

**ANNEXURE A: SCOPE OF WORKS/PRICING SCHEDULE**

*Respondents are required to complete the table below:*

<b>TUG UMTHWALUME DRY DOCK / LAY-UP SCOPE OF WORK</b>				
<b>Please note each item to be quoted for and grand total to be shown</b>				
<b>DESCRIPTION</b>				
<b>ITEM:1</b>	<b>HULL AND DECK CLEAN AND BLAST (Cleaning to Jotun specification supplied)</b>	<b>QTY</b>	<b>Unit price (Excl VAT)</b>	<b>Total price (Excl VAT)</b>
1	Remove and replace 3 sea chest gratings	3		
2	Remove marine growth and barnacles allowing for hand scrape if required (250 square meters).	250		
3	High pressure wash entire vessel with fresh water at 220b	1		
4	Cover / plug all vents, breathers, air intakes, propeller seals and machinery etc., to prevent ingress of grit and water.	1		
5	Remove and supply anodes and renew after painting of hull, 85 off (TNPA to supply Specification) to successful bidder	85		
6	Full blast hull below water line to SA 2.5. And disk	640		
7	Spot blast hull above waterline, bulwarks internally, externally as required to SA 2.5 and disk. (150 square meters)	150		
8	Spot blast main deck alleyways as required to SA 2.5 and disk (10 square meters)	10		
9	Spot blast fore deck as required to SA 2.5 and disk(5 square meters)	5		
10	Spot blast main deck aft including bitts, hatches, coamings and manhole covers to SA 2.5 and disk (30 square meters)	30		
11	Spot blast boat deck including coaming to SA 2.5 and disk(5 square meters)	5		
12	Rinse after blasting	1		
<b>ITEM:2</b>	<b>HULL AND DECK PAINTING Contractor to supply paint (Paint scheme to Jotun or similar specification supplied)</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Apply 2 coats epoxy primer to hull underwater area and 1 coat to bulwarks blasted area	2		
2	Apply 2 coats of NS5 to main deck blasted area	2		
3	Apply 1 tie coat to hull and bulwarks	1		
4	Apply 2 coats of anti-fouling to below water line area	2		
5	Apply 1 topcoat to above water line area and bulwarks	1		
6	Apply 1 full coat none slip deck green (walkway compound) to all deck area	1		
7	Paint grid securing bolts	1		
8	Cut in water line	1		
9	Provide 2-year Jotun or similar paint certificate from paint specialist.	1		
10	Goose necks / vents to be repaired (Assumed thread repair)	16		
11	Repaint names and draft marks on hull	1		
12	Plus hire of painting platforms	1		

ITEM:3	SUPERSTRUCTURE CLEAN and PAINT(TNPA to supply paint)	QTY	Unit price	Total price
1	Wash down with high pressure fresh water at 220b	1		
2	Remove rust where required and feather in by disk	1		
3	Treat de-rusted areas and apply 2 coats of NS5	2		
4	Apply 1 full coat of white enamel to superstructure	1		
5	Paint funnel with supplied red Transnet paint.	1		
6	Replace railings on bridge and boat deck approx. 20mmx 20m round bar	1		
ITEM:4	FENDERS AFT	QTY	Unit price	Total price
1	Remove and refit horizontal fender	1		
2	Remove and refit vertical fenders. 34 off	34		
3	Renew fender locating pins as required. 17 off	17		
4	Straighten fender locating pins as required. 17 off	17		
5	Renew vertical fender palms as required. 17 off	17		
6	Miscellaneous repairs to stern section. (Allow for 500 <b>kg of steel</b> )	500		
ITEM:5	DOCKING PLATFORM / PROP GUARD	QTY	Unit price	Total price
1	<b>Docking platform struts to test</b> for cracks by dye penetrant or MPI. 8 struts top and bottom and provide test report	1		
ITEM:6	FENDER BOXES, BELTING & BULKHEADS	QTY	Unit price	Total price
1	Patch holes on bulkheads. Allow for 500kg	500		
ITEM:7	ANCHOR CHAINS	QTY	Unit price	Total price
1	Anchor chains to range and re-stow. Move up one shackle	2		
2	Kente shackle to be replaced. (Service Provider to supply and provide <b>certificate</b> ) after replacement	2		
3	High pressure wash with fresh <b>water at 220b</b>	1		
4	Mark chains at each shackle with white enamel and red for joining shackle	12		
5	Apply owner's linseed oil during stowing	1		
ITEM:8	ANCHOR	QTY	Unit price	Total price
1	Sweep blast and apply 1 coat black epoxy paint to anchors	2		
2	Free up anchors and swivels if seized	2		
3	Working winch brake to be inspected for (port and starboard) capstons to be inspected	2		
ITEM:9	CLEANING (Service Provider to provide for gas free certificate if required) before entry in the Tanks	QTY	Unit price	Total price
1	Open and clean fresh water tanks ,Renew jointing, gaskets and fasteners as required/high pressure wash, derust and touch up as required	2		
2	Open and clean foam tanks, renew jointing, gaskets and fasteners as required / high pressure wash and repair where necessary. Top tank to be full painted and up to 1M vertical (bulkhead) painted. <b>(Service Provider to arrange for pumping and storage of foam)</b>	2		

3	Open and clean fore and after peaks remove rust and apply paint as required / high pressure wash	2		
4	Open and clean dirty oil tank. Renew jointing, gaskets and fasteners as required	1		
5	Open and clean sludge tank. Renew jointing, gaskets and fasteners as required	1		
6	Open and inspect cofferdam aft store	1		
7	Open and inspect Cofferdam engine room workshop	1		
8	Open and clean Chain locker tanks	2		
9	Open and clean main engine oil drain tanks, Renew jointing, gaskets and fasteners as required	2		
<b>ITEM:10</b>	<b>BOW LEAD / CRUCIFORM</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Weld up and grind smooth or renew doubler plates	1		
<b>ITEM:11</b>	<b>Z PELLER PROPULSION UNITS</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Remove and replace after bluing port and starboard propeller	4		
2	Allow for welding of port and starboard kort nozzle wear rings. Budget for 9 hours	2		
3	Clean and Polish propeller	2		
4	Allow machining of seal liners	2		
5	Propeller shaft and key ways to be crack tested for South African Maritime Safety Authority) SAMSA survey	4		
6	Renew Prop seals and O-rings (Service Provider to supply, TNPA to supply specifications) – before commencement of works	4		
<b>ITEM:12</b>	<b>Z PELLER COOLERS REMOVE TO WORKSHOP</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Punch and clean port and starboard coolers	2		
2	Apply Apexior No3 to inside of covers	2		
3	Renew O rings. TNPA supply	2		
4	Pressure test coolers to 5bar to test for leaks and <b>Provide test certificate – after testing</b>	2		
5	Renew gaskets on coolers and pipework	2		
6	Renew anodes as required. (Service Provider <b>to supply and manufacture to specification</b> )	1		
<b>ITEM:13</b>	<b>CLUTCH COOLER REMOVE TO WORKSHOP</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Punch and clean port and starboard coolers	2		
2	Apply Apexior No3 to inside of covers	2		
3	Renew O rings	2		
4	Pressure test coolers to 5bar to test for leaks and <b>provide test certificate – after tests</b>	2		
5	Renew gaskets on coolers and pipework	2		
6	Renew anodes as required. (Service Provider <b>to supply and manufacture to specification</b> )	2		
<b>ITEM:14</b>	<b>MAIN ENGINE FRESH WATER COOLERS IN SITU</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	<b>Punch and clean port and starboard coolers</b>	2		
2	Apply Apexior No3 to inside of covers	2		
3	Renew O rings	2		
4	Renew gaskets on coolers and pipework	2		

5	Pressure test coolers to 5bar to test for leaks and <b>provide test certificate</b>	2		
6	Renew anodes as required. (Contractor to supply and manufacture <b>to specification</b> )	2		
7	3-way thermostatic control valve stbd <b>side to be overhauled</b>	1		
5	Renew gaskets on coolers and pipework	2		
6	Renew anodes as required. (Contractor <b>to supply and manufacture to specification</b> )	2		
<b>ITEM:15</b>	<b>MAIN ENGINE LUBE OIL COOLER IN SITU</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Punch and clean port and starboard coolers	2		
2	Apply Apexior No3 to inside of covers	2		
3	Renew 0 rings	2		
4	Pressure test coolers to 5bar to test for leaks	2		
5	Renew gaskets on coolers and pipework	2		
6	Punch the tubes out and clean the oil side.	2		
7	Renew the anodes as required. (Service Provider to supply and <b>manufacture to specification</b> )	2		
<b>ITEM:16</b>	<b>MAIN ENGINE CHARGE AIR COOLERS (intercoolers) in situ</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Punch and clean port and starboard coolers	2		
2	Apply Apexior No3 to inside of covers	2		
3	Renew 0 rings	2		
4	Pressure test coolers to 5bar to test for leaks and <b>provide test certificate after tests.</b>	2		
5	Renew gaskets on coolers and pipework	2		
6	Renew the anodes as required. ( <b>Service Provider to supply and manufacture to specification</b> )	2		
<b>ITEM:17</b>	<b>MAIN ENGINES AND ALTERNATORS</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Remove and replace injectors also supply with 16 made anneal washers after cleaning pockets	16		
2	Port and starboard main engine freshwater pumps to be inspected and repaired where necessary	2		
3	Remove and replace camshaft covers after CMEO (Chief Marine Engineer Officer) inspection. Renew gaskets and jointing	2		
4	Cylinder heads to be removed and overhauled and supply with copper head gaskets and replace cylinder heads if required (TNPA to supply gaskets sizing) on Port Main engine	3		
5	Recondition or replace port main engine indicator cock valve and handles	16		
6	Service exchange to be done on Turbo charger for NO. 2 Marine Gen-set Caterpillar 3306 Serial no. 66D20953	1		
<b>ITEM:18</b>	<b>OVERHAUL SHIP SIDE VALVES FOR SAMSA SURVEY (Remove sea suction)</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Bodies, overhaul, pressure test and provide test certificate	1		
2	Size 2 inch emergency fire pump suction, discharge and vent	3		
3	Size 2.5 inch Z Peller cooler over boards and main sea chest vents	4		
4	Size 3 inch main engine coolers overboard	2		
5	Size 4 inch main fire pump overboard	1		
6	Size 6 inch auxiliary sea water main	2		

7	Size 8 inch main sea water injections	2		
8	Size 10 inch main fire pump sea water suction and emergency bilge suction	2		
9	Storm valve general service overboard. Remove body and overhaul	1		
10	Storm valve oily water separator overboard. Remove body and overhaul	1		
11	Storm valve sewage and domestic water overboard. Remove body and overhaul	2		
12	Size 8 inch main fire pump bypass valve to remove and overhaul	1		
13	Standby sea water pump suction valve	1		
14	Fwd peak drain valve to remove and overhaul	1		
<b>ITEM:19</b>	<b>PIPES IN THE ENGINE ROOM FOR RENEWAL (all pipes to be Galvanized)</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Pipes on the sea water standby pump to be removed and galvanised	2		
2	Miscellaneous pipes to be replaced	4		
3	Sounding pipe for no8 lub oil tank	1		
4	Breather pipe on starboard main Sea suction Strainer	1		
5	Discharge pipe on Starboard main Sea water pump	1		
<b>ITEM:20</b>	<b>FIRE MONITOR</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Strip and assemble on good order with new gaskets and fasteners etc.	1		
2	Slewing motion. Clear lubrication channels and renew grease nipples as required	1		
3	Vertical motion. Clear lubrication channels and renew grease nipples as required	1		
4	Size3 inch butterfly valve to renew	1		
<b>ITEM:21</b>	<b>MAIN FIRE PUMP AND AUXILIARY PUMPS</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Main fire pump bed plate to be needle scale and painted if required	1		
2	Supply and fit new rubber coupling on main fire pump	1		
3	Recondition gland follower and fit new gland packing on main and emergency fire pump	2		
4	Repair or replace main port SW pump and mechanical seal	1		
<b>ITEM:22</b>	<b>AIR COMPRESSOR</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	<b>Electrical air</b> compressor to be overhauled (TNPA to supply spares)	1		
<b>ITEM:23</b>	<b>DECK HYDRAULIC CRANE</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	<b>Seals to be replaced</b> on hydraulic ram (Service Provider to supply seals)	1		
<b>ITEM:24</b>	<b>BILGE AND GENERAL CLEANING</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Provide labour 4 x 8 hrs x 15 days for cleaning of bilges and assisting TNPA Engineering staff	15		
2	Provide labour 2 x 8 hrs x 10 days for assisting TNPA deck staff	10		
<b>ITEM:25</b>	<b>WORK (Service Provider to provide acceptable signed dated certificate for SAMSA ) after completion.</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>

1	Blackout, isolate switchboard and conduct mega- test on all motor, alt m/switchboard as follows: Port caspan motor	1		
2	Starboard capstan motor	1		
3	Aft winch motor	1		
4	general service motor after	1		
5	general service motor forward	1		
6	Hydrophore outboard motor	1		
7	Hydrophore inboard motor	1		
8	Sea water standby motor portside	1		
9	Sea water motor starboard side	1		
10	Standby lube oil motor main engine	1		
11	sea water motor portside	1		
12	freshwater standby electrical motor	1		
13	Hydro oil motor no2 starboard	1		
14	Hydro oil motor no1 port side	1		
15	Top fuel oil motor	1		
16	Bottom fuel oil motor	1		
17	Main air compressor motor	1		
<b>ITEM:27</b>	<b>HULL AND DECK GAUGING</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Hull and deck thickness test to be done and contractor to provide formal report (300 spots) hull thickness report to be submitted 3 days after the test for SAMSA.	1		
<b>ITEM:28</b>	<b>Miscellaneous work</b>	<b>QTY</b>	<b>Unit price</b>	<b>Total price</b>
1	Budget R100 000 for unplanned work identified after inspection	1	R100 000,00	R 100 000,00
2	Budget for Skilled labour 1 x 20 hours	1		
3	Budget for Semi-skilled labour 1 x 20 hours	1		
4	Budget for Unskilled labour 1 x 20 hours	1		
	<b>TOTAL PRICE, exclusive of VAT:</b>			
	<b>VAT 15% (if applicable)</b>			
	<b>Total Inclusive of 15% VAT (where applicable)</b>			