



Applus⁺ K2

FIRE & GAS

Applus+K2 provides a comprehensive range of Fire & Gas and Control & Instrumentation services to the worldwide owners/operators of offshore drilling, FPSO and fixed production platforms, shore based drilling rigs, refineries, chemical, pharmaceutical and similar manufacturing plants. Our services extend to a full solution for the lifecycle of the system including installation, commissioning, fault finding and testing, inspections, servicing and maintenance on firefighting equipment in accordance with all class requirements.



FIRE & GAS CAPABILITIES

- Fire and Gas Input/output Device Installation, Commissioning, Function Testing, Fault Finding, Maintenance.
- Fire Suppression System Service, Function Testing, Inspection and Maintenance: - Co₂, Hi-Fog, Deluge, FM200, Wet Chemical Systems etc.
- Portable Fire Fighting Equipment Inspection, Service and Maintenance :- Extinguishers, Lifeboats, BA Equipment.
- Control and Instrumentation Input/output Device Installation, Commissioning, Fault Finding, Calibration and Loop Check.

Fire & Gas Testing

Multi-disciplined IRATA rope access and CompEx field technicians are able to cover a wide range of tasks such as:

- Commissioning, loop checks and fault finding of all Fire & Gas equipment.
- Installation/replacement of new or defective Fire & Gas equipment and devices.
- Periodic inspection of equipment and testing as per client planned maintenance routines.
- Function testing of Fire & Gas user control panels (UCP) and fault finding.
- Ex inspection and fault reporting at the appropriate level required.

With many years of experience, K2 is able to ensure that all work is structured so that there is minimal risk to plant integrity and the possibility of any outage or downtime is vastly reduced.

Applus+K2 can perform testing of Fire & Gas input devices such as:

- Autronica addressable loop Fire & Gas systems and all associated loop equipment.
- VESDA high sensitivity smoke detection systems.
- Open path "Line of Sight" gas detection with manufacturers sure as MSA SafeEye, Honeywell and Draeger.
- Flammable single point gas detection supplied by Draeger, Simrad and Crowcon.
- Pellister toxic gas detection.
- UV/IR Flame detection along with CCTV capabilities Dettronic, Spectrex, Emerson and Micropack.



Fixed/Portable Firefighting systems

Function testing, maintenance, inspection and servicing of:

- Firehoses, hydrants and nozzles.
- Portable and trolley fire extinguishers.
- SCBA sets and cylinders.
- EEBD sets and cylinders.
- Medical oxygen equipment.
- Helideck inspections and foam systems.
- BA compressor and systems.
- Lifeboat air systems and cylinders.

Capabilities include:

- Hydrotesting and refill of cylinders in line with class and vessel flag requirements.
- Reporting and recommendations in line with IMO standards.
- Supply of replacement equipment.



Fixed Fire & Gas Suppression System

Testing, service, maintenance on Fire & Gas suppression systems in accordance with relevant class requirements.

- Watermist
- Wet chemical
- CO2
- FM200
- Deluge skids and all ancillary components

Working on manufacturer equipment such as:

Ansul, Chemetron, Danfoss, Fain, Fogtec, Heiser, Hi-Fog, Kawasaki, Kidde, Kidde-Ginger, Minimax, Nohmibossi, NK, Ranger, Semco, Semco-Danfoss, Sem-Safe, Seaplus, Unitor, Yamato.

Control and Instrumentation

Function checks calibration, maintenance and fault finding of instrumentation input and output devices to DCS/PLC.

- Level, pressure, flow, temperature transmitters and associated devices.
- Control valves, ESD valves and associated controllers/ logic.
- Vendor and package specific instrumentation.



Applus+K2 provide the following:

- Instrument test records for all equipment with full visibility and traceability of test equipment.
- Provision of services for full turnkey of new or retrofit systems.
- RFID tagging of equipment providing digital registration and audibility of testing.
- Full support for procurement of equipment.
- Compilation of hazardous area Ex registers and inspection records along with recommendations and actions required.

Benefits and Experience

1. Applus+K2 provides experienced field engineers to ensure that field equipment and all associated annunciation and protection/shutdown system operates as intended offering:

- Peace of mind for continued asset operation.
- Full engineering service and reporting as to plant protection status and defects.
- Recommendations for improvement and upgrade to maintain integrity and operability.

2. With our ongoing relationships with market leaders of Fire & Gas manufacturers and distributors, we are able to offer a full supply and delivery service of equipment along with turnkey installation.

3. Due to the high importance of Fire & Gas safety systems, Applus+K2 has developed testing and operations procedures to ensure that all equipment is operated and tested within the manufacturer's standards.

By using these procedures we can ensure:

- Safe operation and testing of Fire & gas systems ensuring adherence to correct safe systems of work.
- Repeatability and consistency for inspection and testing across all work locations.
- Demonstrate compliance along with having an auditable trail for testing methods used along with results.

4. Dual certification of technicians and engineers provides:

- Reduction in time and labour costs required to erect scaffolding for access
- Reduction in overall manpower required and trades, POB and mobilisation costs
- Ability to carry out any remedial repairs immediately and reducing any potential for non-compliance with asset Fire & Gas coverage.



Profile

Applus+K2, part of Applus+ Group's Energy & Industry Division, provides a comprehensive range of services that span the entire lifecycle of the global rig, FPSO and energy industry.

Applus+K2 has operating offices in Singapore, Korea, Brazil, Abu Dhabi and Houston along with representative and logistical support from our parent company who have over 350 offices in more than 70 countries globally. This allows us to source and develop local resources with local content benefits and mobilisation savings passed onto our clients.

Our Inspectors are trained and assessed according to company's Competency Management System, which incorporates internationally recognized schemes such as PCN, ASNT, CompEx, CSWIP, LEEA & IRATA by utilizing our proprietary management planning software and mobile project report tools (APPS) to deliver consistency and quality to customers.

Our Services

Inspection and Survey

- Advanced NDT Services
- Conventional NDT Services
- Critical Load path
- Derrick Inspections
- Drilling and Hoisting Equipment Inspection
- Dropped Objects Survey
- Electrical Inspection and Testing
- Hull Inspection and Class Surveys
- Lifting Gear Inspection
- Offshore Crane Inspection
- Pipework and Pressure Vessel Inspection
- Preservation
- Rig Inspection (Rig Audit)
- VAIL-Plant Risk Based Inspection (RBI)
- Wire Rope Inspection

Repair and Upgrade

- Cold/warm Stack Services.
- Derrick and Mast Repair.
- General Upgrade Services.
- General Maintenance Services.
- Heat shielding.
- Hull and Tank Repairs.
- Offshore Crane Repairs.
- Platform Repairs.
- Windwall Cladding/Weatherproofing Repairs.

Engineering

- 3D Laser Scanning/Modelling
- Engineering Design
- Equipment Integration and Interfaces
- Structural Analysis
- Turnkey Solutions

Construction

- Commissioning
- Derrick Assembly-Structure
- Electrical Installation
- Mechanical and Equipment Installation
- Piping Installation
- Shipyard Services

Electrical

- Electrical Audit
- Electrical Construction Supervision
- Electrical Installation, Commissioning, Repair and Maintenance
- Hazardous Area Equipment Register (HAER)
- Motor Inspection and Testing
- Primary and Secondary Injection Testing
- Thermography & Partial Discharging Testing

Fire & Gas

- Control and Instrumentation
- Fire & Gas Testing
- Fixed Fire & Gas Suppression System
- Fixed/Portable Firefighting systems

Training

- CompEx / IECEx (CoPC)
- Confined Space Training
- Drilling Industry Training Courses
- DROPS Training
- IOSH Safety Training
- MEDIC First Aid Training
- Rigging and Lifting
- Work At Height and IRATA Training
- Wire Rope Inspection Training

Singapore

+65 6545 7646

k2singapore@applusk2.com

Korea

+82 55 686 1974

k2korea@applusk2.com

Brazil

+55 22 2764 8034

k2brasil@applusk2.com

USA

+1 281 617 4020

k2usa@applusk2.com

Abu Dhabi

+971 2 550 2600

k2me@applusk2.com