

Kampala Office:

Acacia Place, 4th Floor
Plot 6 Acacia Avenue, Kololo
P.O. Box 35501, Kampala-Uganda
+256 (0) 312 203 009

Kalangala Office:

Plot 3 & 5, Mwena Road
Kalangala Town Council
Kalangala – Bugala Island
+256 (0) 312 253 510/11

www.kis.co.ug

**REQUEST FOR EXPRESSION OF INTEREST TO PERFORM WORK OF DRY-DOCKING
SERVICES AND SURVEY TO MARINE VESSEL MV PEARL (FERRY)**

Kalangala Infrastructure Services Ltd (KIS), is a Utility company under Public Private Partnership (PPP) operating on Bugala Island, Lake Victoria, Kalangala District. We provide daily ferry services between Luuku and Bukakata, generate and distribute electricity, and abstract, treat and supply water.



Under its Ferry services KIS operates two ferries ***MV Pearl*** and ***MV Ssesse*** between Bukakata and Luuku. These ferries are operated to international maritime standards ensuring safe and reliable operations. As a result, KIS regularly dry docks the vessels to perform major routine repairs and maintenance.

It is upon this background that the company hereby invites interested firm/firms and surveyor (Owner's Engineer – who will supervise work on KIS' behalf) to submit sealed proposals to perform work of Dry-docking services for MV Pearl that is expected to be done at either Port Bell Docking facilities at Luzira, Uganda or at the contractor facility/yard as the case may be. For details on the scope of works and specifications of Dry-docking please log onto our web site www.kis.co.ug or KIS social media sites i.e. Facebook: www.facebook.com/KISLtd Twitter: <https://twitter.com/kisltd>

Proposals should be addressed to the "Procurement Committee" and delivered to the address above at Kampala Office at or before **1700Hrs Local time on 7th December 2018**.

Directors: *Prof. John Senfuma**, *David Mpanga**, *Emmanuel Mutahunga**, *Benon Kajuna**, *Matome Thenga***, *Ravi Dhanani****

Ugandan, **South African, * British*

KALANGALA INFRASTRUCTURE SERVICES LTD.

SPECIFICATIONS

FOR

**Works in Connection with the dry docking
and repairs of**

M/V Pearl

(February 2019)

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1. SHIP GENERAL

10. Specification, Estimating Instruction

In the following, the Owner will be referred to as “**Owner**”. Contractor performing the works as specified in this specification will be referred to as “**Yard**”.

Yard shall specify price for each item in this specification and give a total timeframe for the completion of works and provide 2 quotes one indicating the price inclusive of provision of dock facility and the other were the Owner procures the docking facility

Specification is built up using the SFI-Code.

101. Contract Work

The following document serves as docking specification for the docking works on the ferry MV Pearl.

By entering into Contract with Owner, Yard commits to performing the duties specified in this specification to the Owner's satisfaction.

Further, by submitting tender, the Yard commits to the following terms:

1. Ferry is insured by Yard throughout the period of the works including any extensions resulting from delayed works. The yard has the ferry insured until Owner has signed for the handover of ferry after works completion.
2. The Owner reserves the right to enter into a contract with third party suppliers and contractors at any time for works not covered by this specification or where specifically stated under work item.
3. All extra works are to be agreed in writing and mutually signed by Yard and Owner before commencement. If the extra works result in an extension of time, it is to be stated in writing to the Owner.
4. Any price escalation in the prices offered by yard in the tender will not be accepted by Owner, unless mutually agreed as stated under sub item 4.
5. All prices in the tender are to be to the full extent of the completed works and shall include all materials, skilled and unskilled labour, prices are to be quoted in USD.

11. Certificates

The Yard is responsible for obtaining all the required certificates for equipment and materials used during the works and submitting same to the Owner and/or owner's representative.

The owner and/or owners representative has the right to demand additional documentation and testing of materials at the Yard's expense if this is necessary to satisfy national authorities and/or international rules and regulations ferry is serving under.

12. Quality Assurance, General Work [Yard]

121. Quality Assurance, Planning, Work Preparation

Quality of works shall be according to shipbuilding and repair IACS standard no. 47 for repair of steel works. Painting works shall follow the recommendations and guidelines laid out by respective paint manufacture and guidelines in this specification.

In general, work is to be performed by skilled labourers to a standard of good craftsmanship. Where unskilled labour is used, an experienced and skilled work foreman shall supervise ongoing works.

Works are to be well planned and time frames for completion to be known by supervisors and workers. Where time frame for completion is lapsing, an action plan for catch-up shall be presented to owner and/or owners' representative in writing within 1 (one) working day of owner and/or owners representative request.

122. Work Management, Fire Guard, Watch-keeping

Work management plan (schedule) to be made by Yard to cover all aspects of work areas for timely completion. If delays occur, original and an updated work management plan is to be presented to the owner and/or owners' representative on either's request.

Fire Guard is to be present during hot works, under the agreement if possible. Yard may request a crew to act as fireguard. Request to be submitted to the owner and/or owners' representative. Yard is responsible for all protective equipment and fire-fighting equipment to be used by fireguard and such to be made available at the location of works and fire guard duty.

Night watchman is to be made available by Yard at Yard's expense for the security of the ferry.

123. Clearing and Cleaning

Right after dry-docking, the ferry is to be high-pressure, freshwater cleaned all-over with min. 400 Bar hydro blaster to evaluate the deterioration of existing paint system and evaluate scope of work.

At the end of works and latest before undocking and further delivery of ferry back to Owner, a thorough cleaning of all spaces accessed during works to be performed by Yard to ensure the cleanliness of the ferry.

Works finishing in access areas to be cleared and cleaned immediately for safety reasons.

125. Transportation

Yard is responsible for all transportation of goods and materials to and from the yard and within the yard if ferry is under the dock yards repair.

126. Owner's Supply

Owner has the right to supply own goods and third-party contractors as specified under 101 item 2.

Should the owner and/or owners representative request assistance from yard in assistance with supply, Yard is obliged to assist to the full extent for the timely completion of the ferry.

128. Health, Environment, Safety

Yard is to maintain safe working environment and have PPE available for workers and the specific works undertaken.

Yard shall make available standard PPE equipment e.g. helmet, glasses, gloves ear protection for workers and people moving around on the yard.

2. HULL

20. Hull Materials, General Hull Work

201. Hull Materials [Yard]

Hull materials are to be certified to the extent required by national authorities and international rules and regulations. Hull materials are to be suitable for the place where they are intended to be used.

203. Blasting and Shop priming [Yard]

All new steel plates to be mounted blasted and shop primed to min. SA2.5 shop primer zinc rich to 20my and have class approval. Plates may be used as pre-shop primed from manufacturer.

26. Hull Outfitting [Yard]

High-pressure cleaning of sea chests, outside box coolers and removal of any foreign bodies. Paint-scheme sea chests and box cooler compartments to follow item 271 Bottom.

Overhaul of sea-valves with new spindle packing material, flange packings bolts and nuts.

Visual confirmation and inspection to be performed by owner and/or owners' representative

27. Material Protection External [Yard]

General

A Paint specification to be supplied by yard for owner's approval, paint scheme to be from HEMPEL.

271. Bottom [Yard]

Works flat/vertical bottom to waterline

1. Sand Blast paint damaged areas.
2. Repainting of cleaned areas to follow approved paint scheme from supplier HEMPEL.
3. Painting of complete bottom up to four coats.
4. Microns to be measured between coats.

272. Top Side

Waterline to deck including fender [Yard]

1. High pressure washing after docking with min. 400 Bar to remove loose paint.
2. Repair of paint damage as follows:
 - Mechanical cleaning to ST3 and edges to intact paint system to be feathered. Price to be given per spot, 100x100mm, 200x200mm, 300x300mm and per 1 (one) m2.
 - Repainting of mechanical cleaned areas to follow approved paint scheme from supplier HEMPEL.
 - Repainting of name, hometown and markings (depth etc.), in white.
 - Microns to be measured between coats.

Bulwark outside [Owner]

1. High pressure washing after docking with min. 400 Bar to remove loose paint.
2. Repair of paint damage as follows:
 - Mechanical cleaning to ST3 and edges to intact paint system feathered price to be given per spot estimated 100x100mm, 200x200mm, 300x300mm and per m2.
 - Repainting of mechanical cleaned areas to follow approved paint scheme from supplier HEMPEL.
 - Full Painting of Bulwark outside according to paint scheme.

Bulwark inside and main deck (Including ramps) [Owner]

1. High pressure washing after docking with min. 400 Bar to remove loose paint.
2. Repair of paint damage as follows:
 - Mechanical cleaning to ST3 and edges to intact paint system feathered price to be given per spot estimated 100x100mm, 200x200mm, 300x300mm and per m2.
 - Repainting of mechanical cleaned areas to follow approved paint scheme from supplier HEMPEL.
 - Full Painting Bulwark inside and full painting main deck according to paint scheme.

Superstructure, PS, SB, wheelhouse and upper decks [Owner]

1. High pressure washing after docking with min. 400 Bar to remove loose paint.
 2. Repair of paint damage as follows:
 - Mechanical cleaning to ST3 and edges to intact paint system feathered price to be given per spot estimated 100x100mm, 200x200mm, 300x300mm and per m2.
-
- Repainting of mechanical cleaned areas to follow approved paint scheme from supplier HEMPEL.
 - Full painting superstructure outside, full painting upper decks according to paint scheme.

273. Ballast Tanks [Yard]

All rusted ballast tanks to be cleaned and repainted according to the paint scheme from supplier HEMPEL.

278. External Cathodic Protection [Yard]

Extent of exchange of zinc on bottom to be agreed between owner and/or owners' representative and Yard after dry-docking and high-pressure cleaning.

Enough Zinc is available onboard should it be found necessary to renew.

3. EQUIPMENT FOR CARGO [YARD]

311. Ramps

Replace broken flap stoppers where applicable.

Brackets to be installed to stiffen ramp construction.

4. SHIP EQUIPMENT [YARD]

42. Navigation Equipment

All navigation equipment to be tested for correct operation and yard to submit test protocol to owner after test is completed stating the test results.

Echo sounders in hull bottom to be checked for proper function.

Windshield wipers in wheelhouse to be repaired, adjusted and checked for correct function.

42. Communication Equipment

All communication equipment to be tested for correct operation and yard to submit test protocol to owner after test is completed stating the test results.

Testing of communication equipment to be completed after the complete rewiring of the electrical on the ferry.

43. Anchoring and winch equipment

431. Anchors w/chains and equipment

Anchors and anchor chains to be rolled out and inspected for damages, owner and/or owners' representative to be advised when anchor and anchor chain is ready for inspection.

Anchor and chain to be rolled out on suitable steel or wooden plates, preventing sand or foreign bodies from entering the chain knuckles.

After inspection chain to be sprayed with oil e.g. vegetable oil or deep fat frying oil for preservation of the anchor chain while being winched back on the ferry and into the chain locker.

438. Hydraulic oil systems for anchoring and mooring equipment

Hydraulic pumps

Hydraulic pumps to be inspected, operating pressure to be measured by pressure gauge before dismantling any parts of hydraulic system, pumps to be monitored for abnormal sounds.

A hydraulic oil sample to be extracted from the hydraulic system and sent to a certified laboratory for testing, immediately after ferry arrival to the yard.

Test report to be handed to owner and/or owner's representative for perusal of foreign bodies in hydraulic oil.

Hydraulic motors

Hydraulic motors on anchor and ramp winches to be opened and visually inspected together with owner and/or owner's representative for abnormal wear.

Control Valves and filters

Control valves to be opened and cleaned for foreign obstacles and overhauled with new gaskets and O-rings.

Some valves to be replaced, i.e. VARIANTS EMERGENCY Control Level for directional control valve (ADC/AD.3.E)
AD3E04CLE Aron spa (ITALY)

Hydraulic oil filters to be replaced with new ones from a recognized dealer.

Testing

After service is completed the system to be operated and tested for correct pressure and function together with owner and/or owner's representative, test reference is lowering and hoisting of ramp.

5. EQUIPMENT FOR CREW AND PASSENGERS [YARD]

50. Lifesaving and Protection Equipment

501. Lifeboat

Inspection of the internal and external of the rescue boat for damages. Outboard engine to be serviced and tested for correct operation. Wire harness to be inspected, cleaned and tightened. Where applicable, oil and spark plugs to be replaced with new.

Oil and spark plugs to follow makers instruction.

A speed test to be performed with the rescue boat after service to ensure smooth sailing and operation at maximum speed.

The Hoisting mechanism for the Life boat Davit is not functioning well. Should be replaced.

Lifeboat davit wire to be rolled out completely and checked for damages.

Lifeboat davit quick release to be tested after service is completed.

Modify existing Davit to electrical using 24volts. Specifications to follow.

503. Lifesaving, safety and emergency equipment

All Floating devices to be inspected by yard.

Signs on floating devices to be polished so markings of certification are clear for flag state inspection. New floating devices to marked with correct plate marking stating number of persons capable of carrying.

506. Portable Fire extinguishers

Portable fire extinguishers to be replaced and/or serviced by an authorized workshop and remounted on same locations on the ferry.

Thread on fire plan holders to be greased and repainting to be done in signal red colour.

6. MACHINERY MAIN COMPONENTS [YARD]

60. Diesel Engines for Propulsion

601. Diesel Engines

Portside and starboard side Propulsion units shall have service according to the makers (MAN) service interval instructions for 20,000 – 25,000 hours maintenance. This implies that both engines will undergo **major overhaul**.

The intervention at the 20,000-hour service interval will include the following;

1. Fuel valves to be replaced with new or overhauled adjusted to correct injection pressure.
2. Inlet and exhaust valves shall be checked for correct clearance and readjusted accordingly.
3. Carry out General overall of both portside and starboard engines.
4. Oil sample to be extracted from the main engines sump immediately after ferry arrival to the yard and sent to a recognized laboratory for analysis results to be presented to the owner and/or owner's representative.
5. All belts to be replaced and adjusted for correct tension.
6. Main Engine day tank below in engine frame mounting to be opened and cleaned. Owner and/or owners' representative to verify the cleaning works before reassembling covers.
7. Main engine switchboards to be opened and all terminal connections to be tightened.
8. Cooling water to be replaced with new coolant premixed or mixed according to coolant makers instructions. Coolant to comply with engine maker recommendations.

Expansion tanks to be cleaned prior to refilling cooling media.

9. Oil cooler to be opened and cleaned and closed with new packing's.
10. All pressure and temperature gauges to be checked for correct function.
11. Canopy to be thoroughly cleaned and canopy doors to be readjusted to close completely. Canopy door handles to be replaced. Canopy door packing to be replaced with new ones.
12. All bolts, nuts and joints to be retightened according to makers torque listings.

13. All alarms to be tested and capability to reset local and from wheelhouse control console.
14. AC Processor and Diodes to be installed.
15. Linear Motor and Morse cable unit No.2 to be replaced.
16. Accelerator Handle for engine No.2 malfunctioned. To be rectified or replaced.

63. Propellers and Transmissions [Yard]

635. Thrusters units

A hydraulic oil sample to be extracted from the thruster's unit's servo system immediately after ferry arrival to the yard and sent to a recognized laboratory for analysis results to be presented to the owner and/or owner's representative.

Cardan shafts to be checked for correct alignment and bolts retightened according to makers torque listing on drive side and propeller unit side.

Cardan shaft couplings to be greased according to makers instructions.

Gear oil to be drained and replaced with new according to maker's recommendations.

Propeller to be visually checked for wear and wear marks to be noted on a sketch of the propeller for future reference.

Replacement of Propeller Blade, Torque motor, Worm shaft on unit No.2 will be carried out.

Gear Box on unit No.2 to be fitted with new pressure switch.

7. SYSTEMS FOR MACHINERY MAIN COMPONENTS [YARD]

70. Fuel System

701. Fuel Transfer System

Fuel transfer pumps to be replaced with new ones. i.e. 2 Pumps.

After replacement, fuel pumps delivery capacity to be tested by filling the day tank with approx. 100 liters from bottom tank and measured against pump capacity.

Fuel transfer piping observed leaking. Should be replaced with new pipes.

Fuel bottom tanks to be opened and internally cleaned and deposits disposed of by yard, manhole gaskets to be replaced with new.

Owner and/or owners' representative to do visual inspection of the internal of fuel bottom tanks before closing.

All filters in the fuel transfer line to be replaced with new ones and pipes blown through with air.

72. Cooling Systems

Box Coolers Internal

A 24-hour acid cleaning to be performed and thereafter flushing with clean water.

Box Coolers External

Hydro blasting and scrapping, with non-metallic scrapper.

Flushing of all cooling water pipes and manual operating of butterfly valves to ensure easy movement open/closed position.
Valves to be serviced.

8. SHIP COMMON SYSTEMS [YARD]

803. Bilge/Ballast system

Bilge/ballast system to be tested by means of suction from all bilge and ballast tanks.

After successful completion of the bilge and ballast system suction testing, yard to instruct engineer onboard in bilge and ballast system operation.

813. Fire/wash down System

All fire hoses to be rolled out and tested for leaks.

All fire hose piping to be checked for leaks and repainted in colour signal red.

After completion of service a spray test to be performed to ensure correct operation of pumps in fire mode and integrity of the complete fire system.

The magnetic clutch for generator No.1 (Water pump) to be replaced with new one.

A smoke detector system to be installed in Bridge, store room and generator set room.

When the ferry is in motion, fire pumps can't draw water. This must be rectified.

87. Common Electric distribution systems [Owner]

The complete electrical distribution system to be checked for proper function.

Check all switch boards for proper functioning of all warning lights, controls from the bridge console and public address system.

9. MV PEARL MODIFICATIONS AND ADDITIONS [YARD]

M-1: INSTALLATION OF OFFICE/WORKSHOP INSTEAD OF TWO RESTROOMS

Yard must present proposal for making office/workshop facilities in the **two** closed restrooms. The other two restroom to be renovated and one marked "Ladies" and the other "Gentle Men" as requested by Surveyor.

Replace all Doors with metallic doors.

M-2: ELECTRICAL SHORE CONNECTION

Yard must present proposal for establishing onboard shore connection and integrating with ferry electrical distribution system. Shore connection to be delivered with inverter for charging consumer batteries and to be lay out for 230VAC 50Hz shore connection facilities ashore.

Deck lights to be replaced with Water proof (Water tight) lights

New Horn to be fitted. i.e. Electric Marine Horn.

New Search Lights with 24v,250wt Bulbs to be fixed and changed to Manual operation.

M-3: OTHER MODIFICATIONS AND REPAIRS

Yard must present proposal for the following works;

Cutting, Removal and fixing of new plate at the Bent Keel plate and frame.

Replacement of all the wooden timber on the passenger seats

Addition of more Deck Scuppers to drain water from the main Deck.

Replacement of the upper store door with a water tight door. The one existing lets in water when it rains.

Replacement of the rubber gaskets on the Generator set and Pump room door.

Replacement of the window wipers at the Bridge.

ADDITIONS:

1.Spraying of the engine canopies. (Royal Paint). By Yard.

2.Invitation of the HRP Electronics Technician to configure the AC Processor on the main engine unit no.1