



Floating & Subsea Prod. Systems 0703 508 9832 https://bullionoffshoreg.com/

**Offshore Vessel Maintenance** 

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### INTRODUCTION

Bullion Offshore Contracting Ltd. is an integrated Project services company. We are set up to provide world class services to the key sectors of the global economy covering Oil & Gas, Process, Power, Marine and Maritime Industry sectors. We are also local representatives of some oversea OEM (Original Equipment Manufacturers)

### **MISSION STATEMENT**

Applying Cutting Edge Technology and international project experience to deliver projects and services that will enhance the client profitability, while consistently meeting and exceeding clients' expectations.

### **OUR VISION**

To ascent into a world class Engineering, Construction, Marine and Industrial group with African roots and global presence, following a sequence of 5 year development plans.

### **DIVISIONS & BUSINESS UNITS**

our services are delivered under major divisions which are: Engineering Consultancy, Marine Services and Construction. Each division carries out a wide range of related services in business units.

**CLIENT MARKETS:** The client markets where we provide services cover the following sectors:

- Oil & Gas companies (Upstream, Midstream & Downstream).
- Residential and Commercial Real Estate
- Chemicals & Petrochemicals sector.
- Manufacturing Industries
- Maritime
- Government & infrastructure sectors.
- Mines & Metals. Offshore renewables

### **ENGINEERING CONSULTANCY**

- Engineering consultancy is the foundation on which the entire company divisions and group's services is built on.
  Engineering competency in executing challenging technical scope of work is a pillar of strength upon which we grow our capabilities. We have a large resource base of highly experienced engineers working with us on full and part time basis, bringing in a wide range of industry experience to the table. We have design software such as Auto CAD, Auto Plant, Tekla, PDMS, PDMS Outfitting, PV Elite, Solid works, STAAD Pro, Hysis, Pipesim, Cadmatic, etc. We constantly innovate internally to augment use of design software with design calculations spreadsheets developed in-house based on industry standards, using Mathcad and Excel, all based in industry standards (API, ASME, DNV).
- Our Engineering department drives Technology Product development. They also supports other divisions of BOCL and external clients especially in the Oil & Gas, Process, power, Marine and Infrastructure sectors with Design, Cost estimation, Project Controls and Project management. The value of this service is to enable the client to determine project or investment economics before committing resources to execution. This also provides the client with reliable information for arranging project financing and reaching FID

### **Energy & Marine Technology Product Development**

We have some pre-development studies for some Equipment and Technology for:

- Floating Energy Production Systems: Small Scale FLNG, LNG barge and FPSO.
  Solution can include Subsea Field development / Gas monetization studies.
- Offshore Marine Vessels Design for specialist uses (New and Conversions)
- Modular Refinery and Petrochemical Plants / Modular gas processing Plants
- Subsea Equipment
  - Subsea Production manifolds to manage high GOR / Wet gas compression
  - o Subsea Separation and re-injection modules
  - o PLEM and PLET with advanced capabilities for flow assurance solutions
  - Subsea Tie-back studies
  - o Subsea pipeline route survey and Subsea pipeline design



S/N	ENGINEERING DESIGN PROJECT EXPERIENCES (Manpower contracts)	ASSET LOCATION	CLIENT / COMPANY
1	Pipeline design (Scope: drafting alignment sheets & Pipeline stress analysis)	Gbaran Ubie Pipeline	Saipem
2	IPP Gas Supply Unit. (50mm scf gas plant to feed an IPP)	Adjacent Obite gas plant	Total E&P/ Saipem
3	As-Built Design & Upgrade planning (4 Offshore platforms)	Afia, Ime, Odudu, Edikan	Total E&P / NETCO
4	Design of Subsea Production & Water Injection Jumpers	BONGA field	SNEPCO/BHGE
5	Design of Subsea Jumper Connectors (Concept design of prototype)	IP product. – Any location	E & P Companies
6	Small Scale LNG Tanks for Industries (Concept design of various tank sizes)	Concept Development (WIP)	Cluster Power Consumers
7	Small Scale FLNG (Conceptual design for Investment planning)	Concept Development (WIP)	ТВА
8	Base Development with Workshop / OH Crane structural works	Various locations in PH	Topline Ltd. / Multiplan Ltd
9	LACT Unit (Front End Engineering Design) - Subcontract	OML 11	Sak Dekalog Ltd./MPDC
10	Remote Automation Capability implementation -pilot project (Sub contract)	Mkpoku Manifold	SPDC/PPC/Albergy.
11	8" OBDA HP gas Pipeline Hook up (Manpower supply)	Obite	Total/Epic Atlantic Ltd.

## **MARINE SERVICES**

### Dry Dock / Underwater Inspection, Repairs & Maintenance of Vessels

We carry ship repair operations in leased space at Taraba Jetty Slipway, located in Borokiri, Port Harcourt. We are dedicated to customer support in the areas of Vessel Inspection, Maintenance and repairs. Vessels that are bigger than Taraba Jetty Slipway capacity is repaired in other shipyards in a dry dock, or Floating dock belonging to our associates. We can also execute vessel repairs afloat. This service covers both Offshore vessels, drilling rings and Floating production assets. Our vessel repair works include the Following:

- o Engine repairs and overhaul
- o Heat Exchanger Systems repairs and maintenance
- Piping Spool, Pumps and Valves repairs and Maintenance.
- o Electrical motor repairs for winches, anchors, etc
- o Repairs of Hydraulic Pressure systems
- Repairs of vessel Cranes and On board equipment
- o Vessel hull repairs, blasting and painting
- Upgrade features of the vessel to meet class requirements.

# Bow & Azimuth Thruster & Propulsion Systems Maintenance:

We have the capability to execute bow thruster and Azimuth Thruster removals and reinstallations. We carry out such repairs in collaboration with their OEM. This can be done while the vessel is afloat or trimmed, to reduce or eliminate interruption to the operational schedule of the vessel. Alternatively, we can remove the thruster, blind the foundation hole and transport the thruster to our workshop for repairs and return to fix it back at wherever the vessel is berthed



Docking of Crew boat at Taraba Jetty Slipway for repairs



Vessel Generator Engine and Heat Exchanger repairs & overhaul





# Bow & Azimuth Thruster & Propulsion Systems Maintenance

We have engineers that are specialists in Propulsion systems, involving complete general overhauls, maintenance, or trouble shooting regardless of the brand or type of Propulsion equipment. For whatever you need to be repaired or overhauled on your need in this scope, we can ensure quality and efficiency. Our expertise in Thrusters and Propulsion system maintenance covers the following:

#### Inspection in the dock

- Backlash and tooth pattern verification
- Trust bearing clearance verification on pinion and propeller shaft.
- Propeller blades seals exchange
- Propeller shaft seals exchange
- Functional test
- Clutch wear test
- Input shaft seals exchanging on upper part
- Od-box internal leakage test or exchanging if necessary

#### Inspection on the water:

- Backlash and tooth pattern verification upper and lower part
- Propeller blades seals exchange
- Propeller shaft seals exchange
- Support bearing clearance verification on steering tube.
- Separate pressure test on intermediate section

### Repairs of Thrusters on Vessels on a Floating dock



Bow thruster and Azimuth Thruster Repairs



### General overhaul (Thruster and Propulsion systems):

- Bow Thruster removal from the tunnel
- Azimuth thruster removal. Upper, intermediate and lower part.
- Overhaul in the workshop
- Machining
- Backlash and pattern adjustments
- Thruster installation in the tunnel
- Azimuth thruster installation on board.
- Pressure test and drive test

# Controllable & Fixed pitch Propellers and Shafts Services are as follows:

- Dismantling and assembling of propeller
- CPP hubs inspection and maintenance
- Crank discs, sliding and piston rod dismantling, inspection, measurements and reconditioning
- Extract the propeller shaft. Inspection & Machining where applicable
- Execute aft and forward propeller shaft seals exchanging
- Overhaul Oil distribution
- Disassemble, maintain and re-install bearing coupling.

# **Rudder Repairs**

Major defects on rudders very often cause unscheduled dry docking of ships. The technique designed by our R&D department allows engineers, welders and inspectors to perform their tasks in a dry environment with the vessel still afloat.

**General Overhaul of Yatch and Crew Boat Steering gear as follows**: Seal replacement, Bearings exchange, Feedback adjustments, ruder stock pull up <u>. Ruder removal, repair and installation</u>. Alignment adjustments of the ruder

#### Controllabe Pitch Propeller Reparis



Rudder Repairs in Floating dock



### Vessel Leasing/Brokerage:

- We have a global network of vessel operators across key oil and gas markets. We are able to source for vessels most commonly used in offshore oil and gas operations ranging from AHTS, Platform supply vessels, Security patrol vessels, Accommodation barges, etc.
- The list of marine vessel deals brokered or facilitated is available on request.

### Barge & Tug boat Leasing / Ferry Services

 We provide barge charter services for companies in need of marine logistics for the purpose of transporting equipment and material along the coastal and inland waterways. We have a regular barge service that moves bulk materials by barge from Winsko Serves Jetty at Trans Woji River to Bonny.

### Marine Vessel Conversions and Upgrade:

- Vessel owners sometimes need to convert their vessel to a different type in order to meet market demands and class requirements. Most critical elements here is the timeline for Inspection, concept study, engineering design of new vessel (conversion) and the cost estimates.
- We can provide the client with the design modifications that show the renewed vessel appearance in 3D model. Upon getting all necessary approvals and cost estimate, such vessels can be converted into an entire new one, able to earn huge profits for the vessel owners.
- **Boat Building:** We can design and manufacture brand of crew boats. We have ready-made designs with cost. (specs is available on request)

#### Marine Vessel For leasing



Barge & Tug boat operations. Ready to load cargo to Bonny



Vessel Conversion & refurbishment to the standard of new



## **MARINE SERVICES (CRANES & LIFTS)**

## **Overhead Cranes**:

Our crane and Elevator solutions is a business unit in our Marine Services Division. We have expertise and track record in assembly, installation and Maintenance of various types of Cranes.

- We have assembled and installed overhead cranes in some Workshops and Warehouses that we have constructed. For Existing workshops, we can upgrade the workshop structural steel works to enable it carry the overhead crane.
- We are also the Manufacturer's representative of one of the leading Cranes, hoist and Winch manufacturers in China. For more information, refer to the website: <u>https://www.aicranes.com/</u> and <u>https://aicranemachine.com/</u>

# **Offshore Cranes, Marine Vessel, Port Cranes & Tower cranes:**

We can maintain cranes and winches afloat or in dry dock in the following:

- Offshore Vessels (Subsea construction vessels, AHTS, FSIV, etc.)
- Offshore Platforms
- Floating Production Systems (FPSO, FSO, FLNG)
- Offshore Oil drilling Platforms
- Tower Cranes and Sea Port

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- Tower Cranes & Seaport Cranes: We also have capabilities in installation and maintenance of Tower Cranes and Seaport Cranes
   o
- Lifts, Elevators and Escalators: We have capabilities in installation of maintenance of elevators and escalators. We also the Nigerian Representatives of Dazen Elevators of China.

30 Ton overhead Crane Installation completed @ Winsko Base PH



10 Ton OH Crane: Mechanical assembly of parts and wiring on ground



10 Ton Crane Installation on runway beams @ Topline workshop



S/N	MARINE SERVICES & CRANES PROJECT EXPERIENCE	ASSET LOCATION	CLIENT / VESSEL
1	Crew boats hull repairs, blasting and painting @ Taraba Jetty Slipway Port Harcourt Several vessel comp		Several vessel companies
2	KTA Cummins Engine overhaul and repairs of Electric motors (Collaborating teams)    Port Harcourt    Seabulk Ramos		Seabulk Ramos
3	Overhaul of KTA 38 Diesel Engine / Maintainace of Propellers (Collaborating teams)    Port Harcourt    MV Qua ibo River		MV Qua ibo River
4	Repairs of Pneumatic pressure systems (Collaborating teams)Port HarcourtMV Bella		MV Bella
5	Overhaul of CT 6 Cummins Engine and Electric motor for Anchor winch    Port Harcourt    MV Tiyana		MV Tiyana
6	Replacemnet of Heat exchanger and cooling water system (Collaborating teams)    Port Harcourt    MV Zara		MV Zara
7	Inspection of Hydraulic Power systems, pumps and piping outfitting (Collaborating Port Harcourt MV Success hope teams)		MV Success hope
8	Routine maintenance works in Vessel Engine room and Propulsion systems Port Harcourt MV Kings Landing (Collaborating teams)		MV Kings Landing
9	Maintenance works of Vessel Propulsion systems, Rudder and Vessel Cranes (PSV & Port Harce Security Patrol vessels, FSIV)		Seakey Marine Limited
10	Maintenance & Change out of Vessel Winches @ Taraba Jetty Slipway    Port Harcourt    Several vessels/Comp		Several vessels/Companies
11	Installation of 10 Ton Overhead crane in workshop (AiCrane)	Overhead crane in workshop (AiCrane)  Port Harcourt  Topline Limited	
12	Installation of 30 Ton Overhead Crane in workshop (AiCrane) Port Harcourt Winsko Services		Winsko Services
13	Installation of 5 Ton Overhead Crane (Workshop/Crane works ongoing) (AiCrane) ANOH Gss (Asa North) Gladtrico Nigeria Ltd.		Gladtrico Nigeria Ltd.
14	Home Elevator for residential homes (Duplex of 3 Floors) (Dezen)Port HarcourtEstate under development		Estate under development
15	5Maintenance of Rough Terrain CraneBUA Terminal, PHBUA PLC		BUA PLC

## **CONSTRUCTION OF OIL FACILITIES & CIVIL INFRASTRUCTURE**

Our construction division provides a wide range of services across several sectors as follows:

• Offshore Oil & Gas Facilities:

Our Oil & Gas Facility construction services is focused on offshore assets, with experience in maintenance and upgrade of Offshore Production platforms. Operating from our Fabrication Yard with a jetty, we can prefabricate sectional replacements of piping and structures or complete platforms, handle marine transport and offshore installation. The major distinguishing factor we have is the Engineering modifications we can make to these platforms to enable them accommodate future expansion for subsea tieback of new wells.

Cryogenic Tank Manufacturing:

We have the know-how for design and manufacture of cryogenic tanks and special purpose tanks for gas and chemicals products storage.

Workshops, Warehouses & Industrial Facilities:

We have experience and capabilities in construction of Workshop and Warehouse structures having overhead cranes installed in it. This capability includes development of industrial clusters hosting diverse sizes of workshop, Warehouses, Industrial buildings, etc. We have delivered workshop and warehouse construction of various capacities. These types of warehouses are well suited for Operational bases of companies in sectors such as Oil & Gas, Marine services, Ports, Manufacturing, warehousing and logistics, etc.

### Civil Construction:

We have the capability to handle the design and Construction of Civil works such as Roads and Bridges, Railway projects, Industrial facilities, Structural Steel works, Water and Waste water treatment plants, Municipal water, Dams and Irrigation Projects. We also provide solutions in coastal Engineering works such as breakwaters, quay walls, Shoreline protection, Seawall construction, Swamp land reclamation, Dredging and Sand filling. Offshore Platforms Construction & Brownfield Eng.



Ware house Construction / installation of Overhead Crane



#### Bridge Construction project



### **CONSTRUCTION OF OIL FACILITIES & CIVIL INFRASTRUCTURE EXPERIENCE**

S/N	S/N SOME CONSTRUCTION PROJECT EXPERIENCES PROJECT LOCATION CLIENT / C		CLIENT / COMPANY	
1	Shore line protection and stone pitching (KP-10 Gas line encasement works)	Isiopko, Rivers state	Total E&P/ Topline limited	
2	KP-10 Shoreline protection /Gas line encasement (Subcontract)	Isiokpo, Ikwerre LGA	Total E&P/ Topline limited	
3	Construction of 24m x 42 m workshop with overhead crane	Port Harcourt	Topline Limited	
4	Reconstruction of Warehouse facilities and external workshops	Port Harcourt (Azikiwe Rd)	Alliance Autos (CFAO)	
5	Swamp Reclamation of Base location & construction of buttress wall	Port Harcourt	Topline Limited	
6	Piping Fabrication for replacement of corroded piping spools. (Sub contract)	Offshore platforms	River Safe Solutions/Amni.	
7	3km road projects	Imo State	Imo state Gov.	
8	Bridge Design (Subcontract)	Bayels State	Harmonie Engineering	

### **CONSTRUCTION OF PIPELINE & TANKS**

- Onshore pipeline construction: We are able to carry out on-shore pipeline and flowline construction on challenging terrain spanning across stable ground and swamp locations. Our pipeline construction is for all category of services from Oil & Gas, Water & Waste water, Hazardous fluids, etc.
- Offshore pipeline construction: Our major Offshore Pipeline and Flow line construction solutions centers around Subsea pipeline Route survey, alignment sheets, Trenching, burial and Backfill Ploughing, hot taps and tie-ins. In collaboration with our technical partners, we are able to carry out installation of hot-tap tees that will enable the operator to tie-back subsea wells.
- Pipeline Sectional replacement services: We carry out pipeline sectional replacement on corroded pipelines. We provide this service both for land, swamp and offshore locations.
- Pipeline Protection Works: We execute Pipeline Protection works like Concrete encasement and offshore pipeline mattress. For swamp locations, this involves preparation of access roads to location, land stabilization, etc..
- Pipeline Cleaning Services: We have the capability to execute pipeline descaling and cleaning services using Mechanical Scrapper, Chemical and Gel cleaning solutions to remove wax and calcium deposits that clog pipelines.
- Pipeline Inspection: We carry out Pipeline inspection works using intelligent pigging as part of our pipeline integrity assessment solutions.
- Petroleum Products Tank Terminals: We have built up project delivery capability covering: Oil and Gas Export terminals, Petroleum Products Tank farms, Petroleum Products Inland depots, Domestic gas terminals. These type of oil and gas facilities are inclusive of connecting pipelines for loading and offloading, as well as interconnecting pipelines to nearby industrial installations.

#### Pipeline Construction on land, ongoing



Subsea Pipeline Construction is ongoing



Installation of Pipeline mattress



Petrleuim products Tank terminal



#### **PIPELINE & TANKS WORK EXPERIENCE**

S/N	PIPELINE & TANK PROJECT EXPERIENCES	ASSET LOCATION	CLIENT / COMPANY
1	KP-10 Gas line Encasement works (Subcontract)	Isiokpo, Ikwerre LGA	Total E&P/ Topline limited
2	Construction and installation of Offshore Pipeline connectors (Regular work experience)	Bonga Field	SNEPCO
3	Construction of Petroleum products Tanks (Supply of welder & Supervision)	Port Harcourt	Subcontract @ Oando

# **BUILDINGS, PORT CONSTRUCTION & CONCESSIONS**

**High Rise Buildings:** We have the capability for execution of high rise buildings. High rise building construction has so much to do with tower cranes. We leverage on our expertise in cranes and precast construction to deliver top rated building projects. These projects can be executed as awarded contracts, building financing or investments. Some of the High rise building projects which we can develop are:

- / Hotels, Office Complex and Hospitals
- J Studio Apartments, Student Hostels and Educational facilities
- / Mixed commercial and corporate buildings
- Condominiums (Residential apartments) and housing Estates.

# Jetty & Boat Terminals:

We can carry design and construction of Jetties and Boat terminals for inland water way boat transport linking up riverine communities with modern boat terminals and boat transport. We are working on developing a boat transport / ferry network in some coastal communities in collaboration with some partners and stakeholders.

**Port Concessions:** We have the capability to carry out Sea port Construction and concessions, Greenfield ports construction and existing ports upgrade. Seaport upgrades would normally include Survey, design, and Cost estimation and Planning.

The scope of work for Port expansion may include Quay expansion, port offices and housing facilities, Power generation and fuel gas supply. Port Industrial park development with Roads, Gas and product pipelines network, rail tracks, drainages, stacking areas, helipads, Port housing Estate, etc.

Our concession business development direction is focused on port concessions only. We seek seaport concession contracts on PPP basis that is structured with moderate and practicable terms, able to bring good returns for investors. Condominium and Flats for Expat staff Quarters



#### Boat Terminal



Seaport Contruction / Expansion works



#### **QHSE POLICY**

- Bullion Offshore Contracting Ltd has a strong HSE and Quality policy driven by a culture of excellence. All our services and products are delivered in accordance with International best practices for Quality. Same applies for HSE. We pay attention to providing safe workplaces for workers and strive to maintain an high level of HSE practice in all aspects of our work, in compliance to industry standards and client satisfaction.
- We maintain a culture of regular HSE awareness sessions and meetings for staff at office and worksites as well as providing training opportunities to raise the workers' HSE efficiency and quality consciousness in delivery of products and services.
- We are totally committed to all the laws and legislations governing the Oil and gas industry, safety, occupational health and environment in addition to continuous improvement on our own internal regulations and systems. This policy is revised periodically to ensure its compliance for sustainability.

1	Nigeria Office:	Bullion Offshore Contracting Ltd.
	(Engineering & Project Services)	No 50 Green Village Estate,
		Old Refinery Road, Port Harcourt,
		Rivers State.
2	Shipyard (Leased)	c/o Taraba Jetty Slipway
		Borokiri, Port Harcourt, Rivers State
3	Fabrication Yard (Leased)	c/o Winsko Serves Base
		Trans – Woji (Slaughter Road)
		By Elschon close, Trans Amadi Industrial Layout, PH.

#### **BUSINESS OFFICES & CONTACTS**