

Tele:-079-23243374

SPEED POST/E-Mail

Reply should be addressed
to the Commander

Headquarters
Coast Guard Region (NW)
Udyog Bhavan
Post Box No. 09
Sector-11,
Gandhinagar – 382 010

3469/3

05 Dec 19

**PREQUALIFICATION FOR SERVICE RATE CONTRACT FOR UNDERTAKING
18 MONTHLY UNDERWATER AND WATER JET ROUTINES FOR ICGS C-437 &
54 MONTHLY FOR ICGS C-419, C-413 AND C-429
INVITATION OF EXPRESSION OF INTEREST AND COMMENTS/QUERIES**

Sir,

1. It is intimated that e-mail containing defect list alongwith serial wise CGRHQ (NW) remarks (Hull, Engineering and Electrical) for under water and water jet routines (18 and 54 Monthly routines) for the C-413, C-419, C-429, & C-437 Interceptor Boats (M/s L&T built), [Qty-04 Nos.] based under this headquarters has been forwarded todate 05 Dec 19:-

<u>Sl</u>	<u>Package</u>	<u>DL SLs</u>
(a)	Hull	HA-1001 to HA-1055
(b)	Engineering	EA-3001 to EA-3087
(c)	Electrical	LA-5001 to LA-5028

2. Itemwise Technical comments/ queries are invited from the **Registered Refitting firms** for the defects remarked "DO" by CGRHQ(NW) on the defect list enclosed. **Please note that only Technical Comments/ queries need to be forwarded and no "Budgetary Quote" is to be forwarded. Forwarding of budgetary offer will disqualify the concerned refitting yard from the tendering process.**



3. **The routines are to be undertaken at Gujarat only.** The detailed work package w.r.t the periodicity of underwater & water jet routines (as tabulated below) for each IB is forwarded as an enclosure. The likely duration of work package and work package on each boat is as below:-

<u>Sl</u>	<u>IB</u>	<u>Based at</u>	<u>Work package</u>	<u>Likely Refit Duration including docking period</u>
(a)	C-419	Pipavav	54 Monthly Under water & Water jet routines	45 days
(b)	C-413	Okha	54 Monthly Under water & Water jet routines	45 days
(c)	C-429	Jakhau	54 Monthly Under water & Water jet routines	45 days
(d)	C-437		18 Monthly Under water & Water jet routines	30 days

4. The conduct of routines including other general conditions, payment terms etc. will be governed in accordance with provisions of Defence Procurement Manual in vogue.

5. For details of defects on machinery and ship's Hull and to ascertain availability of IBs in harbour and for clearance to visit the boat, you are requested to contact the following as per the base port of Interceptor Boat:-

SL	IBs	Based at	CGDHQ	CG Station
(a)	C-419	Pipavav	The Commander [for DTO] Coast Guard District Headquarters No.1 Post Box No.25, Porbandar, Gujarat- 360575	The Commanding Officer ICGS Pipavav Post Box No.41, Hindorna Chowk, Jafarabad Road, Dist- Amreli Rajula, Gujarat- 365560
(b)	C-413	Okha	The Commander [for DTO] Coast Guard District Headquarters No.15 Post Box No.16, Port Okha, Gujarat- 361350	Okha
	C-429	Jakhau		The Commanding Officer ICGS Jakhau Post- Naliya, Kutch Dist- Kutch Gujarat- 370655
	C-437			



6. It is intimated that a Request for Information Conference (RFIC) will be held to discuss/ clarify the scope of work and to bring all the participating yards at par. It may be noted that the date and venue for RFIC will be intimated by **CGRHQ (NW)** at a later date.

7. You are advised to depute your reps to the IBs for meeting the Commanding Officers in order to assess the defect wise work package physically prior submitting technical comments/queries.

8. It is also desired that suitable reps may be deputed for attending the RFIC on receiving intimation from **CGRHQ(NW)**. Alternatively, a communication may be sent to **CGRHQ(NW)** that you would accept the work package as finalized during the RFIC.

9. In the event that refitting firm/ refit yard do not have its own infrastructure including workshop facility at the place of refit, it should have a "Memorandum of Understanding" (MoU) with a local firm which owns at least a workshop facility befitting the refit of a ship. The shipyard/ refit yard should be a licensee or have a MoU/ agreement with a Port/ PSU/ private refit yard (ICG registered) in whose dock the ship is going to be docked as part of refit. The proof for both the facilities (workshop and dock) is to be attached alongwith the technical bid so as to ascertain the technical qualification of the yard. The refit including docking of the ship shall be undertaken at one location.

10. **It may be noted that RFP will be issued to all those yards who have not conveyed their unwillingness to undertake the refit in accordance with provisions of DPM-09, irrespective of whether they attend RFIC or not.** As such if you do not wish to undertake the refit you should communicate it in writing before the RFIC takes place.

11. It may be noted that CGHQ is contemplating AIAMC contract for certain equipment/systems fitted onboardship. Although, defects on the equipment have been added in defect list but incase the AIAMC contract is concluded prior commencement of contract, Indian Coast Guard will have right to delete the same from the work package. Further, shipyard will not have any objection to undertake defect rectification/repair on equipment offloaded by ship/ICG through local vendors under DFPR and not included in work package.

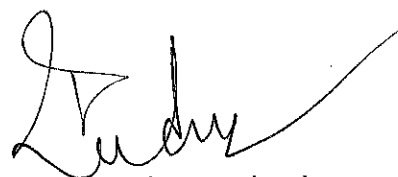
12. It is requested that your **Technical comments/queries** for the defect list serials remarked "DO" by CGRHQ(NW) as per the enclosure be forwarded to reach **Headquarters Coast Guard Region(NW), Gandhi Nagar** with one copy each to the concerned DHQ/Station/IB on the email addresses/fax numbergiven below by

26 Dec 2019:-

Sl	Units	Email ID	Fax No.
(a)	CGDHQ-1	dhq1@indiancoastguard.nic.in	0286-2210559
(b)	CGDHQ-15	cgs-okh@indiancoastguard.nic.in	02892-263421

(c)	ICGS Pipavav	cgs-ppv@indiancaostguard.nic.in	02794-221600
(d)	ICGS Jakhau	cgs-jkh@indiancaostguard.nic.in	02831-286432
(e)	C-419	c419@indiancaostguard.nic.in	02794-221600
(f)	C-413	c413@indiancaostguard.nic.in	02892-263421
(g)	C-429	c429@indiancaostguard.nic.in	02831-286432
(h)	C-437	c437@indiancaostguard.nic.in	02831-286432

13. It is requested that receipt of this letter be acknowledged.



(Kalpesh R Kadam)
Dy Commandant
RTO (Refit)
for Commander
Coast Guard Region (NW)

Enclosure: Main Defect list (Hull, Engg and Electrical)
for Interceptor Boats C-419, C-413, C-429 and C-437 by e-mail.

Copy to:

The Commander
{for (DTO)}
Coast Guard District Headquarters No. 1
Post Box No. 25, Porbandar, Gujarat-360 575


The Commander
[for DTO]
Coast Guard District Headquarters No.15
Post Box No.16, Port Okha, Gujarat- 361350

The Commanding Officer
ICGS Jakhau
Post- Naliya, Kutch, Dist- Kutch, Gujarat- 370655

The Commanding Officer
ICGS Pipavav
Post Box No.41, Hindorna Chowk, Jafarabad Road,
Dist- Amreli Rajula, Gujarat- 365560

HULL WORK PACKAGE
18 MONTHLY FOR ICGS C-437 & 54 MONTHLY FOR ICGS C-419, C-413 AND C-429

<u>DL SL</u>	<u>DESCRIPTION</u>	<u>CGRHO(NW) REMARKS FOR</u>		
		<u>18 MONTHLY</u>	<u>36 MONTHLY</u>	<u>54 MONTHLY</u>
HA-1001	Carry out docking and undocking of the ship as per docking plan in both version	Refit duration 30 days including 15 days docking period	Refit duration 30 days including 20 days docking period	Refit duration 45 days including 25 days docking period
HA-1002	Under water hull including boot top area and water jet bucket & tunnel area to be washed with high pressure fresh water jet soon after docking, providing special attention towards pick up heads of EM log and Echo sounder. Sea growth be cleaned by soft scrapping. Approx area 218 sqmtr.	DO	DO	DO
HA-1003	Survey of complete underwater hull and appendages to be undertaken in association with class surveyor.	DO	DO	DO
HA-1004	Carryout UTG of critical/ suspected area including M/E sea chest and domestic sea chest as per class surveyor/ overseeing team recommendations and reflected in shell expansion drawing.	DO, cater for 250 UTG points	DO, cater for 250 UTG points	DO, cater for 500 UTG points.
HA-1005	Carry out survey in association of classification society for hull structural (internal and external shell plating along with welded joints) including ship side, superstructure, mast, decks, life raft base, cable locker and associated structural members/ fittings for deterioration/ damage. Carry out non-destructive testing on suspected area. Repair affected/ deteriorated surface/ structure as per the surveyor recommendations and report is to be rendered with class surveyor's recommendations. Yard to undertake re-coating of paint for the repaired area as per paint scheme. Cater for renewal of Aluminium (Grade:AA 5083 H116) plates/ stiffeners/frames etc. as per staff remarks. Scope of work includes removal and re-fitting of lagging, if any, to be undertaken by yard.	DO. Cater for 100 KG Aluminium renewal	DO. Cater for 100 KG Aluminium renewal	DO. Cater for 250 KG Aluminium renewal
HA-1006	Carry out inspection of both water jet bucket for erosion/corrosion and peeling of paint film. Report is to be rendered with surveyor's recommendations. The affected areas are to be painted as per the paint scheme.	DO	DO	DO
HA-1007	Renewal all sacrificial anodes including Sea chest-10 nos (size 47 x 35 x 25 mm, weight- 0.23 Kg), Main engine exhaust -04 nos (size 47 x 35 x 25 mm, weight- 0.23 Kg). Anodes yard supply.	DO	DO	DO



HA-1008	Remove 03 in nos underwater sea chest gratings (size 650 x 425 mm 02 nos and 390 x 150 mm -01 no), clean and scrap to bare metal, re-paint as per U/W paint scheme.	DO	DO	DO	DO
HA-1009	Paint draught marks, blue band, pennant number and inscription of Indian Coast Guard (in English) &BhartiyaTatrakhak (in Hindi) as per CGBR- 382. Paint scheme- Pearl night blue- Ral code 5026.	DO, Paint CG supply	DO, Paint CG supply	DO, Paint CG supply	DO, Paint CG supply
HA-1010	Damaged under water and boot top paint film/ area to be scrapped and paint to be restored as per paint scheme. One final coat of paint for touch scheme to be applied as per paint scheme (CGBR-382). Surface preparation and painting to be undertaken with the supervision of paint manufacturer. Under water area- 218 Sqmtrs.	DO, Touch up paint scheme only. Paint yard supply	DO, Touch up paint scheme only. Paint yard supply	DO, Touch up / condition based paint scheme. Paint yard supply	DO, Touch up / condition based paint scheme. Paint yard supply
YARD SERVICES					
HA-1011	Pre and post refit sea trials to be carried out by refitting agency along with OEM/PAC representative. Ship/CGRPT staff to co-ordinate for availability of the reps AIAMC firm	DO	DO	DO	DO
HA-1012	03 bar fire main supply to be provisioned to ship during docking/invariability for full duration of refit.	DO	DO	DO	DO
HA-1013	Refitting agencies to depute 01 in no fire sentry in each location, where ever hot work is in progress. Ship staff to ensure all preventive action taken prior commencement of hot work.	DO	DO	DO	DO
HA-1014	Garbage disposal to be provided during the entire duration of the refit on daily basis.	DO	DO	DO	DO
HA-1015	Shore supply power connection for consumption up to 75 units/day and connecting/disconnecting cable as and when required. Shore supply (3 Ph, 415V, 50 Hz, 80 Amps/40 KW) to be provided for the entire duration of refit with provision of energy meter.	DO	DO	DO	DO
HA-1016	Crane facility (Cap:10 T) to be provided as and when required. Yard to cater for 05 hrs operations during the entire/ work package and other machinery routines.	DO	DO	DO	DO
HA-1017	Supply of fresh water is to be catered for 1000 ltrs per day and 60 ltrs of drinking water per day.	DO	DO	DO	DO
HA-1018	Keel blocks are to be arranged as per approved docking plan and certificate of suitability by yard to be submitted. Keel blocks are to be offered to overseeing authority for inspection, prior docking of the ship. Ship is to be dry-docked in both versions or as per latest version of approved docking plan.	DO	DO	DO	DO

HA-1019	Tug for docking, undocking, berthing and un-berthing are to be provided as necessary.	DO	DO	DO	DO
HA-1020	Pilot is to be provided while entering and leaving during refit as and when required.	DO	DO	DO	DO
HA-1021	Shipyard to provide one Mobile connection for local and STD onboard ship during entire duration of u/w work package and other machinery routines of ship.	DO	DO	DO	DO
HA-1022	Refitting agency to extend fax/email facility to COA/refit overseeing team and SS as and when required basis.	DO	DO	DO	DO
HA-1023	Sufficient ventilation to be provided when ship's AC becomes non operational	DO	DO	DO	DO
HA-1024	Provide temporary lights and compressed air supply as necessary	DO	DO	DO	DO
HA-1025	Refitting agency to ensure suitable and safe berthing facility alongside and yard services to be conducive for undertaking refit activities during the entire period of refit/routines.	DO	DO	DO	DO
HA-1026	Refitting agency to provide suitable containers for storing residual fuel (up to 5KL)/ lub oil (upto 01 KL) and stowage space (15x15 feet) for the duration of refit.	DO	DO	DO	DO
HA-1027	Refitting agency to provide facilities for DP testing/load testing of capstan/towing hook/davits etc.	DO	DO	DO	DO
HA-1028	Refitting agency to arrange gas free and man entry certificate for all fuel/lub oil tanks prior commencing hot work. Provision of blowers with hoses and visit of inspector of explosive are to be catered by refitting agency.	DO	DO	DO	DO
HA-1029	Yard to provide following transports during the duration of u/w routines:- (i) One car for COA (ii) One SUV for IB (iii) One truck (03 tonner)	DO	DO	DO	DO
HA-1030	Refitting agency to provide office space with necessary furniture, AC and locking facility for COA and crew separately. (i) COA: 15 feet x 15 feet (ii) Crew: 15 feet x 15 feet	DO	DO	DO	DO
HA-1031	Shore galley with following facilities to be provided near to slipway and SO & EP accommodation:- (i) gas stove (ii) Gas cylinder (iii) Dinning arrangement (iv) 01 no. water purifier with cooler (v) Garbage disposal facility near galley (vi) Storage space for dry and fresh ration (vii) Utensil washing (viii) vessel provisions storage (ix) Dinning area (x) Fridge.	DO	DO	DO	DO

HA-1032	<p>ACCOMMODATION : Accommodation is to be provided for following crew as per the scale of accommodation indicated below:-</p> <p>OFFICER. A/C Cabin accommodation for 01 officer with following amenities:-</p> <p>(a) one single occupancy room with</p> <p>(i) attached toilet with bathroom.</p> <p>(ii) basic room curtain, table and chairs and TV</p> <p>(iii) basic linen viz. mattress, bed sheets, pillow, pillow covers, blankets.</p> <p>SUBORDINATE OFFICER. Cabin accommodation for 04 subordinate officers with following facilities.</p> <p>(aa) Two double bed room with A/C.</p> <p>(ab) attached toilet & bathroom.</p> <p>(ac) basic room table and chairs, curtain and TV.</p> <p>(ad) basic linen viz. mattress, bed sheets, pillow, pillow covers, blankets.</p> <p>(ae) Common dining space with TV.</p> <p>ENROLLED PERSONNEL. Dormitory type accommodation with curtains for 09 enrolled personnel to be provided. The scale of accommodation is as follows:-</p> <p>(aa) 09 in nos single bed/cots. Rooms to have air cooler/circulator.</p> <p>(ab) Each single bed/cot to be provided with mattress, bed sheet, pillow cover.</p> <p>(ac) Five W/C and five bathrooms.</p> <p>(ad) Dormitory room to have basic upholstery like teapoy, TV, Curtains and easy chairs and wardrobe for keeping uniforms and day to days items.</p> <p>(ae) Dining space and cooking area.</p> <p>(af) Basic linen viz. mattress, bed sheet, pillow, pillow covers, blankets to be provided.</p> <p>NOTE:- Accommodation to be provided with in 10 km radius from the ship/jetty. The walls/roof of the building to be termite/ water resistant (no water seepage)</p>	DO. If the routine/ docking is undertaken in the base port, the scale of accommodation will be modified (cut down to 25%) as per strength of in-living and duty watch personnel	DO. If the routine/ docking is undertaken in the base port, the scale of accommodation will be modified (cut down to 25%) as per strength of in-living and duty watch personnel	DO. If the routine/ docking is undertaken in the base port, the scale of accommodation will be modified (cut down to 25%) as per strength of in-living and duty watch personnel
SCUPPER AND DRAINS, MAKE M/S L&T YARD				
HA-1033	Dismante drain pipe lines. Clean repair and pressure test. Test pressure-01 bar. (Dia-50 mm, total approx. length – 40 mtrs)	DO, for 25 % pipe length	DO, for 25 % pipe length	DO, for 50 % pipe length
HA-1034	Inspect, clean & refit all scupper and drain strainers and its fasteners	DO	DO	DO

HA-1035	All scupper valves to be removed, overhauled and refitted. Qty: 02 nos, size: 40mm.	DO	DO	DO
<u>GREY WATER TANK-AREA 1.31 M³</u>				
HA-1036	Remove grey water from the tank. Clean with liquid detergent and scrap the damaged paint. Carry out 100% survey by surveyor. Repaint the scrapped/damaged area as per paint scheme. Ensure man holes cover is free of erosion and intact at seating. Man Hole cover gasket and securing bolt to be renewed. (Nos of bolts 16 Nos. on each tank and No. of Gasket – 01 No. each). Gasket yard supply.	DO, Touch up paint scheme only. Paint CG supply	DO, Touch up paint scheme only. Paint CG supply	DO, Full paint scheme. Paint CG supply
<u>BILGE HOLDING TANK – CAPACITY 0.94 M³</u>				
HA-1037	Remove black water from tank. Clean with liquid detergent and scrap the damaged paint. Carry out 100% survey by surveyor. Repaint the tank as per paint scheme. (In-way jobs included). Man Hole cover gasket and securing bolt to be renewed. (Nos of bolts 16 Nos. on each tank and No. of Gasket- 01 No. each). Gasket yard supply.	DO, Touch up paint scheme only. Paint CG supply	DO, Touch up paint scheme only. Paint CG supply	DO, Touch up /condition based paint scheme. Paint CG supply
<u>FUEL OIL TANK, QTY – 06 NOS., TOTAL CAPACITY – 20.02 M³</u>				
HA-1038	Tanks to be emptied/ cleaned/ surveyed. SS to empty and dockyard to clean and survey. Prior man entry tanks to be ventilated and gas freed. (Nos of bolts 16 Nos. on each tank and No. of Gasket – 01 No. each) Pressure testing in case of any repair. Gasket yard supply.	DO	DO	DO
<u>LUB OIL TANK, QTY-01 NO., CAPACITY – 0.54 M³</u>				
HA-1039	Tanks to be emptied/ cleaned/ surveyed. SS to empty and dockyard to clean and survey. Prior man entry tanks to be ventilated and gas freed. (Nos. of bolts 16 Nos. on each tank and No. of Gasket – 01 No. each) Pressure testing in case of any repair. Gasket yard supply.	DO	DO	DO
<u>DIRTY OIL TANK, QTY – 01, CAPACITY – 0.42 M³</u>				
HA-1040	Tanks to be emptied/ cleaned/ surveyed. SS to empty and dockyard to clean and survey. Prior man entry tanks to be ventilated and gas freed. (Nos. of bolts 16 Nos. on man hole tank and No. of Gasket – 01 No. to be renewed) Pressure testing in case of any repair. Gasket yard supply.	DO	DO	DO

FRESH WATER TANK, QTY -01 NO., CAPACITY -- 1.37 M³

HA-1041	Remove fresh water from the tanks, clean with detergent and scrap and carry out 100% survey of the tank. Ensure man hole cover are free of erosion and intact at seating. Repaint the tank as approved paint scheme. One final coat of paint to be applied as per paint scheme. Man hole cover gasket and securing bolt to be renewed. Ensure all strainers, limber holes and valves are clear and thoroughly dry before applying paint (Strainer- 01 No., Valve Qty- 01 No., Valve size 25 mm each) all in-way jobs included. Gasket to be renewed, yard supply.	DO. Touch up paint scheme only. Paint CG supply.	DO. Touch up paint scheme only. Paint CG supply.	DO. Full paint scheme. Paint CG supply.
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CABLE LOCKER

HA-1042	Remove all dirt and sludge from cable locker. Examine the structure paying particular attention to that in vicinity of cable clench and ship plating.	DO	DO	DO
HA-1043	Examine and clean drain pipe from chain locker to fore peak bilge. (Dia- 50mm, length- 04 mtrs)	DO	DO	DO

BOAT DAVIT, MAKE: NED DECK MARINE/ HEMANT ENGG

HA-1044	Examine all brake lining for wear & tear. Check condition of wire remote control and electric cabinet. Grease wire rope winch.	DO	DO	DO
HA-1045	Load test of davit to be carried out. (SS to provide last load test certificate for reference)	DO	DO	DO

WATER TIGHT DOORS AND HATCHES, MAKE- M/S L&T YARD (QTY- DOORS -- 07 NOS & HATCHES -- 05 NOS)

HA-1046	Check operation of all doors & hatches including condition of gas struts, closing wheel & lever/lock mechanism. All rubber beading of water tight doors (07 Nos) and hatches (05 Nos) to be renewed. Carry out chalk test/ hose test. Material yard supply.	DO	DO	DO
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GALLEY, MAKE-M/S L&T YARD

HA-1047	Clean the galley exhaust trunking with wire brushes and paint with black heat resistance paint. Paint CG supply	DO	DO	DO
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ANCHOR AND CHAIN CABLE, MAKE -- ASIAN STAR ANCHOR CHAIN (QTY-01)

HA-1048	Clean, scrap and chip the anchor chain cables. Remove all shackles and examine for defects. Survey anchor & chain cables by class surveyor. Record readings of thickness gauging and calibration. (Anchor Mar-SS, weight -- 135 Kg, size of chain cable -12.5 mm). Painting as per existing paint scheme. Paint CG supply. Greasing and lubrication to be done. Scope of work includes Interchanging of cable ends, if required.	DO, paint yard supply	DO, paint yard supply	DO, paint yard supply
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ANCHOR CAPSTAN, MAKE- MUIR WINDLASS AUSTRALIA, TYPE- VRC4500				
HA-1049	Overhaul windlass with brake assembly. Carry out load rest and replace gear box oil. (Oil CG supply).	DO	DO	DO
HA-1050	Survey and Non Destructive Test of bollards, towing post, bullrings and lifting hooks etc. to be undertaken with class for soundness of structure and a certificate to be issued.	DO	DO	DO
SHIP SIDE, SUPPER STRUCTURE, EXPOSED DECK, MAST AND BILGE AREA				
HA-1051	Clean all bilges and apply touch up paint as per existing paint scheme. Area: 140 sqm	DO	DO	DO
HA-1052	Ship side painting (Only one final coat of paint) to be carried out as per existing paint scheme. Paint GG supply. Area: 118 sqm	DO	DO	DO
HA-1053	Painting of weather deck (only final coat of paint) as per existing paint scheme after completion of repairs. Paint CG supply. Area: 155 sqm	DO	DO	DO
HA-1054	Cleaning and painting of one full final coat of super structure including Mast area as per existing paint scheme. Paint CG supply. Area: 105 Sq. mtrs	DO	DO	DO
HA-1055	Engine room ventilation air intake/exhaust fan bottom area to be cleaned and painted with touch up paint scheme (Area: 3 sqm) including removal/re-fitment of intake grill and replacement of gasket. Rubber yard supply.	DO	DO	DO

ENGINEERING WORK PACKAGE

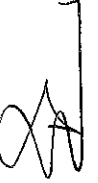
18 MONTHLY FOR ICGS C-437 & 54 MONTHLY FOR ICGS C-419,C-413 AND C-429

DL/SL	DESCRIPTION	CGRHO(NW) REMARKS FOR		
		18 MONTHLY	36 MONTHLY	54 MONTHLY
WATERJET & SHAFTING ROUTINES: MAKE- M/S MJP, SWEDEN, MODEL- 650DD CSU, QTY-02				
EA-3001	18 M1: Check steering cylinder seal for leakage	DO for DL SISEA-3001 to EA-3016 by PAC firm	DO for DL SISEA-3003 to EA-3020 by PAC firm	DO for DL SISEA-3003 to EA-3023 by PAC firm
EA-3002	18 M2: Check reversing cylinder seal for leakage			
EA-3003	18 M3/36M1/54M1: Change HP oil filter or when indicator shows			
EA-3004	18 M4/36M2/54M2: Change return oil filter or change when indicator shows			
EA-3005	18 M5/36M3/54M3: Change hub unit oil filter or change when indicator shows			
EA-3006	18 M6/36M4/54M4: Inspect all bronze bushings and bolts of steering unit (To be changed when the tolerance exceeds 1.5 mm)			
EA-3007	18 M7/36M5/54M5: Inspect impeller and record clearances (0.7 +/- 0.5 mm) and coarse surface on impeller blades			
EA-3008	18 M8/36M16/54M16: Change hydraulic hoses			
EA-3009	18 M9/36M6/54M6: Inspect steering units pin shaft weld lock			
EA-3010	18 M10/36M7/54M7: Replace anodes on water jet unit and transom. Follow as per approved policy. Anodes CG supply			
EA-3011	18 M11/36M8/54M8: Inspect painting on water jet unit. Follow paint scheme as per approved paint scheme			
EA-3012	18 M12/36M9/54M9: Calibration of the Amplifiers for feedback and indication			
EA-3013	18 M13/36M10/54M10: Calibration of the sensor servos for bucket & nozzle			
EA-3014	18 M14/36M11/54M11: Calibration of the indicators at Main Bridge, Remote and Local for bucket and nozzle			
EA-3015	18 M15/36M12/54M12: Calibration of the potentiometer of all controls at Main Bridge and Remote stations			
EA-3016	18 M16/36M13/54M13: Verify functioning of all the alarm switches			

EA-3017	36 M14/54M14: Change lube oil in lubricant system and take oil sample for lab analysis			
EA-3018	36 M15/54M15: Change hydraulic oil of maneuvering unit and take oil sample for lab analysis			
EA-3019	36 M17/54M17: change steering cylinder seals			
EA-3020	36 M18/54M18: Change reversing cylinder seals			
EA-3021	54M19: Change mechanical seal of hub unit			
EA-3022	54M20: Inspect Azimuth rev/ahead potentiometer, Repair/Replace broken or damaged component			
EA-3023	54M21: Inspect feedback sensor of reversing and steering cylinder, Repair/ Replace broken or damaged component			
INTAKE DUCT				
EA-3024	18M17/36M19.54M22: Inspect paint on duct. Follow paint scheme as per approved paint scheme	DO for DL SisEA-3024 to EA-3030 by PAC firm	DO for DL SisEA-3024 to EA-3030 by PAC firm	DO for DL SisEA-3024 to EA-3030 by PAC firm
EA-3025	18M18/36M20/54M23: Inspect the Gel Coat of the intake duct for any cracks or other			
EA-3026	18M19/36M21/54M24: Inspect the outer surface of the intake duct in the water jet compartment for any damages			
EA-3027	18M20/36M22/54M25: Replace the gasket of the inspection hatch of the duct			
EA-3028	18M21/36M23/54M26: Inspect the tightness of the inspection hatch bolts			
EA-3029	18M22/36M24/54M27: Inspect the intake duct bottom flanges for any trace of sea water leakage			
EA-3030	18M23/36M25/54M28: Inspect the threads of the inspection hatch bolts and replace if damaged			
SHAFTING, MAKE: M/s MJP SWEDEN, QTY: 02				
EA-3031	18M1/36M1/54M1: Old Greasing to be removed, Plummer Block to be inspected and re-greased (Cooper roller bearing)	DO for DL SisEA-3031 to EA-3038 by PAC firm	DO for DL SisEA-3031 to EA-3039 by PAC firm	DO for DL SisEA-3031 to EA-3042 by PAC firm
EA-3032	18M2/36M2/54M2: Check function of inflatable seal			
EA-3033	18M3/36M3: Check coupling disc pack			
EA-3034	18M4/36M4/54M3: Check function of shaft locking device			

EA-3035	18M5/36M5/54M4: Inspect shaft seal			
EA-3036	18M6/36M6/54M5: Visual inspection of intermediate shaft for any cracks/chips, missing part/damage			
EA-3037	18M7/36M7/54M6: Visual inspection of intermediate shaft sleeve near bulkhead seal area (for composite intermediate shaft only)			
EA-3038	18M8/36M8/54M7: Check tightening torque for all screws (Intermediate shaft)			
EA-3039	36M9: Inspect disc coupling set for any damaged disc and tightness			
EA-3040	54M8: Inspect disc coupling set for any damaged disc and tightness/ replace disc coupling set			
EA-3041	54M9: Major overhaul of bulkhead seal			
EA-3042	54M10: servicing of shaft seal			
EQUIPMENT : HUMPHREE, MAKE: M/S HUMPHREE, QTY-04				
EA-3043	Carry out following Humphree system routine and prove for satisfactory operation. (Jobs to be undertaken through OEM/PAC firm)	DO by OEM/PAC firm	DO by OEM/PAC firm	DO by OEM/PAC firm
	(a) Check connection of transom cable for corrosion or liquid contamination			
	(b) Inspect the sealing strip and replace the part if worn out or broken			
	(c) Extend the sealing ring to fully out position. Clean the blade and grease the interceptor blade.			
EA-3044	03 nos. sea chest valves to be overhauled and pressure tested at 8 bar including servicing of bevel gear mechanism (size 250 NB, type- butterfly, qty-02 and 50 NB SDNR, qty-01 no.). Scope of work includes renewal of joints and worn out fasteners. Note: For Main Engine Sea Chest Valve- Size 150 NB for C-401 to C-406 & C-425 to C-427, Size 250 NB for rest of the IBs.	DO	DO	DO

EA-3045	<p>Overhaul and pressure test following overboard valves (Pressure test upto 5 bar):-</p> <table border="1" data-bbox="172 1055 424 1957"> <thead> <tr> <th>Sl</th> <th>Valve</th> <th>Qty (Nos)</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td>125 mm SDNR</td> <td>02</td> </tr> <tr> <td>(b)</td> <td>50 mm SDNR</td> <td>01</td> </tr> <tr> <td>(c)</td> <td>40 mm SDNR</td> <td>06</td> </tr> <tr> <td>(d)</td> <td>25 mm SDNR</td> <td>02</td> </tr> <tr> <td>(e)</td> <td>250 NB Butterfly valve</td> <td>02</td> </tr> </tbody> </table> <p>Note: For Main Engine Sea Chest Valve- Size 150 NB for C-401 to C-406 & C-425 to C-427, Size 250 NB for rest of the IBs</p>	Sl	Valve	Qty (Nos)	(a)	125 mm SDNR	02	(b)	50 mm SDNR	01	(c)	40 mm SDNR	06	(d)	25 mm SDNR	02	(e)	250 NB Butterfly valve	02	DO	DO	DO
Sl	Valve	Qty (Nos)																				
(a)	125 mm SDNR	02																				
(b)	50 mm SDNR	01																				
(c)	40 mm SDNR	06																				
(d)	25 mm SDNR	02																				
(e)	250 NB Butterfly valve	02																				
EA-3046	<p>Sea Water System pipes: Chemical Cleaning and pressure tested up to 1.5 times of working pressure of following system pipe. Repaired/ renewed to be undertaken under AWRP:</p> <p>(i) Both ME S/W pump suction line – Dia 250 mm, L-06 mtrs, WP-02 Bar (ii) Both ME S/W pump suction line – Dia 125 mm, L-10 mtrs, WP-04 Bar (iii) Both ME S/W pump discharge line – Dia 100 mm, L-10 mtrs, WP-04 Bar (iv) Gear Box inlet and outlet pipe – Dia 50mm, L-30 mtrs, WP-04 Bar (v) Both shaft seal cooling line – Dia 20 mm, L-06 mtrs, WP-02 Bar (vi) Both M/E sea water vent line- Dia 10 mm, L-20 mtrs, WP-04 Bar (vii) D/A sea water pipe line- Dia 25 mm, L-10 mtrs, WP-03 Bar (viii) A/C condenser pump inlet/out let pipe line – Dia 50 mm, L-25 mtrs, WP- 02 Bar (ix) OBWS pipe lines- Dia 20 mm, L-10 mtrs, WP-02 Bar</p>	DO for 25% pipe length	DO for 25% pipe length	DO for 50% pipe length																		
EA-3047	<p>Fire main system Pipe line: Fire main system pipe to be chemically cleaned and pressure tested up to 1.5 times of working pressure, all in way jobs includes removal and re-fittment of equipment & honey comb paneling (Mat SS, Length 30 mtrs, size 50 mm, WP – 3.5 Bar) including fire sprinkling system</p>	DO for 25% pipe length	DO for 25% pipe length	DO for 50% pipe length																		
EA-3048	<p>Bilge System pipe line: Bilge System pipe lines to be chemically cleaned, pressure tested, painted and fitted with new gaskets. (length 20 Mtrs, Size 40 NB). Material yard supply</p>	DO for 25% pipe length	DO for 25% pipe length	DO for 50% pipe length																		
EA-3049	<p>Lub oil/dirty oil system pipe line: 10 mtr system pipe lines of Lub oil/dirty oil system to be removed, chemically cleaned, pressure tested and fitted with new gaskets. (Size 25 NB). Test pressure: 1.5 times of working pressure</p>	DO for 25% pipe length	DO for 25% pipe length	DO for 50% pipe length																		



ME EXHAUST SYSTEM, MAKE- DECIMIN EXHAUST TECHNOLOGY, QTY-02

EA-3050	Following routines on Main Engine exhaust system to be undertaken:- (a) Test water injection pipe and nozzles for wear, soot and salt built up (b) Inspect welds, flanged joints and gasket for leakage (c) Check bolts and nuts for tightness (d) Check/Replace bellows for crack and sign of aging (e) Overhauling of 02 nos. Flap valves (450 NB) near bell mouth including inway jobs of removal/ fitment of lagging 7 renewal of promatic gaskets (03 nos) (f) Inspection of Bell Mouth including DPT	DO	DO	DO
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AC PLANT, MAKE – KIRLOSKAR/ SHREE REFRIGERATION, TYPE – 12 HVAC, QTY:02

Carry out following routines on AC plant and to be undertaken through PAC/ authorized firm. Material and nitrogen gas yard supply. Spares and Refrigerant 404A CG supply.

EA-3051	AC compressor (Hermetically sealed) including motor to be overhauled and proved for satisfactory operation	DO for DL SIs EA-3051 to EA-3056 by PAC/ authorised firm.	DO for DL SIs EA-3051 to EA-3056 by PAC/ authorised firm.	DO for DL SIs EA-3051 to EA-3056 by PAC/ authorised firm.
EA-3052	Carry out blow through the refrigerant system, pressure test and vacuum test for 24 hrs and to be proved for satisfactory operation.			
EA-3053	Complete condenser tubes to be chemically cleaned and pressure tested for 1.5 times of working pressure. Scope of job includes renewal of gasket and worn out fasteners.			
EA-3054	Adjust the operation of two way solenoid valve and expansion valve.	Overhaul only one compressor and motor	Overhaul only one compressor and motor	Overhaul only one compressor and motor
EA-3055	Carry out condition assessment of shock and vibration mounts. Renew defective one.			

AHU (AC), MAKE- ZECO INDIA LTD, TYPE- ZDLM-20, NO. OF FITTED -01

EA-3056	AHU blower to be overhauled and proved for satisfactory operation. Scope of job includes renewal of bearings and dynamic balancing of blower.	DO	DO	DO
EA-3057	AHU including coil to be chemically cleaned and air passage of trunking (L-40 mtrs, size-01 feet) to be blown through with HP air. Renew damper and suction filter.	DO	DO	DO

FM 200 FIRE FIGHTING SYSTEM, MAKE- M/S SOLAS MARINE SERVICES, TYPE - FM 200, QTY - 01

EA-3058	Test remote pull cables, manual actuators and pressure switches	DO for DL SIs EA-3058 to EA-3062 by PAC/ authorised firm	DO for DL SIs EA-3058 to EA-3062 by PAC/ authorised firm	DO for DL SIs EA-3058 to EA-3062 by PAC/ authorised firm
EA-3059	Test pneumatic detection system and time delay			
EA-3060	Overhaul the control panel system, monitoring system and fire detection system.			
EA-3061	Check HF C 227 and CO ₂ cylinder weights and re-charge, (if weight loss is more than 10%)			
EA-3062	Blow out distribution piping.			
<u>FIRE & BILGE PUMP, M/S SPX JOHNSON, MODEL - KGEFN 15-6 32, QTY- 01</u>				
EA-3063	Overhaul fire & Bilge pump and replace the worn out parts. Pump to be proved for satisfactory operation. Spares CG supply. Material yard supply.	DO	DO	DO
<u>AC CONDENSER PUMP, MAKE- KIRLOSAR, TYPE - SP-1 HM, QTY-01</u>				
EA-3064	Overhaul A/c condenser pump and replace the worn out parts. Pumps to be proved for satisfactory operation. Spares CG supply. Material yard supply.	DO	DO	DO
<u>GREY WATER PUMP, MAKE- JOHNSON PUMPS, TYPE- KGEFN 11-4, QTY-01</u>				
EA-3065	Overhaul Grey water pump and replace the worn out parts. Pump to be proved for satisfactory operation. Spares CG supply. Material yard supply	DO	DO	DO
<u>FRESH WATER PUMP, MAKE- JOHNSON PUMPS, TYPE- KGEFN 16-3, QTY-01</u>				
EA-3066	Overhaul Fresh water pump and replace the worn out parts. Pump to be proved for satisfactory operation. Spares CG supply. Material yard supply	DO	DO	DO
<u>FUEL OIL TRANSFER PUMP & FUEL SYSTEM, MAKE- TUSHACO, TYPE- TIG- GM100/50- QTY- 01</u>				
EA-30567	Overhaul Fuel oil transfer pump and replace the worn out parts. Pump to be proved for satisfactory operation. Spares CG supply. Material yard supply	E&R	DO	DO
<u>MAGAZINE SPRINKLING PUMP, MAKE - AZCUE PUMPS, TYPE - CA-50-2A, QTY-01</u>				
EA-3068	Overhaul Magazine sprinkling pump and replace the worn out parts. Pumps to be proved for satisfactory operation. Spares CG supply. Material yard supply	E&R	DO	DO
<u>DOMESTIC SEA WATER PUMP, MAKE-AZCUE PUMPS, CP-25-130, QTY-01</u>				
EA-3069	Overhaul Domestic sea water pump and replace the worn out parts. Pump to be proved for satisfactory operation. Spares CG supply. Material yard supply	E&R	DO	DO

SEWAGE TREATMENT PLANT, MAKE: EVAC, TYPE: SEA CLEAN II-N25CE, QTY: 01

Following routines on STP to be undertaken.

EA-3070	Removal of sludge from tanks by opening man hole of storage tank and effluent tank	Under AIAMC	Under AIAMC	Under AIAMC
EA-3071	Clean and check storage tank and effluent tank body			
EA-3072	Check shut off valve operation			
EA-3073	Overhauling of sewage pump, clean housing and replace worn out parts			
EA-3074	Check flap of mini check valve in every toilet			
EA-3075	Check possible wear and vacuum leakage.			
EA-3076	Overhaul control panels and check all alarm/ safety and system to be proved for satisfactory operation.			

OILY WATER SEPARATOR, MAKE: EPE, SA, TYPE: PE 0.5 CU M/HR, QTY: 01

Oily Bilge water separator to be overhauled and proved for satisfactory operation. Overhauling includes the following:-

EA-3077	Drain both separator stages and remove top covers and all valves.	E&R	DO by PAC/ authorised firm	DO by PAC/ authorised firm
EA-3078	Wash through the separator vessels using hot water and clean all valves.			
EA-3079	Inspect the interior coating of vessels for corrosion			
EA-3080	Replace the first stage coalesce pack			
EA-3081	Renew second stage coalescer cartridge			
EA-3082	Change all gaskets and joints.			
EA-3083	Reset pressure relief/ water valves as previously indicated			

VALVES: SEA WATER COOLING SYSTEM

EA-3084

Following valves of sea water system to be removed, chemically cleaned and pressure tested for 1.5 times of working pressure. Painting of valves to be undertaken as per the colour code prior to fitment. Material yard supply.

SL	DESCRIPTION	QTY (In Nos)
(a)	Butterfly Valve 150 NB	02
(b)	Ball Valve 80 NB	02
(c)	Butterfly Valve 40 NB	04
(d)	Butterfly Valve 15 NB	02
(e)	Ball Valves 40 NB	02
(f)	Ball Valves 15 NB	02

DO for 25% valves
Qty:04 NosDO for 50% valves
Qty:07 NosDO for 100% valves
Qty:14 Nos**BILGE SYSTEM**

EA-3085

Following Fire Main Valves to be removed, chemically cleaned and pressure tested for 1.5 times of working pressure. Painting of valves to be undertaken as per the colour code prior to fitment. Material yard supply.

SL	DESCRIPTION	QTY (In Nos)
(a)	Butterfly Valve 50 NB	04
(b)	Ball Valve 50 NB	06
(c)	Butterfly Valve 25 NB	02
(d)	Screw Down NRV	02
(e)	Ball Valve 25 NB	01
(f)	32 NB NRV	01
(g)	Fire hydrant 50 NB	05

DO, for 25% valves
Qty:05 NosDO, for 50% valves
Qty:11 NosDO, for 100% valves
Qty:21 Nos

FUEL SYSTEM

EA-3086	12 in no. quick closing valve to be overhauled and pressure tested for 3.5 bar. (25 NB - 08Nos, 15 NB; 02 Nos& 20 NB 02 Nos.) Mat: SS	DO, for 25% valves Qty:03 Nos	DO, for 50% valves Qty:06 Nos	DO, for 100% valves Qty:12 Nos												
EA-3087	Following valves of fuel line system to be overhauled and pressure tested to 1.5 times of working pressure and proved. <table border="1" data-bbox="1069 280 1316 1545"> <thead> <tr> <th data-bbox="1189 280 1228 392">SL</th> <th data-bbox="1189 392 1228 1142">DESCRIPTION</th> <th data-bbox="1189 1142 1228 1545">QTY (In Nos)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1149 280 1189 392">(a)</td> <td data-bbox="1149 392 1189 1142">Butterfly Valve 80 NB</td> <td data-bbox="1149 1142 1189 1545">02</td> </tr> <tr> <td data-bbox="1109 280 1149 392">(b)</td> <td data-bbox="1109 392 1149 1142">Ball Valve 50 Nb</td> <td data-bbox="1109 1142 1149 1545">07</td> </tr> <tr> <td data-bbox="1069 280 1109 392">(c)</td> <td data-bbox="1069 392 1109 1142">Ball Valve 25 NB</td> <td data-bbox="1069 1142 1109 1545">05</td> </tr> </tbody> </table>	SL	DESCRIPTION	QTY (In Nos)	(a)	Butterfly Valve 80 NB	02	(b)	Ball Valve 50 Nb	07	(c)	Ball Valve 25 NB	05	DO, for 25% valves Qty:03 Nos	DO, for 50% valves Qty:07 Nos	DO, for 100% valves Qty:14 Nos
SL	DESCRIPTION	QTY (In Nos)														
(a)	Butterfly Valve 80 NB	02														
(b)	Ball Valve 50 Nb	07														
(c)	Ball Valve 25 NB	05														



ELECTRICAL WORK PACKAGE
18 MONTHLY FOR ICGS C-437 & 54 MONTHLY FOR ICGS C-419, C-413 AND C-429

DL SL	DESCRIPTION	CGRHQ(NW) REMARKS FOR		
		18 MONTHLY	36 MONTHLY	54 MONTHLY
WATERJET CONTROL SYSTEM, MAKE: M/S MJP SWEDEN, QTY: 02				
LA-5001	Overhaul of water jet control system and repair/ renew defective components. Carry out operational checks and local, bridge/ fly bridge including emergency operation.	DO by PAC firm	DO by PAC firm	DO by PAC firm
LA-5002	Calibration all alarms/ sensors:- (a) Low hydraulic oil level (b) Low hydraulic oil pressure (c) Low lub oil level (d) Low lub oil pressure (e) High hydraulic oil temperature			
ICCP, MAKE: M/S SARGAM METALS, CHENNAI, QTY: 01				
LA-5003	Check the condition of anodes, reference electrodes and shield sensors. Renew anodes and reference electrodes if consumed more than 50%.	Under AIAMC	Under AIAMC	Under AIAMC
LA-5004	Carryout insulation checks w.r.t. hull.			
LA-5005	Carry out functional test and proving the system.			
LA-5006	Dielectric shield of ICCP system to be examined for wear and damaged layer. To be renewed as per specification.			
ICAF, MAKE: M/S SARGAM METALS, CHENNAI, QTY: 01				
LA-5007	Check the status of all fitted anodes and renewed defective anodes.	DO	DO	DO
LA-5008	Overhaul the digital processing unit and prove for operation.			
ECHO SOUNDER, MAKE-KODEN, JAPAN (CVS 128), QTY: 01				
LA-5009	Overhaul the equipment & control panel and performance to check on high speed.	DO	DO	DO
LA-5010	Inspect transducer fitment alongwith surface ring to be cleaned properly and sea weeds to be removed. (in dry dock)			
EM LOG, MAKE- JOHN LILLEY & GILLEY (4020 LOG), QTY: 01				
LA-5011	Carry out calibration of EM Log and compare the readings with GPS speed. Difference should be within permissible limits.	Under AIAMC	Under AIAMC	Under AIAMC
LA-5012	Visual inspection of Log sensor/ Echo sounder transducer soon after dry docking for any damage. Cleaning of these sensors from sea growth with soft brush and covering of sensors during preparation of painting surface and painting.			

GALLEY HOT PLATE (02 NOS.) & OVEN (01 NO.) MAKE: KANTILAL CHUNNIAL & CO.				
LA-5013	Overhaul complete cooking range & oven alongwith control panel and replace defective components.	E&R	E&R	DO
AC PLANT MAKE: KIRLOSKAR/ SHREE REFRIGERATION TYPE: 12TR/12 TR HVAC (02 NOS.)				
LA-5014	Inspect and service electrical components, repair/ replace broken or damaged components. Check functioning of over load relays, operation of controls and fuses. Checks and tighten power and control connections	DO	DO	DO
AIR HANDLING UNIT (AC) KPCL PLANT MAKE: ZECO INDIA LTD/SHREE REFRIGERATION (01 NO.)				
LA-5015	Clean and check fan, motor contactor, check proper operation and overload protection.	E&R	E&R	DO
LA-5016	Check motor acceleration time, voltage, current and speed.	E&R	E&R	DO
AC PLANT CONTROL PANEL, MAKE- M/S KPCL, PUNE (QTY-02)				
LA-5017	Overhaul all control panels, calibrate meters and over load relays, calibrate all cut outs and capacity controls of plant. Prove them in the system.	DO	DO	DO
BOAT DAVIT MAKE: NED DECK MARINE/ HEMANT ENGG. QTY: 01				
LA-5018	Clean and check motor contactor, check proper operation and overload protection	DO	DO	DO
WINDLASS STARTER AND MOTOR (4KW, 415V, 3-PH), MAKE- M/S MUIR, (QTY-01)				
LA-5019	Overhaul control panel, calibrate meters and over load relay. Prove the system	E&R	DO	DO
NAVIGATION LIGHT AND CONTROL PANEL, MAKE: M/S DAERYAND ELECTRIC, KOREA				
LA-5020	Clean all light fitting lenses with fresh water and sponge and ensure all lamp holders and connections in the lamp fitting are intact. Replace defective/ damaged lamp holders/ lamps and lamp shade.	DO	DO	DO
FIRE DETECTION AND ALARM SYSTEM, MAKE: M/S L&T EBG, INDIA, TYPE: AUTRONICA/ AUTOPRIM, QTY: 01				
LA-5021	Carry out performance checks on fire detection and alarm system	DO	DO	DO
MAIN SWITCH BOARD, MAKE: M/S L&T EBG INDIA, TYPE: 415 V, 3PH, 50 HZ, QTY:01				
LA-5022	Check all safety trips with interlocks (reverse power trip, under voltage trip, over load trip, short circuit trip, under & over frequency trip etc.) and adjust setting if necessary and prove the system.	DO	DO	DO
LA-5023	Calibrate all meters and obtain calibration certificate from refit yard	DO	DO	DO
DIESEL GENERATOR, MAKE: CATERPILLAR, MODEL: C.4.4 DITA, CAP: 86 KW, 415 V, 3 PHASE, QTY: 02				
LA-5024	Overhaul complete generator including starter motor & dynamo. Thoroughly inspect windings, if insulation is found low, cleaning, varnishing and baking of windings to be done and replacement of bearing to be carried out.	DO	DO	DO
DIESEL GENERATOR, MAKE: CATERPILLAR, MODEL: C.4.4 DITA, CAP : 86 KW, 415 V, 3 PHASE, QTY: 02				
LA-5025	Check and calibrate all alarms and safeties.	DO	DO	DO

MOTORS		DO	DO	DO
LA-5026	Overhauling of following motors to be undertaken:- (a) Fire and bilge pump motor (5.5 KW), Qty: 01 No. (b) AC Condenser pump motor (1.5 KW), Qty: 02 Nos. (c) Anchor Windlass motor (4 KW), Qty: 01 No (d) AHU motor (2.2 KW), Qty: 01 No. (e) Water Jet Lubrication motor (1.5 KW), Qty: 02 Nos (f) Boat davit hoisting motor (4 KW), Qty: 01 No. (g) Boat davit slewing motor (1.5 KW), Qty: 01 No.			
MAGNETIC COMPASS (MAKE: M/S ANCHUTZ GERMANY, TYPE: CASSENS & PLATH), QTY: 01				
LA-5027	Overhauling of Magnetic compass and carry out compass swing.	DO	DO	DO
RADAR (MAKE: M/S FURUNO, JAPAN, TYPE: FURUNO FAR 2117 BB SERIES), QTY: 01				
LA-5028	Carry out complete overhauling of RADAR scanner units/ Radar displays. Check and replace defective motor bearing. Detailed performance checks to be carried out for display, scanners, transceiver unit, control unit and prove system for optimum performance.	DO	DO	DO



