



360 DEGREE SHIP REPAIR SERVICES





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INTRODUCTION TO WAS

A subsidiary of the PIRIOU group, WEST ATLANTIC SHIPYARD Ltd (WAS) was formed in 2004 in Nigeria and registered in the free zone in 2005.

The shipyard, located on the Bonny River in the Oil and Gas Export Free Trade Zone, Federal Ocean Terminal (FOT) Onne in Rivers State, Nigeria, was set up to build support ships for the offshore oil and gas industry in accordance with the Nigerian Coastal and Inland Shipping Act. In keeping with the spirit of promoting 'local content', over 80 million US dollars has been invested into the facility and its workforce to date. Benefiting from the extensive experience and support of the PIRIOU group, WAS is proud to be the only modern shipbuilding and ship repair facility in the Gulf of Guinea.

WEST ATLANTIC SHIPYARD Ltd is fully ISO 9001:2015 certified.

As a Shipbuilder WAS has been in operation in Nigeria since 2008 and has completed over 45 fabrication projects for vessels that are 100% built within the country to International Class Standard (Bureau Veritas), achieving AAA status. Operating two state-of-the-art 100 metre floating docks and with a 300 metre quayside, WAS also has the capability to launch the vessels built at its facility. The company has a dedicated multi-disciplinary shipbuilding team with the highest level of competencies, which together with its main strategic partnership with PIRIOU, enable the shipyard to satisfy industry demands for safe, reliable and cost effective solutions that meet the most exacting standards in terms of quality and schedule adherence.

STRATEGIC POLICY STATEMENT

Our strategy is to be where our customers need us, by transferring knowledge gained from the mother company (PIRIOU) in France over the past fifty years and developing appropriate skills to achieve sustainable development locally.





WAS AT A GLANCE

CAPACITY

- 2 x floating docks - 110m x 25m - 5000 TLC
- 300m quayside - fully serviced by cranes
- 135 000m² yard space
- 60 000m² area for fabrication facilities and warehousing
- Workshops - 50-ton overhead crane with 25m height
- ISO 9001:2015 ISO management systems - Bureau Veritas certification



HIGH QUALITY

- A robust QA/QC policy & repair management system
- Highly skilled and trained workforce (Expat & Nigerian)
- State-of-the-art equipment and facilities



FAST DELIVERY

- Highly driven efficiency
- Strict adherence to productivity, process & procedures
- Highly skilled project planning
- Ability to work 24/7, 365 days a year



COMPETITIVE PRICES

- Customer-friendly sales policy
- Flexible payment terms
- Excellent procurement and supply chain network
- Master agreement long-term fixed pricing option available





DRY DOCKING AND QUAY REPAIR FACILITIES

WAS operates a quayside area of 13500m² with a jetty side of 300m in length with a draft of 6.5m at low tide and 8.5m during high tide, supported with mobile & tower cranes. For docking of vessels, we have two floating docks situated at the south end of the jetty which are strategically double banked. The docks are both 110m long and 25m wide and able to dock vessels with a draft of 6.2m.

The facility boasts over 60,000m² of secured storage and fabrication areas on site as well as four workshops spread over 6,000m² for steel and pipe fabrications, mechanical and electrical overhauls, and a power station supplying 440V 60Hz stable current 24/7.

The two fabrication halls are designed and built to withstand weights of up to 600t. The largest hall is fitted with 2 x 25t cranes. To date over 45 vessels and numerous large fabrication projects have been facilitated within these halls.





BLASTING AND PAINTING

Our ship blasting and ship painting division works round the clock and can operate more than 16 blast nozzles simultaneously. The waste materials are disposed of using environmentally approved certified waste disposal components. All major paint brands are available and we are approved for all applications and coatings.

Ship Blasting and Ship Painting services include:

- Grit Blasting
- HP Washing at 200 bar
- Ultra-High-Pressure Blasting
- Mobile Blast Units for easy transport to all locations
- Afloat and Offshore Blasting and Painting Ability for Platforms, FSOs, FPSOs and MODUs
- Environmental Protective Wrapping
- Silicone Hull Treatment Application



TANK CLEANING

WAS undertakes the cleaning and maintenance of all your on-board tanks including Fuel, Lubrication, Water Ballast and Sewerage. Our services includes opening, gas-freeing, pumping and cleaning.



STEEL REPAIRS AND FABRICATION WORK

WAS fabrication division offers a host of steel repairs and fabrication work, with class-approved materials on a 24-hour basis at globally competitive rates. WAS has over 50 approved procedures from various Classification Societies and Inspection Authorities and complies with the highest standards of quality expected within these key industries.

The steel repairs and fabrication works division is able to staff up quickly and adequately on a 24-hour basis, while the fully-equipped fabrication workshops offer a complete complement of manufacturing and repair equipment including:

- Plasma cutters
- Gas profile cutters
- Oxy-acetylene torches
- Diesel welding machines
- Sub-arc welding machines
- Mig and Tig welding machines and component aluminium welders
- Conventional welding machines
- Full complement of welding consumables
- Comprehensive stock holding of steel plates and tubing
- Comprehensive stock of fully certified rigging gear and equipment

STEEL FABRICATION

WAS are specialists in heavy marine, offshore and industrial fabrication with fully equipped undercover workshops totalling 30 000m². These under hook fabrication workshops are purpose-built for shipbuilding and large steel fabrications.

Fabrication from ferrous and non-ferrous parts or complete assemblies are quoted on and manufactured on a 24-hour basis. Working in conjunction with the other divisions on a common project, means that costs are drastically reduced. The benefits of a 24-hour fabrication operation include the elimination of daily shut down and start up delays and are reflected in our pricing structures, which provides WAS with a major advantage over our competitors.

The fabrication shop is equipped with modern cutting, rolling, pressing and welding equipment.

The classification society-approved works undertaken include:

- Furnace cooling equipment
- Pressure vessels
- Vent heads
- Manhole covers
- Rolled to fit steel plating
- Pipe work
- Long bore ducting
- General engineering
- Drilling of stern tube flange
- Grinding to size hard-face welding on radar feeder



MECHANICAL REPAIRS AND ENGINE WORKS

We pride ourselves on our long association and history of repairs and refurbishments to equipment produced by major Original Equipment Manufacturers (OEMs).

Our mechanical repair, propulsion and engine team, with its professionally trained and skilled technicians, provides mechanical ship repairs, ship engine works, marine engine repair and fitting to all makes of engines and classifications to international standards.

Fitting:

The mechanical works at WAS are undertaken by mechanical teams with extensive experience across a wide range of disciplines, and include:

- Propulsion repairs
- Thruster overhauls, Azimuth and Z-type
- Tail shaft surveys
- Pump repairs
- Winches
- Bolters
- Gearboxes
- Derricks
- Sheaves
- Special survey items



as well as Ship Engine Works, covering all makes of engines and classification society-approved reconditioning of:

- Cylinder covers
- Piston crowns and skirts
- Exhaust valves and cages
- Fuel injectors
- Main engine and auxiliary engine governors
- Crankshaft replacement
- Repairs and reconditioning of castings and cylinders



MARINE PIPE REPAIRS AND FABRICATION WORKS

Our services cover all marine and industrial systems and applications and are carried out by extremely knowledgeable technicians and engineers who have been professionally trained.

Marine pipe repairs and fabrication works include:

- Piping engineering and design
- System evaluation, installation, repair, modification and failure investigation
- Compliance with ASME piping codes
- Non-Destructive Leak Examination, X-Ray, MPI, UT scanning and dye penetrant
- Leak detection services in accommodation and living quarters
- Extensive experience in carbon steel, stainless steel, copper, Yorcibro, Cunife, PVC and galvanised steel
- New piping which can be hot and cold formed or fabricated
- Pipe systems which include water, fuel, oil, hydraulic and pneumatic



ELECTRICAL AND ELECTRONIC SERVICES

The WAS electrical team carries out repairs to all types of electrical machinery and equipment, including repairs and refurbishment of electric motors, cranes, switchboards, switching gear and fault finding on all on-board electrical equipment.

WAS's electrical repair team focuses on servicing almost all electrical equipment on vessels.

- Our electrical and electronic repair services include:
- Supply of new standard frame size motors
- Overhaul and rewinding of motors and alternators
- Rewinding of transformers and manufacture of new transformers
- Balancing of rotors and impellers
- Re-sleeving and machining of motor-end shields and bearing journals
- Supply of electrical equipment and spares
- Fault finding and repairs to automation systems (electrical and programmable logic computer)
- General installation work (e.g. running of cables, fitting units and multi-cable transits)
- Shore supply and generator hire
- Cleaning of switchboards
- Supply of personnel for off-port limits and riding crew work
- Repairs and navigational equipment





MACHINE ENGINEERING

The machine engineering shop at WAS is fully equipped to carry out any kind of repair or manufacture of mechanical parts.

It boasts a 4700m² covered area with turning, boring capacity up to 5 tons, all served by overhead crane with a capacity of 40 tons.

Operating under the rules and regulations of International Class requirements as well as the quality control requirements of ISO 9001:2015, the machine shop has set firm precedents in the local and international engineering fields.

Equipment includes:

- Conventional milling machines
- Vertical boring mills
- Horizontal boring mills
- Various lathes – From 3m to 13m between centres, max diameter over saddle 1.2m
- Surface grinders
- Slotters
- Radial drill
- Hydraulic presses – up to 100t
- Sub-arc welding machines
- Balancing machines – length 12m, 32 tons up to G1
- Milling machine
- Shapers
- Furnace
- Drill presses
- Cut-off saws

The classification-approved repair works undertaken by the machine shop include:

- Shaft and rudders
- Pumps and castings
- Fabrication and reconstruction of shaft, wear rings and bushes
- Pressure vessel fabrication and repairs
- Repairs and reconditioning of cracked casting and cylinders
- Conrods
- Piston Crowns
- Turbines
- High tensile steel fabrications
- General ship repair and maintenance.

We are able to:

- Manufacture and repair tail shafts – 12 m long
- Repair Centrifugal baskets
- Undertake turnkey roll fabrication including roll shells, heads, journals and housings.
- Machine turbine casings

UNDERWATER REPAIRS AND DIVING

WAS has diving specialists in underwater repairs, maintenance, underwater surveys, underwater welding and salvage. Our teams pride themselves on finding original, innovative and cost-effective underwater repair solutions where a dry dock is not an option for the ship owner.

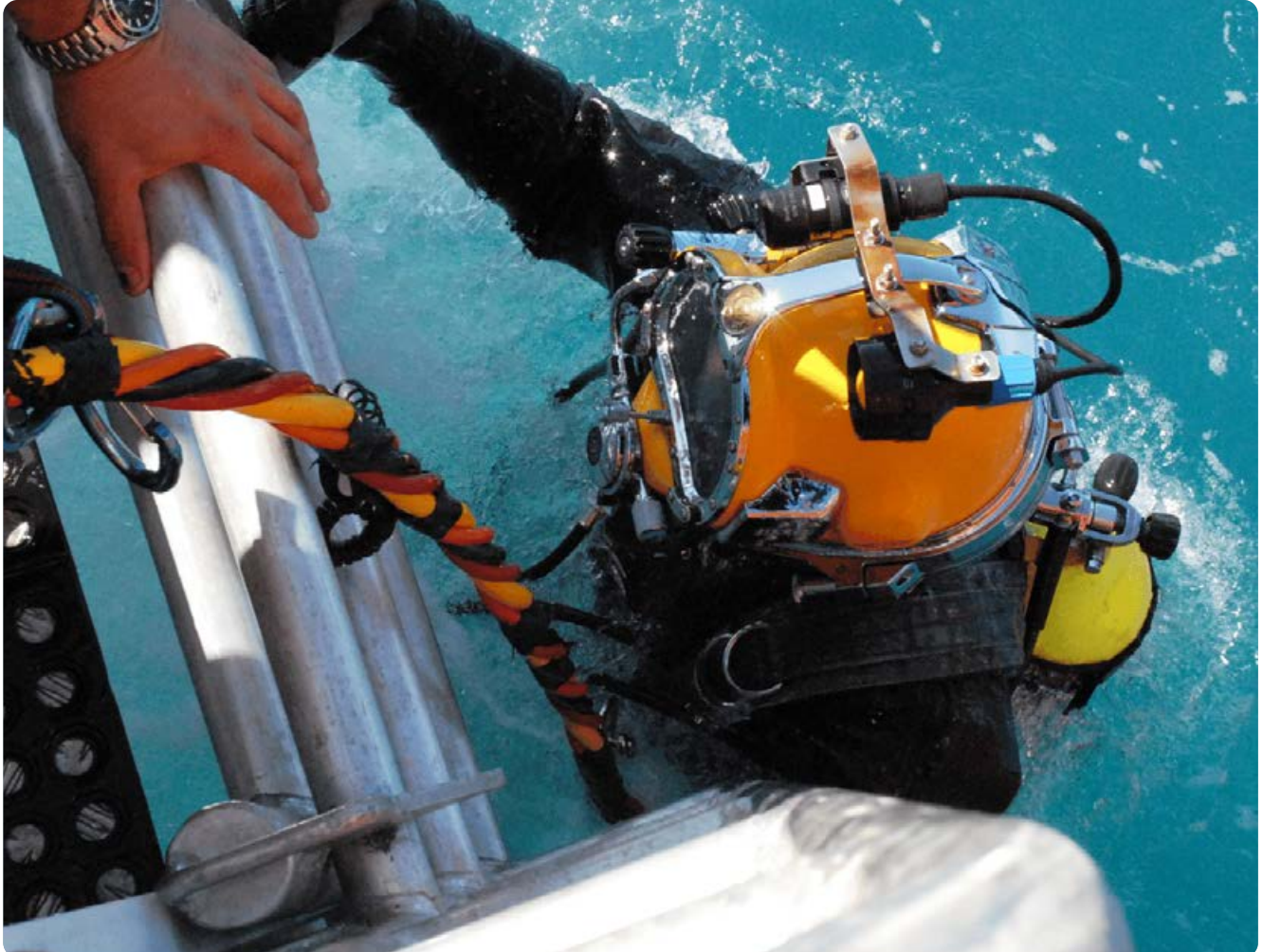
Our facilities and engineering backup make us the leaders in our field in Nigeria.

The scope of work in this division includes:

- Cofferdam design and fitment
- CCTV surveys
- Underwater welding repairs

We are recognised by the following class societies:

- Det Norske Veritas
- American Bureau of Shipping
- Bureau Veritas
- Russian Class
- Lloyds Register of Shipping
- Germanischer Lloyd



HYDRAULIC SERVICES

WAS is a leading provider of maintenance, refit, repair, and installation of hydraulic systems on modern vessels and off-shore-based equipment.

Together with a network of international partners, WAS maintains teams of well-trained and qualified hydraulics technicians and engineers to undertake service and repairs at sea and at waterfront locations. These highly experienced teams are on standby to work on any piece of hydraulic equipment, no matter how complex. At all times we work closely with our customers to get them fully operational as quickly as possible, and are committed to delivering reliable, precision services using the highest quality parts and components.

A complete service is available for the maintenance and installation of all hydraulic systems, including hydraulic rams, furling units, steering, thrusters, stabilisers, shell doors, deck equipment, access platforms and cranes. It includes:

- Rebuilding of pumps and motors
- Hydraulic hoses
- Machining
- Welding fabrication
- Winch overhauls
- Retro-fitting of old equipment
- On-site/ On-board service





HVAC SERVICES

WAS offers on-site repairs and assists in the removal and reinstallation of heating, ventilation, and air conditioning (HVAC) units and all major brands of refrigeration and air-conditioning units.

Our expertise in marine heating, ventilation, and air conditioning (HVAC) and refrigeration enables us to deliver quality service on time and on budget to:

- HVAC systems of engine control room and accommodation
- Control air dryers and air handling units
- Packaged units (split or self-contained)
- Water-cooled / air-cooled condensing units
- Direct expansion systems
- Sea water and freshwater chiller units
- Food provision plants
- Reefer and cargo refrigeration

We supply original parts and equipment including:

- Compressors (reciprocating, rotary, screw, centrifugal, scroll / open, semi hermetic, hermetic) – new or reconditioned
- Condensers and Evaporators
- Package equipment
- Spare Parts (controls, valves, electrical components, etc.)



RISER REFURBISHMENTS

WAS has recently become involved in the refurbishing and recertification of various types and makes of offshore drilling risers. We are in the process of becoming accredited workshops for most of the brands including GE-Vetco, Cameron and Aker Solutions.

As part of our Marine Services, we have a highly skilled team of technicians and engineers to provide a comprehensive riser refurbishment service including:

- Transport and logistics
- Removal of buoyancies and disassembly of components
- High pressure washing and cleaning for full inspection
- Carrying out inspections and NDE
- Repairs or remedial works
- Pressure testing
- Blasting and coating
- Reassembly of all components and buoyancies
- Detailed recertification of data books



TECHNICAL FLEET MANAGEMENT

WAS is also able to deliver independent Third-Party Ship Management Services covering all aspects of vessel technical management.

We provide fully integrated solutions to meet customers' needs throughout the shipping cycle, including Integrated Logistics Support, In-Service Support, Maintenance, Repairs, Revisions and Conversions, along with a wide array of General Services, delivered by competent staff, using innovative methods and cutting-edge technology.

Integrated Logistics Support (ILS)

- Spares provisioning
- Logistics engineering
- Technical documentation
- ILS management system
- Training

In-Service Support (ISS)

- Maintenance – Dry dockings, Afloat and Offshore
- Follow-on training
- Spares replenishment
- Warranty
- Documentation update

Maintenance Repair Overhaul & Conversions (MRO&C)

- Modernisation
- Overhaul and upgrade
- Middle-life maintenance
- Conversions
- Refitting and repair

These include services for platform support systems.

WAS provides a full array of information and logistics services, totally supporting the needs of marine fleets, through a fully integrated process that encompasses the entire lifecycle of your vessel, from planning to after sales. We design and implement our logistics services based on your specific needs and optimise the lifecycle cost of your equipment through developing and applying the most advanced engineering tools.

Thanks to the efficiency of our Worldwide Supply Chain, we guarantee logistics support for your fleet by providing Spare Parts and Special Tools and are directly responsible for all process phases, from identification to coding, procurement, packaging, transport, and testing.

Our support includes processing all technical documentation required to operate and maintain all ship's equipment safely and properly.



LOGISTICS SUPPORT

WAS can assist with all procurement, importation, transportation and storage of required marine equipment for your vessel. We have access to global sources to ensure your spares and equipment are ready for issue and rapid deployment. WAS is the perfect partner to meet customers' warehousing and logistics needs.

Services include:

- Experienced personnel who are always ready to respond
- Equipment procurement
- Worldwide logistics for parts
- Unique logistics for rare parts and oversize loads
- Parts and materials innovation and creation
- Technical library management and classified material storage



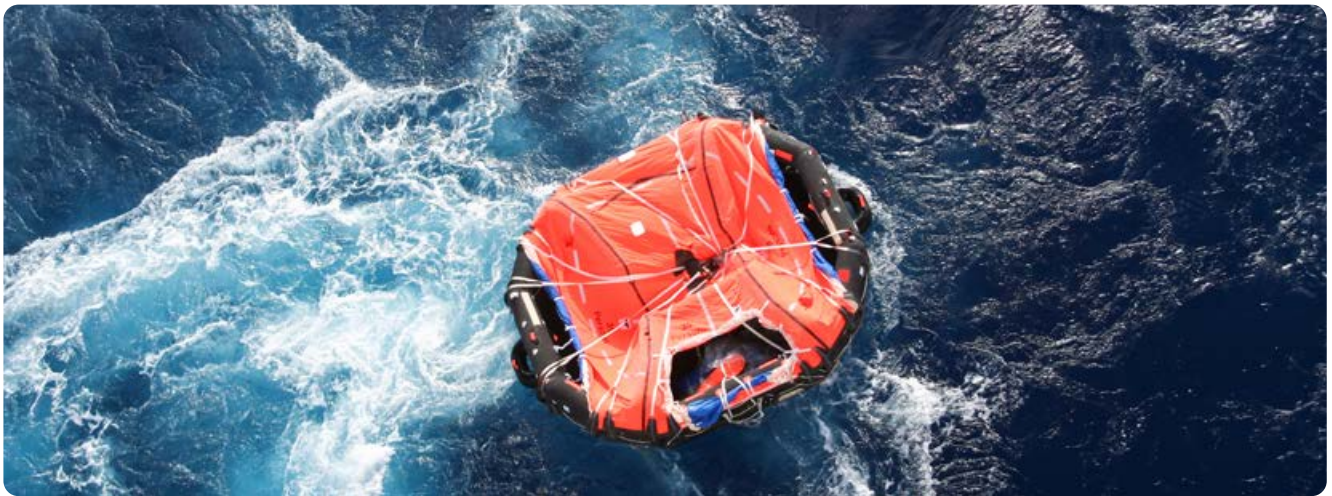
INTEGRATED MARINE SAFETY SERVICES

WAS, through its JV with a well-known international partner in this field, trusted by clients across the globe, is also able to deliver the full range of life saving services and equipment in-house. Our quality products, highly experienced professionals and service excellence make us a reliable supplier of marine safety services.

LIFE RAFT SERVICING AND REPAIR

Life Rafts, according to regulations, have to be serviced annually. WAS has a Life Raft Service Station that is certified by local and international authorities, as well as all major classification societies.

Our technicians are highly trained professionals who keep up to date with industry standards and developments. WAS offers annual servicing, certification, sales and repairs to multiple major life raft brands.



LIFE BOAT SERVICE AND REPAIR

WAS, through our JV, is the only multi-manufacturer approved lifeboat and davit arm service provider in Africa. We are extensively equipped and accredited for the servicing and repair of lifeboats for over 50 major manufacturers. Our services are approved by NIMASA as well as all major classification and regulatory societies in accordance with MSC.1206.



LOAD TESTING

WAS, through our JV, has trained and certified engineers to inspect and test all Lifting and Rigging equipment, from shackles and slings, to wire falls and deck cranes. All inspections are carried out according to international standards and guidelines as set out by the various governing bodies. Detailed reports are issued, enabling our clients to plan for the replacement of equipment as and when needed.



HYDROTESTING

We offer hydrotesting equipment to test the pressure, quality, strength and damage in all high-pressure breathing apparatus, diving cylinders, respirators, immersion suits and personal fire protection. We are agents for several of the top international manufacturers, including Scott Safety, Honeywell & Fenzy, SRI, Coltraco, DX Marine and Drager, and sell and service all leading brands.

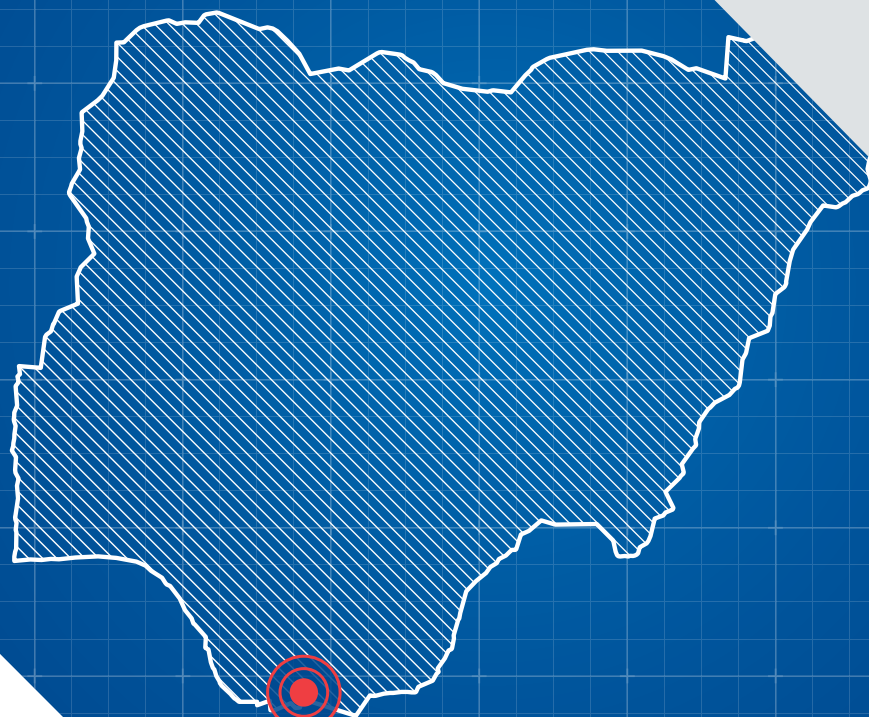


FIRE & MARINE SAFETY

WAS sells to, services and repairs a wide range of Marine Fire Safety and Marine Safety equipment for national and international clients.



NIGERIA



**PORT HARCOURT
PORT ONNE**



WEST ATLANTIC SHIPYARD

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BUREAU VERITAS
Certification



NIGERIAN COMPANY ESTABLISHED IN 2005