classification society. Please visit our website for more information.



OUR SERVICE NETWORK

UAE | INDIA | OMAN | SAUDI ARABIA | QATAR | SINGAPORE | KUWAIT | BAHRAIN



OUR PARTNERS



OUR CLIENTS



projects@solasmarine.com
projects@solasmarine.co.in

