

**PORT OF SALDANHA  
PILOT BOAT AVOCET-LAY UP BOQ**



**BILL OF QUANTITIES**

**PORT OF SALDANHA  
PILOT BOAT AVOCET-LAY UP BOQ**



**Summary**


	SECTION	TOTAL
1	Hull cleaning	
2	Hull Painting	
3	Seachests	
4	Anodes	
5	Anchores and Cables	
6	Propulsion	
7	Seachest Valves	
8	Overboard valves	
9	Fresh water tanks	
10	Dirty oil tank	
11	Fuel tanks	
12	Grey water tank	
13	Anchor Chain lockers	
14	Fenders	
15	Drydock 1	
16	Drydock 2	
	Total excluding VAT	
	15% VAT	
	Total including VAT	

**\* Note the Bill of Quantities sections which follow must be read in conjunction with the relevant item contained in the scope of services, Annexure A.**

**PORT OF SALDANHA  
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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>1</b>		<b>EXTERNAL HULL CLEANING and PAINTING</b>				
	<b>1.1</b>	<b>HULL &amp; SUPERSTRUCTURE</b>				
		Scrape and high pressure water wash hull exterior. Dispose of the barnacles.	M <sup>2</sup>	305		
	<b>1.2</b>	<b>HULL GRIT BLASTING</b>				
	1.2.1	(SA1 = Will remove lifting rust and paint. 1 nozzle/hour = 15 m <sup>2</sup> ) (SA2.0 = Down to bare metal over 80% of hull). (SA2.5 = At least 95% of the surface shall be clean bare steel with at least 90% of any 25mm square clean bare steel. 1 nozzle/hour = 7 m <sup>2</sup> ). All grit blasting to be conducted in conjunction with the appointed paint representative. This will include the decision as to whether to carry out a SA1.0 or SA2.5 grit blast. Contractors will be responsible for the cleaning and removal of all spent grit from dry-dock and the legal disposal of such.	M <sup>2</sup>	305		
	1.2.2	Light wet Sweep blasting to SA 1 to be carried out on hull [It may be necessary to spot blast certain areas to SA2.5, allow 15% for this]	M <sup>2</sup>	305		
	1.2.3	Wet spot grit blasting to SA1 to be carried out on main deck, upper deck [it may be necessary to blast certain areas to SA 2.5, allow 15% for this]	M <sup>2</sup>	166		
	1.2.4	Wet spot grit blasting to SA1 to be carried out on super structure (Aluminium structure) including masts, hook, windlass and other fixtures. It may be necessary to blast certain areas to SA 2.5 allow 15% for this. [Contractors to ensure all glass areas are covered and protected against damage from shot blast].	M <sup>2</sup>	80		
		<b>Subtotal carried forward to summary</b>				

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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2		<b>HULL PAINTING [On Completion of blasting and mechanically cleaning]</b> <b>NOTE: Paint specs requirements might change by paint specialist.</b> <b>Painters to follow specialist advise. All paint, primer and coatings is free issued by TNPA.</b>				
	2.1	Apply a coat primer paint as per appointed paint representative's instructions to hull exterior, including underwater and side areas, sea chests, and hawser pipes.	M <sup>2</sup>	305		
	2.2	Apply a coat key paint as per appointed paint representative's instructions to hull exterior, including underwater and side areas, sea chests, and hawser pipes.	M <sup>2</sup>	305		
	2.3	Apply first anti-fouling paint as per appointed paint representative's instructions to hull exterior up to and including the waterline. To include underwater and side areas, sea chests, hawser pipes.	M <sup>2</sup>	305		
	2.4	Apply second anti-fouling paint as per appointed paint representative's instructions to hull exterior up to and including the waterline. To include underwater and side areas, sea chests, hawser pipes.	M <sup>2</sup>	305		
	2.5	Apply coat [black] as per appointed paint representatives instructions to hull exterior above waterline. To include hawser pipes, anchors.	M <sup>2</sup>	166		
	2.6	Apply primer coat to prepared exposed areas on superstructure and all decks as per appointed paint representative's instructions.	M <sup>2</sup>	200		
	2.7	Apply final coat [white] to superstructure including masts as per appointed paint representative's instructions	M <sup>2</sup>	200		
	2.8	Paint vessel names, port of registration and draft marks in white.	EA	2		
	2.9	Apply final coat deck green as per appointed paint representative instructions to all decks. [Apply non slip sand to decks.]	M <sup>2</sup>	170		
	2.10	Paint all deck auxiliary equipment such as winches, anchor windlass and fit Denzo tape on metal fittings. (established on site briefing)	M <sup>2</sup>	50		
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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>3</b>		<b>SEA CHESTS AND GRIDS</b>				
	3.1	Remove ships intake grids.	EA	2		
	3.2	Mark grids for easy installation	EA	2		
	3.3	Scrape and high pressure wash inside sea chests and sea chest grids	EA	2		
	3.4	Damaged Intake Grid bolts and threads to be repaired and/or replaced. Broken bolt threads to be removed from holes. [Bolts are stainless steel] [Bolts to be supplied by contrator]	EA	10		
	3.5	Spray paint inside sea chests and grids as per hull specifications	M <sup>2</sup>	50		
	3.6	Replace anodes inside sea chests	EA	2		
	3.7	Replace grids upon completion of painting [Ref : Hull painting]	EA	2		
	3.8	All sea chest grid bolts to be rewired with stainless steel wire. [wire to be supplied by CONTRACTOR]	EA	16		
<b>Subtotal carried forward to summary</b>						


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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	<b>SEA CHESTS AND GRIDS - TNPA to supply anodes, washers and nuts (free issue).</b>					
	4.1	All old anodes to be removed from hull, sea chests and rudder stocks before shot blasting and returned to vessel.	EA	20		
	4.2	All threaded holes to be cleaned [16mm tap] and protected before shot blasting and painting commences.	EA	16		
	4.3	All studs of sea chest anodes to be cleaned and protected before shot blasting and painting commences.	EA	4		
	4.4	Replace new anodes in sea chest, on hull and rudder stocks on completion of painting.	EA	20		
		<b>Subtotal carried forward to summary</b>				

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TRANSNET



ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5	5.1	Range anchors	EA	1		
	5.2	Remark cable.	EA	1		
	5.3	Wet grit blast anchors and cable. (only invoice spare anchor if needed)	EA	2		
	5.4	Coat cable with boiled linseed oil or equivalent. [linseed oil to be provided by contractor].	EA	1		
	5.5	Paint anchor ( Suitable black paint to be provided by contractor).	EA	2		
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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6	6.1	Propellers to be cleaned and polished	EA	2		
	6.2	Cover Propeller from paint work	EA	2		
	6.3	Propellers to be pulled out every four years. The following test have to be done under the presence of SAMSA Surveyor.	EA	2		
	6.4	Shafts straightness tests.	EA	2		
	6.5	Non Destructive testing to check for cracks	EA	2		
	6.6	Blueing of the shaft and the propeller.	EA	2		
	6.7	When the shaft is assembled, stern tubes seals and white metal bearings to be fitted, specification will be provided by the owner	EA	2		
	6.8	On the intermediate dry dock, shaft clearance to be taken and confirm if wear is still within limits	EA	2		
		<b>Subtotal carried forward to summary</b>				





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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>SHIPS SEA CHEST VALVES</b>						
	7.1	Port Sea water inlet valves to strainer (butterfly valve) (DN 200)	EA	1		
	7.2	Stbd Sea water inlet valves to strainer (butterfly valve) (DN 200)	EA	1		
		<b>Subtotal carried forward to summary</b>				


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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>OVERBOARD VALVES</b>						
	8.1	Overboard Fire line valve (65mm) SDNR Globe valve	EA	1		
	8.2	Bilge Overboard Valve (40 mm) SDNR Globe valve	EA	1		
	8.3	Black Water and Grey water overboard valve (40mm) SDNR Globe valve	EA	1		
	8.4	Port Main engine sea water overboard valve (65mm) SDNR Globe valve	EA	1		
	8.5	Stbd Main engine sea water overboard valve (65mm) SDNR Globe valve	EA	1		
	8.6	Port Generator sea water overboard valve(32mm) SDNR Globe valve	EA	1		
	8.7	Stbd Generator sea water overboard valve(32mm) SDNR Globe valve	EA	1		
	8.8	Oily water separator overboard valve (25 mm) globe valve	EA	1		
	8.9	Chain locker overboard valve (40mm) SDNR Globe valve	EA	1		
	8.10	Port Generator overboard valve NRN (DN100)	EA	1		
	8.11	Stbd Generator overboard valve NRN (DN100)	EA	1		
		<b>Subtotal carried forward to summary</b>				

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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Fresh water tank						
	9.1	Port fresh water tank.	M <sup>3</sup>	2.3		
	9.2	Stb'd fresh water tank.	M <sup>3</sup>	2.3		
		<b>Subtotal carried forward to summary</b>				

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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Dirty oil tank						
10		Dirty oil tank	M <sup>3</sup>	1.3		
		<b>Subtotal carried forward to summary</b>				

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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Fuel tanks</b>						
	11.1	Fuel tank Port day tank	M <sup>3</sup>	1.3		
	11.2	Fuel tank Starboard day tank	M <sup>3</sup>	1.3		
	11.3	Fuel Oil double bottom fuel tank -No 4	M <sup>3</sup>	4.6		
	11.4	Fuel Oil double bottom fuel tank -No 6	M <sup>3</sup>	6.7		
	11.5	Fuel Oil double bottom fuel tank -No 7	M <sup>3</sup>	6.7		
		<b>Subtotal carried forward to summary</b>				

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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Black/grey water tanks</b>						
	12	Grey/black water tank	M <sup>3</sup>	1.83		
		<b>Subtotal carried forward to summary</b>				


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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Anchor chain lockers</b>						
	13	Anchor chain lockers	M <sup>3</sup>	5		
		<b>Subtotal carried forward to summary</b>				

**PORT OF SALDANHA  
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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>14</b>		<b>Fenders</b>				
	14.1	Remove and refit belting fenders port.	EA	46		
	14.2	Remove and refit belting fenders Stbd.	EA	46		
	14.3	Replace fender locating pins as required	EA	155		
	14.4	Straighten fender locating pins as required. (only invoice pins worked on)	EA	155		
	14.5	Overhaul vertical fender palms as required.	EA	1		
	14.6	Miscellaneous repairs to stern section.	M <sup>2</sup>	30		
	14.7	Repair belting port side.	EA	1		
	14.8	Repair belting stb'd side.	EA	1		
	14.9	Repairs to port fender boxes.	EA	1		
	14.10	Repairs to stb'd fender boxes.	EA	1		
		Subtotal carried forward to summary				



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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Pipe work & steel work						
15	15.1	Contractor to make provision for steel work	Ton	1		
			Subtotal			
Water Management						
	15.2	Supply water for blasting and cleaning	M <sup>3</sup>	10		
			Subtotal			
Waste Management						
	15.3	Provide waste collection and disposal facilities (contractor to supply TNPA with disposal certificate)	Ton	1		
	15.4	Contents of bilge and sludge tanks to be disposed off legally. Certificate of bilge sludge liquid to be supplied to the vessel. To include location of disposal and volume.	M <sup>3</sup>	10		
			Subtotal			
Chemist						
	15.5	CHEMIST to test and issue gas free certificates for tank entry and hot work permits. (one before entry into tanks for cleaning and one before entry for SAMSA)	EA	4		
			Subtotal			
Drydock						
	15.6	Hire of shore crane contractor to supply equipment(only actual days usage to be invoiced).	Days	20		
	15.7	Hire of cherry picker contractor to supply equipment(only actual days usage to be invoiced)	Days	20		
	15.8	Hire of hyster contractor to supply equipment(only actual days usage to be invoiced)	Days	20		
	15.9	Arrange 380V 3 phase shore supply + extension cable .	Days	25		
	15.10	Arrange ablution facilities	Days	25		
	15.11	Arrange fire main supply	Days	25		
			Subtotal			
Hotwork						
	15.12	Supply Fire Marshall	Days	25		
	15.13	Supply hot work permit	Days	25		
			Subtotal			

**Subtotal carried forward to summary**

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ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Bilge Cleaning and General Cleaning</b>						
<b>16</b>	Deck plates to be removed and bilges cleaned Bilges to be degreased and wiped down					
	16.1	Provide labour for cleaning of bilges and assisting TNPA engineering staff in the engine room	4x8 Hours	5 days		
	16.2	Provide labour for assisting TNPA deck staff for cleaning of accommodation and bridge	4x8 Hours	3 days		
		<b>Subtotal</b>				
<b>Thickness Testing</b>						
	16.3	To do thickness testing as per SAMSA Requirement, plus or minus 80 points.	Points	80		
		<b>Subtotal</b>				
<b>Water tight Compartments</b>						
To clean all watertight doors rubber grooves and fit new rubbers on potholes and watertight doors. Contractor to supply rubber material						
	16.4	Water tight doors	EA	3		
	16.5	hatches	EA	4		
	16.6	vents	EA	3		
	16.7	Battery box	EA	1		
		<b>Subtotal</b>				
<b>Scaffolding</b>						
	16.8	Erect safe access scaffolding to vessel	Days	20		
	16.9	Erect scaffolding on in accessible heights (anodes, fender valve work and cooler)	Days	20		
		<b>Subtotal</b>				
<b>Divers</b>						
	16.10	Provide divers during docking of craft (min 12 hours)	Days	2		
	16.11	Provide divers during undocking of craft (min 8 hours)	Days	2		
		<b>Subtotal</b>				