



**Mao-Oak**  
Resources Ltd

# COMPANY PROFILE

[www.mao-oak.com](http://www.mao-oak.com)



COMPANY PROFILE

# HOME

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MAO-OAK Resources Ltd founded October 2017 prides herself as the trusted one-stop-shop for quality design, supply, installation, testing, and commissioning of fire detection, fire protection, integrated security and suppression systems, Breathing Apparatus, Emergency Escape Breathing Device, Gas Detectors and other safety equipment for Marine, Oil & Gas, Land and Aviation operations.



We carryout periodic inspections, follow OEM service manual in the recertification of life-saving and fire-fighting equipment for use. Our technicians are certified to support our clients service request either onshore or offshore. Our service station is well equipped and certified by various classification societies.





## **At our Service station; we are capable of rendering the below services:**

- 01** Refilling and recharging of CO2 Extinguishers.
- 02** Refilling and recharging of Wheel Unit Extinguishers.
- 03** Recharging of powder agent or DCP extinguisher
- 04** Recharging/refilling of twin agent units.
- 05** Nitrogen purging of containers.
- 06** Integrity/Hydro test for Hoses.
- 07** Installation, Inspection and maintenance of Pre-engineered systems (CO2, FM 200, Restaurant System, and Water Mist).

- 08 Inspection/maintenance of foam/water sprinkler systems.
- 09 Inspection and Maintenance of CO2 flooding Systems.
- 10 Replacement of adapters, fittings and hoses on extinguishers and foam trucks.
- 11 Annual Inspection and Maintenance of fire extinguishers and fire-fighting equipment.
- 12 Water mist suppression, installation and maintenance services
- 13 Deluge valve testing and repairs.
- 14 Routine Inspection and Maintenance of SCBA (Self Contained Breathing Equipment).
- 15 Hydro-testing of pressure vessels (eg. cylinders, valves and pressure tanks).

## **As well, our solution Includes but not limited to the below.**

- CO2 high and low pressure systems
- Dry powder systems
- Wheeled and Portable fire extinguishers
- Breathing air equipment
- Gaseous fire suppression systems
- Fire detection/smoke and heat detection
- Water mist systems – all types
- Foam Systems
- Hydrostatic pressure testing of steel cylinders and composite materials
- 10-year hose replacement
- 5 yearly control valve



## COMPANY PROFILE

# FIRE - GAS - BREATHING AIR

We design, supply, install, commission & maintain a wide range of Fire & Gas Detection, Fire Suppression Systems, Breathing Apparatus & Safety Equipment for Marine, Land, Aviation and Oil & Gas Based Application.

With our strong focus on Annual Vessel & Compliance Inspections as well as providing the offshore industry with fire & gas safety maintenance engineers & technicians for more permanent ongoing maintenance positions.

# ANNUAL, BIANNUAL AND 5 YEARLY RECERTIFICATION:

Our technicians are well qualified and experienced to carry out annual, biannual and 5 yearly recertification with OEM service manual as a guide.

- Our fire station is approved to ISO9001:2008 with class approvals
- Certified, central compliance control to ensure we deliver services to the same, consistently high standard worldwide.
- Service stations and technicians fully equipped with state-of-the-art test equipment to deliver inspections as prescribed by the IMO, SOLAS and the FSS code and according to the requirements of individual brands.
- All service inspections fully documented in clear, transparent reports, with references to the relevant IMO circulars.
- In addition to the usual manufacturers' warranties on parts, we also offer a global warranty on labour, for extra peace of mind.

# FIRE SUPPRESSION



- CO2 AGENT System
- FM 200 Clean agent System
- FE 13 Clean Agent System
- Novec 1230 Clean Agent System
- Water Mist
- Sprinkler System

We Offer Pre-Engineered system design and development from inception through installation, Mao-Oak Resources Ltd provides solutions for fire and gas detection, and suppression for industrial, marine, and commercial applications

- INDUSTRIAL DRY CHEMICAL SYSTEM
- INDUSTRIAL WET CHEMICAL SYSTEM
- RESTAURANT SYSTEMS (R-102, PIRANHA)
- VEHICLE SYSTEM



A large percentage of our work is providing two man teams comprising of an Engineers with an assistant to carry out the required annual inspections.

All certification is done on board and where possible any defects are rectified.

We can as well design, supply, install, test and commission systems that helps detect and protect people from hazards such as fire and toxic gases.

We customize system designs as the the project entails and we provide complete technical documentation to the end user



# FIRE DETECTION

We are pleased to be able to offer design, installation, maintenance & servicing for a wide variety of both Conventional & Addressable systems for both Marin & Land based Installations Our technicians are experienced with a wide variety of fire detection panels. For land based products we use Ziton & Advanced Fire Detection Panels.

# GALLEY / KITCHEN SUPPRESSION

The Liquid Agent System or Wet Chemical fire suppression system for Commercial cooking areas continues to be the ideal fire suppression solution for Galley & kitchen equipment for both offshore and land based applications. We are happy to supply, install & maintain either system.





# **EXTINGUISHERS:**

We carry out Annual servicing of Fire Extinguishers for the Refinery, Marine & Oil & Petrochemical industry of various sizes. We have a well equipped fire service station for all types of fire extinguisher testing and maintenance

# **CO2 BOTTLE REFILL:**

Mao-Oak offers a food-grade CO<sub>2</sub> Cylinder/ Bottle Refill Service.

Whether it is for home brewing, fish tanks, hydroponics or welding, SCUBA, Aviation we can refill your CO<sub>2</sub> Cylinder/ Bottle.

Collection/delivery service available for commercial customers (charges may apply).



# **FOAM SYSTEMS/ FIREFIGHTING FOAM:**

Mao-Oak is a major supplier and service partner for foam concentrate analysis, replacement and replenishment for commercial vessels, tugboats and firefighting vessel

Our firefighting foam range includes Non-fluorinated Foam (NFF), alcohol-resistant aqueous film-forming foams and SOLAS-approved foams for fixed fire suppression systems.

As a result of our partnership with renowned manufacturer of firefighting foam for maritime / Oil and Gas use. we are set to become your global supplier and service partner for high-performance firefighting foam concentrates.

We continuously strive to expand and enhance our selection of firefighting foam, which includes several types of IMO approved concentrates.



# **FULL-SCOPE FIREFIGHTING FOAM SYSTEM SERVICE:**

Beyond our supply of foam concentrates for maritime applications, Mao-Oak offers full-scope services including:

- Foam system inspection and service
- Repair and certification
- OEM foam system components
- 5-year foam system including testing
- Foam tank cleaning
- Foam disposal

# BREATHING AIR - SCBA / EEBD

All breathing Apparatus annual testing is carried out in compliance with NFPA 1852 & EN 137. By using one of our POSICHECK3 units which allow for fully computerised dynamic testing & certification of your SCBA.

With Mao-Oak's professional team handling your respiratory needs, you have a single-source partner for all types of breathing air demands, including:

- Single cylinders
- Cascade systems
- Tube trailers
- High-Pressure Breathing Air Loop System (HPLS)
- SmartCompressor – connected breathing air solution
- Breathing air compressors
- Fixed breathing air systems
- Breathing air refills



## **Let us help eliminate respiratory bottlenecks during turnarounds with these services:**

- Long- and short-term respiratory equipment rentals
- Asset management, and maintenance of customer-owned equipment
- Hydrogen sulfide (H<sub>2</sub>S) packages
- Start-up or total turnaround safety services and consulting
- In-Plant Service Centers: bring Total Safety to your job site full time
- Respiratory equipment rentals, cleaning, repair and maintenance
- Respiratory fit testing – Pulmonary Function Test
- Respiratory protection systems
- Safety attendant services
- Rescue Technicians

# **HYDRO TESTING**

Hydrostatic testing of SCBA, EEBD, Extinguishers & Fixed Suppression Cylinders, Nitrogen Cylinders, Aviation cylinders, to mention a few

# **GAS DETECTION**

We Supply, Calibrate, Bump Test, General Maintenance & Replace Sensors on various makes of Gas Detection including; Drager, MSA, BW, General Monitors, Otis, Sensitron & Scott. (H<sub>2</sub>S O<sub>2</sub> N<sub>2</sub> CO<sub>2</sub> CO LEL SO<sub>2</sub>) As well as provide H<sub>2</sub>S training.





## **A. GAS DETECTION EQUIPMENT RENTAL AND SALES**

Mao-Oak Resources Ltd provides the top-quality gas detection equipment and instrumentation and the technical support that you need to keep your people safe and your operations efficient. Total Safety has one of the largest fleets of connected and non-connected personal and area gas detection monitors that are maintained, calibrated, and ready to deliver. Our gas detection solution include:

- Personal Gas Monitors
- Area Gas Monitors
- Single-gas monitors & Multi-gas monitors
- Photo-ionization detectors (PIDs)
- Flame-ionization detectors (FIDs)
- Air sampling pumps and monitors
- Fixed gas monitors
- Connected gas monitors
- Data-enabled gas monitors
- Gas detection systems design, installation, inspection and maintenance

# FIXED GAS DETECTION SYSTEMS

We specialize in the design, procurement, project management, installation, testing and commissioning of fixed gas detection systems, including:

- Controller- or PLC-based
- Hard-wired or wireless
- Integrated fire and gas
- Audible and visual enunciation
- Point or open path
- Combustible, toxic, VOC and O<sub>2</sub> gas sensors

## **B. GAS DETECTION SYSTEM INSPECTION, TESTING AND MAINTENANCE**

Mao-Oak's dependable, scalable gas detection services protect your workers from the dangers associated with flammable and toxic gases.

We have the expertise in gas detection solutions, breathing air systems, and contingency planning to design a service package that fits your specific needs, ensures safe operations, and protects your people.

Mao-Oak Resources Ltd provides all the top-quality equipment and gas detection instrumentation you need. Our gas detection solutions include:



- Personal gas monitors
- Area gas monitors
- Fixed gas monitors
- Single and multi-gas monitors
- A variety of LEL sensor technologies
- A wide variety of toxic sensors
- Photoionization Detectors (PIDs)
- Flame-Ionization Detectors (FIDs)
- Air sampling pumps and monitors
- Connected gas monitors
- Data-enabled gas monitors
- Gas detection systems design, installation, inspection and maintenance

# CALIBRATION GAS SERVICES.

We ensure your gas detectors are calibrated on schedule, on your site, or ours. Detection of hazardous and combustible gases is a critical step in ensuring the safety of your workforce. Mao-Oak is proud to offer a complete line of gas detection services, including calibration and maintenance for most major gas detector manufacturers.

With our advanced asset management system, we will contact you when your equipment is due to be calibrated, giving you complete confidence that your gas detection fleet is managed in such a way as to ensure safety, reliability, and compliance.

# **WHY IS CALIBRATING YOUR GAS DETECTOR IMPORTANT?**

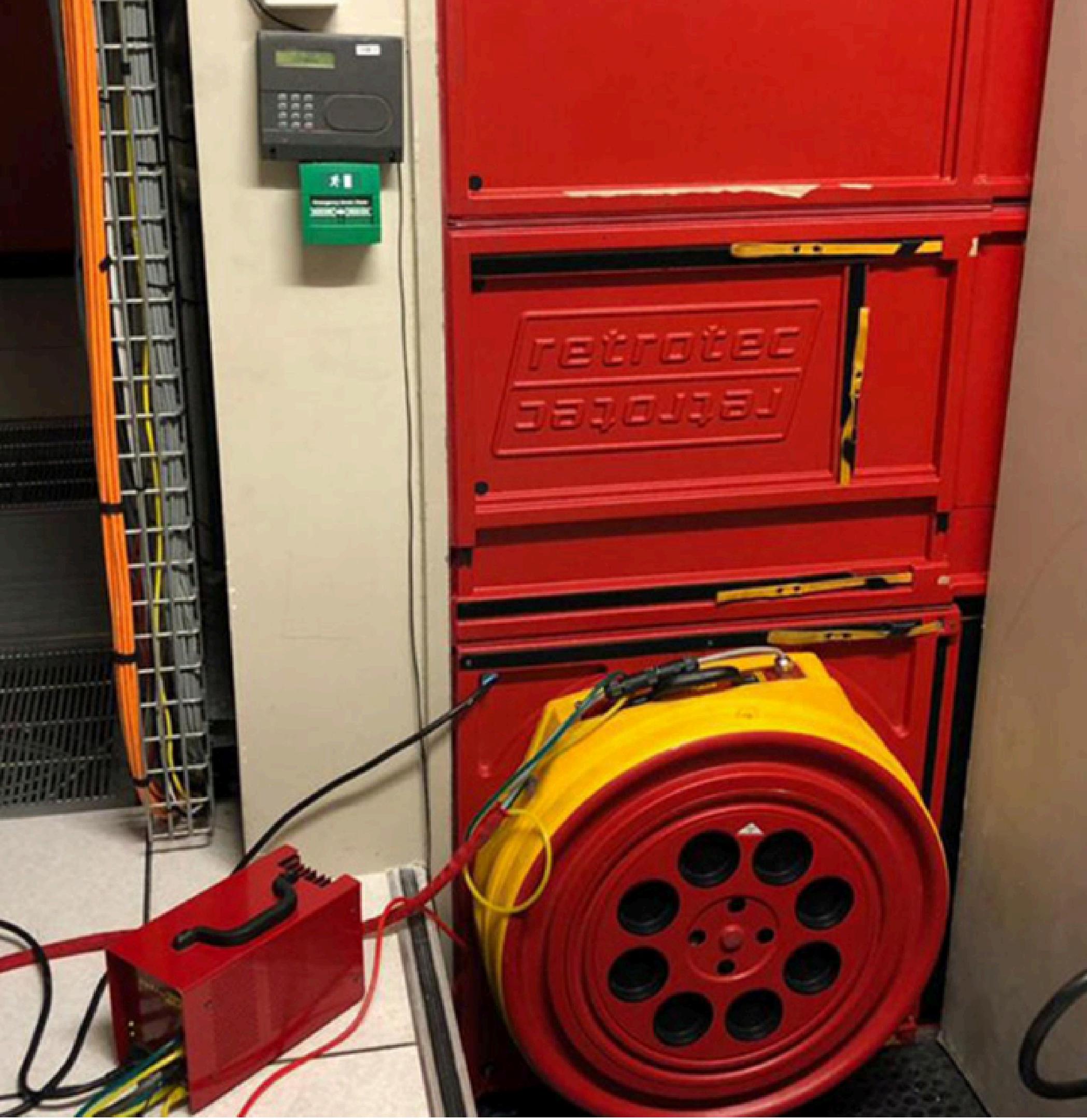
The calibration process involves the adjustment of a sensor's output to match a known concentration of calibration gas. It ensures maximum accuracy of the instrumentation.

Calibration is important since all sensors will have some amount of drift over time and are subject to potential effects such as over-exposures, poisoning, physical shocks, and environmental changes. These types of events can cause sensors to be less accurate and could lead to injuries or fatalities.

Trust the experts with your life-safety equipment repairs and maintenance. Let us know how we can help you today!

# ROOM INTEGRITY TESTING

Utilizing our Retrotec Q5E Blower Door kit.  
To give you accurate hold times and  
advise on in ways to improve the hold  
times.



# **BOAT ENGINES AND WATER JET (INSPECTION & MAINTENANCE):**

We have qualified mechanical and electrical technicians that can repair both outboard and inboard engines should it be petrol or diesel with original OEM spares.



# **Project: MV Dijama Vessel 25HP Outboard Engine:**

- 1. We changed the Impeller rubber, impeller rubber housing, impeller plate, impeller key, O-ring.
- 2. We also changed the gear slator, gear liver, gear link rod end, gear liver spring, thermostat kit and thermostat cover gasket.

If you are looking for consumable personal protective equipment, we carry stock from the most reliable brands for hearing protection, gloves, boots, fire-resistant clothing, head, eye and face protection, gloves, and more.

# SAFETY EQUIPMENT SUPPLY AND PPE

With our extensive catalog of over 130,000+ safety supplies, personal protective products, and top-of-the-line safety equipment, we have your safety needs covered. Total Safety runs one of the largest safety equipment rental fleets in the world.





# **PERSONAL PROTECTIVE WEAR PROTECTS AGAINST RISKS**

Total Safety specializes in providing garment solutions for every industry to help protect your employees against job site risks. Our products help keep your workers safe and compliant.

- Managed apparel services including online ordering, and employee allowance programs
- Custom Garments and Uniforms
- Allotment programs and turnkey solutions
- A wide range of flame-resistant (Fr) and workwear garments
- Garments specific to job requirement
- Choose from a wide range of industry-leading brands
  - 1. Head, Face, Eye, and Hearing Protection
  - 2. FR Garments
  - 3. Hand Protection
  - 4. Work boots... and more

Total Safety has top brands of wearable PPE equipment to help protect your workers from environmental hazards, falls, and job-related injuries.

We partner with leading manufacturers on all types of personal protective equipment including MSA, Industrial Scientific, 3M, Honeywell, Blackline Safety and more to get you the latest products:

- Respiratory protection
- Gas detection and monitoring
- Fire protection
- Fall protection
- Radio equipment



Thanks to our global capabilities, local footprint and efficient distribution systems, we are on hand to supply the safety equipment, supplies, and personal protective equipment you require with a quick turnaround. Before delivery, all rental safety equipment and protective gear is cleaned, maintained, calibrated and tested in full compliance of manufacturers' recommendations by our certified technicians.

# PROCUREMENT



# PARTNERS





**Lagos Address:** Plot 24 Block 139 Josemaria Escravia Street Lekki 1

 **Port- Harcourt Address:** 12 Wenedah Road, Opposite Madonna secondary School, Off power Ecounter By east-west Road. Port-Harcourt. Rivers State

**MAO-OAK UK Address:** 3/2 Smithfield street Edinburgh EH11 2PH, United Kingdom

 [Info@mao-oak.com](mailto:Info@mao-oak.com)

 0916 602 1937

 [www.mao-oak.com](http://www.mao-oak.com)