



GARDEN REACH SHIPBUILDERS & ENGINEERS LIMITED

गार्डेन रीच शिपबिल्डर्स एण्ड इंजीनियर्स लिमिटेड

(A GOVERNMENT OF INDIA UNDERTAKING – MINISTRY OF DEFENCE)

(भारत सरकार का प्रतिष्ठान)

Registered & Corporate Office Address: GRSE Bhavan, 61, Garden Reach Road, Kolkata - 700 024

61 Park Unit Address: 61, Garden Reach Road, Kolkata-700 024

Phone दूरभाष:(033) 2469-8100 to 8113, Web site वेब:www.grse.in

CIN सी आई एन: L35111WB1934GOI007891

SERVICE LEVEL AGREEMENT (SLA) WITH NIT TERMS & CONDITIONS (NIT SLA)

To,
M/s. Yeoman Marine Services Pvt. Ltd.
D 179/4 TTC Industrial Area,
Mumbai – 400706

Garden Reach Shipbuilders & Engineers Limited is a **leading Warship Builders and Engineering Product Company**, invites offer from **M/s. Yeoman Marine Services Pvt. Ltd.** to submit **single stage two part (Part I- Techno-Commercial & Part II- Price) bid** through NIC portal for the work package as per following bid document:

NIT SLA No. निविदा संख्या:	SCC/DC/ST/ZOROASTER WP-2/049/ET-2081. Date: 01.04.2024
Job Title कार्य का नाम:	“CONDUCT OF SHORT REFIT OF SCG ZOROASTER (WORK PACKAGE-II)” (to be executed as per SOTR No. GRSE/SR/SCGZ/01 Date: 22 Mar 24 [Annexure-I] with DL List.
Tender issuing Dept. बिभाग द्वारा जारी:	Contract Cell (संविदा विभाग), GRSE Main Unit

ARTICLE 1A अनुच्छेद-1A: SCHEDULE OF CALENDAR DATES समायावली की अनुसूची:

SCHEDULE सारणी		
Bid submission Closing Date निविदा जमा की अंतिम तिथी	03.04.2024	12:00 hrs.
Tender Opening Date (Part I) निविदा खुलने की तिथी (तकनीकी- वाणिज्यिकबोली भाग-I)	03.04.2024	16:00 hrs.
Offer Validity Period minimum ऑफर की नियुक्तम वैधता अवधी	90 days from date of opening of Tender (Part – I)	

**ARTICLE 1B अनुच्छेद-1B : COMMERCIAL REQUIREMENT FOR THE NIT निविदा की
ब्यवसायिक आवश्यकता:**

FEES / DEPOSITS	
Tender Fee निविदा प्रपत्र मुल्य	Not Applicable for this tender
EMD बयाना राशिजमा	Not Applicable for this tender
Security Deposit (SD) प्रतिभूति	5% of Order Value (inclusive of GST)
PBG पी बी जी	As per payment term in SOTR/NIT
Liquidity Damage परिनिर्धारित नुकसान	0.5% per week, Max. 5% of unexecuted job
Billing Frequency बिल करने की अवधी	Stage wise Progressive Bill basis

Note:-If any vendor other than **M/s. Yeoman Marine Services Pvt. Ltd.** participates in this tender, then their offer will be rejected outright.

ARTICLE 2 अनुच्छेद-2: ANNEXURES FORMS PART OF THIS TENDER निविदा की संलग्नक प्रपत्र:
Please find all enclosures as indicated below in GRSE website by clicking the link <http://www.grse.in/index.php/tender.html> and then click **Enclosure to all sub-contracting activities** :

Annexure 1 संलग्नक-1	Statement of Technical Requirement (SOTR with Enclosure) (attached with NIT)
Annexure 2 संलग्नक-2	GRSE Standard Terms and Conditions (STAC) (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 3 संलग्नक-3	Format for - Integrity Pact (attached with NIT) To be submitted in Non-Judicial stamp paper of value not less than Rs.100/-.
Annexure 4 संलग्नक-4	Check List for Statutory Responsibility of Contractor (If and as applicable)
Annexure 5 संलग्नक-5	Check List for Bill submission
Annexure 6 संलग्नक- 6	Check List for Bid Submission
Annexure 7 संलग्नक-7	Format for – Non-Disclosure Agreement to be submitted in Rs. 100/- Non-Judicial stamp paper (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 8 संलग्नक-8	Fire & Safety Guidelines (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 9 संलग्नक-9	Special condition of contract (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 10 संलग्नक-10	Contractors Responsibility (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)

Annexure 11 संलग्नक-11	General Requirement (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 12 संलग्नक-12	PF, ESI declaration form (please refer www.grse.in →Tender→Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 13 संलग्नक-13	Guideline for Bank Guarantee (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities) (BG to be submitted in Rs. 100/- Non-Judicial Stamp paper)
Annexure 14 संलग्नक-14	Format for - Bank Guarantee Format for SD (please refer www.grse.in → Tender → Enclosures Related to tenders of Sub-Contracting Activities)
Annexure 15 संलग्नक-15	Format for PBG (please refer www.grse.in →Tender→Enclosures Related to tenders of Sub-Contracting Activities)

ARTICLE 3 अनुच्छेद - 3 : (A) DOCUMENTS TO BE UPLOADED अपलोड हेतु दस्तावेज :

Self-Attested documents are to be scanned and uploaded with Part I of bid बिड के भाग-1 के साथ स्कैन एवं अपलोड हेतु स्वअभिप्रामाणित दस्तावेज	
1	MSME/NSIC certificate, if any
2	PAN /TAN, GST, Labour License Certificate, Registration Certificate of the Company with ROC, Memorandum and the Article of Association of the firm, confirming documents of Company's registered, branch office address, Copies of registration with PF, ESI authorities/ last challans etc.
3	Integrity Pact (refer clause 1 of STAC at Annexure-2 and Integrity Pact format attached) – Annexure-3 of NIT.

(B) DOCUMENTS IN PHYSICAL FORM TO SUBMIT वास्तविक प्रपत्र जो जमा करने हैं:

PHYSICAL SUBMISSION		
1.	Integrity Pact	Scanned copy to be uploaded along with the bid & original to be submitted within 03 days from opening of Part I bid

Note: Above mentioned original Negotiable Instruments as stipulated, to reach to **Ms. Debalina Chowdhury, JM(Contract), Contract Cell, GRSE 61 Park Unit, 61, Garden Reach Road, Kolkata-700 024** within stipulated period as indicated above in a sealed envelope with tender number and job duly superscripting on it.

ARTICLE 4 अनुच्छेद-4: JOB EXECUTION SCHEDULE कार्य निष्पादन सूची

(A) Job Starting Date कार्य आरम्भ तिथि- The job is to be commenced immediately on receipt of LOI/LOA/PO (whichever is earlier) subject to site clearance and as per instruction of SR dept. LOI issued by CGM(SR) on 12.03.2024 to mobilise and commence the job.

(B) Job Completion date / Period of Contract कार्य समाप्ती तिथी/अनुबन्ध का समय - Job is to be carried as per priority given by GRSE and to be completed in all respect within scheduled time of **90 days** from the date of LOI.

Please note, time is the essence of this contract. During execution of work, the contractor shall ensure the timely mobilization of their equipment, adequate manpower and materials based on agreed work schedule. The contractor shall adopt necessary measures to avoid any delay in work progress.

(C) Quality Assurance Authority – SS, GRSE, WOT, Classification Society and Paint OEM.

ARTICLE 5 अनुच्छेद-5: JOB EXECUTION कार्य निष्पादन -

Job is to be carried out strictly as per SOTR (**SOTR No.: GRSE/SR/SCGZ/01 Date: 22 Mar 24**) at **Annexure-1** and relevant enclosure with Defect List etc. and in case of doubt, instructions of the Engineer in-charge / nominated authority of GRSE (SR dept.) are to be followed.

PLACE OF WORK: - The work is to be executed in GRSE (RBD/MW/FOJ) or KPDD/KOPT premises. The job is to be undertaken in dry-dock/ afloat condition as per availability of the ship.

ARTICLE 6 अनुच्छेद-6: GUARANTEE & WARRANTEE गारंटी एवं वारंटी –

The CONTRACTOR shall give Six months guarantee for workmanship and material defects for items repaired/ overhauled and Twelve months guarantee for new installations (if any) under the contract from the Contract Completion Date (Contract completion date will be the date of Refit Completion date certified by GRSE/SS). The guarantee clause will also be applicable to the items repaired by the OEMs/PAC/ sub-contractor of shipyard. Any defects noticed during this guarantee period due to defective/ poor workmanship or sub-standard material shall be rectified free of cost by the CONTRACTOR or by the OEMs/PAC/sub-contractors under arrangements by the CONTRACTOR.

If within the period of warranty, the repairs reported by the CUSTOMER to have failed to perform as per the specifications, the CONTRACTOR shall either replace or rectify the same free of charge, within TWO WEEKS of notification of such defect received by the CONTRACTOR provided that the equipment are used and maintained by the CUSTOMER as per instructions contained in the Operating Manual. Record of the downtime would be maintained by user in logbook. Spares required for warranty repairs shall be provided free of cost by CONTRACTOR.

CONTRACTOR has to provide all necessary service and repair backup, during the warranty period of the repair at the CUSTOMER's base port at Seychelles or any Indian port.

ARTICLE 7 अनुच्छेद-7: PRICE मूल्य -

Price quoted will be firm and fixed for the entire contract period till completion of work awarded during valid contract period. Price is to be quoted with all inclusive taxes & duties etc. except GST. GST is to be indicated separately in the space provided in Price Bid and will be paid extra. No escalation whatsoever will be considered under any circumstances within the stipulated period of contract.

Bidder should quote for all line items in price bid as per DL list/Price bid (Part-II).

ARTICLE 8 अनुच्छेद-8: ESCALATION मूल्य वृद्धि - Not Applicable.

ARTICLE 9 अनुच्छेद-9: UNREASONABLE QUOTES अतर्कसंगत भाव - Not Applicable.

ARTICLE 10 अनुच्छेद-10: OFFER VALIDITY प्रस्ताव की वैधता-

Offer should be valid for 90 days from the date of opening of Part-I bid i.e. Techno-commercial bid. Under exceptional circumstances GRSE may request for extension of price validity, beyond 90 days against valid reason.

ARTICLE 11 अनुच्छेद-11: CONDITIONAL OFFER सशर्त प्रस्ताव -

Conditional offers w.r.t. SOR will not be accepted. However, in case the bidder wishes to deviate from any/ some commercial Terms & conditions, then separate deviation statement has to be uploaded along with Part-I bid. However, GRSE reserves the right to accept / reject the deviations / bid with deviations, after giving reasonable opportunity to the Bidder. If the deviation is acceptable to GRSE, then suitable loading for such deviation on the price quoted by the bidder will be considered (during TNC/CNC proceedings) prior to determine the price.

ARTICLE 12 अनुच्छेद-12: DETERMINATION OF L1 एल-1 का चयन - Not Applicable as the tender in on M/s. Yeoman Marine Services Pvt. Ltd. only.

ARTICLE 13 अनुच्छेद-13: BOQ बी ओ क्यू -

BOQ as part of SOTR (as per Defect list Enclosure-A of SOTR) given in the tender is tentative. It may vary according to actual requirement of job during the period of contract. The Bidder has to execute the required quantity at same rate and Terms & Conditions.

The detailed BOQ is as per SOTR (with Defect list (DLs) of SOTR) and **M/s. Yeoman Marine Services Pvt. Ltd.** has to quote in **Totality (inclusive of GST)** considering the same in NIC portal as below:

Sl. No.	Job Description	Qty	UOM
1	Work Package - II Defect List under Vendor scope as per Enclosure-A of SOTR	1	LS

NB: i) UOM = Unit of Measurement, ii) LS = Lump Sum.

Relevant DLs to be referred as per SOTR and price bid.

Detail of DLs is as per SOTR. BOQ will be as per Price breakup template.

Detail of BOQ (as Enclosure-A of SOTR) and terms is as per SOTR (SOW) - Annexure-I attached with the tender.

ARTICLE 14 अनुच्छेद-14: OPENING OF BIDS निविदा खुलना -

Part I (techno-commercial) bid will be opened on the date declared in NIT. Part II bid will be opened post techno-commercial evaluation by GRSE. Price bid of only those who qualify techno-commercially will be opened. Opening date of Price Bid will be intimated accordingly to all qualified bidders. Disqualified bidders, either during technical assessment or commercial discussion will also be intimated about their non-consideration for farther processing.

ARTICLE 15 अनुच्छेद-15: MICRO & SMALL ENTERPRISES सूछम एवं छोटे उद्योग - Not Applicable.

ARTICLE 16 अनुच्छेद-16: AWARDING JOBS TO MULTIPLE BIDDER बहुल बिडर के लिए ठेका कार्य - Not Applicable as the tender is on M/s. Yeoman Marine Services Pvt. Ltd. only.

ARTICLE 17 अनुच्छेद-17: ELIGIBILITY CRITERIA पात्रता के मापदंड - As per term of SOTR.

ARTICLE 18 अनुच्छेद-18: INSTRUCTION TO THE BIDDERS बिडर हेतु अनुदेश -

- 1. Before submitting a bid, M/s. Yeoman Marine Services Pvt. Ltd. is expected to examine the Bid Documents carefully, if they desire, may visit the work front, fully inform themselves of existing conditions and limitations including all items described in the Bid Documents. NO consideration will be granted for any alleged misunderstanding or the materials to be furnished, work to be performed or actual considerations to complete all work and comply with conditions specified in the Bid Document.**
2. Any qualified deficiency, errors, discrepancies, omissions, ambiguities or conflicts in the Bid Documents, or there be any doubts as to the meaning of a provision or requirement, the same shall immediately brought to notice of GRSE Tendering Dept. in writing not less than 01 day prior to bid closing date.
3. It is understood that in receiving this bid, GRSE assumes no obligation to enter into a contract for the WORK covered by this bid request. GRSE reserves the right to reject any and all unqualified proposals or waive irregularities therein. GRSE reserves the right to evaluate each and every proposal and accept the whole or any part of the tender and the Tenderer shall be bound to perform the same at the rates quoted.
4. GRSE also reserves the right to reject any and all bids and accept the bid, which in its opinion, appears to be most advantageous to GRSE. Receipt and review of this Bid Request constitutes an agreement of confidentiality between GRSE and each of the contracting Firms preparing its Bid. GRSE reserves the right to change the form of this request to Bids, or make clarifications thereto, within a reasonable time before date of submission of Bids.
5. Generally, Contractors assume all safety related responsibilities for the site and will furnish and maintain its own safety program for itself and its subcontractors. Contractor are bound to comply with all applicable Environmental, Health & Safety rules, regulations, policies, procedures and guidelines when performing work in the facility or site.

6. Bidders objecting on any grounds to any bid specification or legal requirements imposed by these bidding documents shall provide written notice to GRSE within 01 calendar day from the day bid document was made available to public. Failure of a bidder to object in the manner set forth in this paragraph shall constitute and irrevocable waiver of any such objection.
7. Job is to be carried out as per SOTR and instruction of the Engineer in-charge/nominated representative of GRSE.
8. Any Drawings or technical information attached / provided with this NIT is the Intellectual Property of the Company and will be governed by the specific Acts applicable thereto.
9. As applicable, Post submission of Tender, such drawings and technical information are to be physically returned. Also all soft copies are to be destroyed and a self-certification to be submitted during TNC, failing which the processing of bid will not be taken further.
10. Contractor will be responsible to clean up the area of work w.r.t all sort of debris generated on daily basis. If they fail to do so GRSE reserves the right to perform the cleaning activity and charge the contractor with penalty of up to 25%.
11. M/s. Yeoman Marine Services Pvt. Ltd. is only allowed to submit the Bid under any capacity / status.
12. **E-mail Address for communication संचार हेतू ई. मेल पता:** Vendor to provide e-mail address to enable faster communication.
13. **Independent External Monitors (IEM):**

Either or both of the following Independent External Monitors will have the power to access the entire project document and examine any complaints received by him. In case of any change in IEMs, it will be informed accordingly.

The communication details of the IEMs are as follows:-

- A. Shri Bam Bahadur Singh,
Height-7; Flat No.1802, Uniworld City,
New Town, Rajarhat,
Kolkata-700160
bbsinghbeml@gmail.com
- B. Shri Pidatala Sridhar, IRS (Retd.)
Flat 2C, Kanaka Lakshmi Apartments
3-6-467 & 468
Street Number-6,
Himayatnagar, Hyderabad-500029
sridharpidatala@gmail.com

14. Integrity Pact (समग्रताअनुबंध):

The Integrity pact essentially envisages the agreement between prospective vendors /Bidders & buyers committing the person/officials of both the parties not to exercise any corrupt influence on any aspects of the contract. Only those vendors/bidders who enter into such an integrity pact with the buyer would be competent to participate in the bid. The format of integrity Pact is enclosed with tender documents. Refer Annexure-3. The "Integrity Pact on Govt. issued Stamp paper of Rs. 100/- duly filled as per enclosed format to be submitted in original. Bidders to ensure that every page of IP is ink signed with company seal/stamp in every page. [Please refer guideline for IP in STAC (Sl.-1) in GRSE website/ Annexure-2 of the tender]

15. Difficulty in submitting the bid:

- a) Any query/difficulty in understanding of SOTR or other technical Terms may be got clarified from **Sri Ravikanth Panithy, DGM (SR), Mobile no. +91 75960 94155; e-mail: Panithy.Ravikanth@grse.co.in** and from **Sri Subrata Das, SM (SR), Mobile no. +91 91633 61811; e-mail: Das.Subrata3@grse.co.in** prior to submission of offer.
- b) Any query/difficulty in understanding of Commercial Terms may be got clarified from **Ms. Debalina Chowdhury, JM (Contract), GRSE (Main Unit), Mob: +91 9147162442, e-mail: Chowdhury.Debalina@grse.co.in**
- c) Any difficulty in submitting / uploading of e-tender or for any system help **Mr. Saraswata Palit, SR. Manager (Purchase/E-Procurement, GRSE), e-mail/ Palit.Saraswata@grse.co.in** Mob: **99037 79626**, may be contacted [Land line no: 033 24893902]

16. e-BID INSTRUCTION ई बिड के अनुदेश -

- a) **M/s. Yeoman Marine Services Pvt. Ltd.** can view / download Part-I (Techno-Commercial) bid documents along with all attachments in E-Procurement portal <https://eprocoregrse.co.in>; They need to fill up the downloaded documents as per instruction and upload the same during bid submission. Non-acceptance of any techno-commercial criteria is discouraged.
- b) It is mandatory for all bidders to have class – III Digital Signature Certificate (DSC) in the name of the person who will digitally sign the bid from any of licensed Certifying Agency (CA). Bidders can see the list of licensed CAs from the link <http://www.cca.gov.in>.
- c) Bidders can view / download Part-I (Techno-Commercial) bid documents along with all attachments in E-Procurement portal <https://eprocoregrse.co.in>; NIT document can also be downloaded from GRSE website <http://www.grse.in/index.php/tender.html>. They need to fill up the downloaded documents as per instruction and upload the same during bid submission. Non-acceptance of any techno-commercial criteria is discouraged. However, if there is any, it is to be commented accordingly and also stated in the separate deviation format.

- d) Bidders need to fill up Part II (Price) bid online in HTML price bid format by inserting unit price only. No other attachment to the price bid will be reckoned.
- e) In case **M/s. Yeoman Marine Services Pvt. Ltd.** does not quote his rate for any item(s), it will be presumed that the bidder has included the cost of that/those item(s) in the rates of other items and the rate for such item(s) shall be considered as **Zero** and the tender will be evaluated by the Employer accordingly and the work executed by the bidder accordingly.
- f) The amendments / clarifications to the bid document, if any, will be posted on E-portal / GRSE website only.
- g) It will be the bidder's responsibility to check the status of their Bid on-line regularly after the opening of bid till award of work.
- h) **AMENDMENT OF TENDER DOCUMENT**
 - i. Before the deadline for submission of the tender, the Tender Document may be modified by GRSE Ltd. by issue of addendum/corrigendum.
 - ii. Addendum/corrigendum, if any, will be hosted on website / e procurement portal and shall become a part of the tender document **M/s. Yeoman Marine Services Pvt. Ltd.** is advised to see the website for addendum/ corrigendum to the tender document which may be uploaded within the deadline for submission of Tender as finally stipulated.
 - iii. To give **M/s. Yeoman Marine Services Pvt. Ltd.** reasonable time to consider the addendum/ corrigendum into account in preparing their tenders, extension of the deadline for submission of tenders may be given as considered necessary by GRSE.

ARTICLE 19 अनुच्छेद-19: BID REJECTION CRITERIA बिड अस्वीकृति के मापदंड -

Following bid rejection criteria may render the bids liable for rejection:

1. Bidder's failure to furnish sufficient or complete details for evaluation of the bids within the given period depending on the deficiencies noticed in the drawings / technical data which shall not however conflict with validity period.
2. Incomplete / misleading / ambiguous bid in the considered opinion of the Technical Negotiation Committee (TNC) / Commercial Negotiation Committee (CNC) of GRSE.
3. Bid with technical requirements and/or terms not acceptable to GRSE / Customers / External agency nominated, as applicable.
4. Bid received without qualification documents, where required as per the tender.
5. Bid not meeting the pre-qualification parameters / criteria stipulated in the Tender Enquiry/SOTR.
6. Bid with validity expiry date shorter than that specified in the Tender Enquiry.
7. Bidder who have not agreed for the fixed price till the validity of the tender or have quoted the variable price.
8. Bidder not agreeing for furnishing of the required Security Deposit (SD).
9. Bidder not submitting Integrity Pact as per requirement of the tender.

ARTICLE 20 अनुच्छेद-20: POST AWARD APLICABLE CLAUSES ठेका जारी करने के पश्चात लागू उपधारा –

i. Security Deposit प्रतिभूति जमा -

- a) An amount equivalent to **5%** (percent) of the total contract value (inclusive of GST) as interest free refundable Security Deposit (SD) is to be submitted in the form of Pay Orders/D.Ds/Bank Guarantees (in case of BG- with validity of sixty days beyond contract period as per GRSE format) on any schedule bank other than Co-operative bank payable at Kolkata, duly crossed favoring “**Garden Reach Shipbuilders & Engineers Limited**”, within 15 days from the date of order. In case of non-submission of SD as per schedule, penal interest will be charged for delayed period of submission of SD beyond 15 days at the prevailing SBI cash credit rate on the amount of SD to be submitted.
- b) If SD is to be submitted in the form of BG then the same is to be forwarded directly to GRSE by the BG issuing Bank in Banker’s sealed envelope addressing to concerned Ordering Authority failing which same will not be accepted. Details of BG should also be confirmed to Ordering Department, GRSE.
- c) S.D. amounts would be refunded / returned after successful execution of the job. The Contractor is to apply for release of their SD along with job completion certificate which has to be certified by competent authority of executing dept. of GRSE, through GRSE Ordering Dept. In the event of failure to execute the order satisfactorily or default by the Contractor, the security deposit will be forfeited.

ii. Work Done Certificate (W.D.C.) कार्य पूर्ति प्रमाण-पत्र (डबल्यू.डी.सी)-

Work done certificate will be issued to the Contractor (as per prescribed format) by concerned Engineer-in-charge/nominated authority by AGM(SR), GRSE/nominated officer for the job executed against each stage (stages as per payment term) based on clear inspection report by Quality Assurance authority as detailed in SOTR. W.D.C. is to include whether work has been completed as per delivery schedule or with delay [in days/weeks specified therein]. Any recovery towards usage of GRSE resources is also to be indicated [in days/weeks specified therein]. Any other recovery/deduction is also to be indicated on WDC.

iii. Bill Submission बिल प्रस्तुति:

On obtaining WDC, bills to be raised in line with job stage recognition stated in SOR else on completion of tendered job. Bills are to be submitted with checklist for Bill Submission **(as per attached format at Annexure-5)** at the Bill Receiving Counters located at the respective unit of Company. Bill is to be submitted in sealed envelope super-scribing on the envelope the Purchase Order No., Vendor code, Bill / Invoice No., Name of person / employee to whom bill is addressed, for processing. For Ship related Service Bill, the Name of the person to be mentioned on sealed envelope will be concerned person of Ship Repair Dept./Bill certifying officer/DGM (Ship Repair).

iv. **Payment Terms भुगतान की शर्तें:**

The stage wise payment (with full GST) will be paid within 30 days of receipt of bill (in 03 copies) duly certified by Bill Certifying Authority CGM(SR) / Nominated officer of GRSE & supported with satisfactory Work Done Certificate. Recoverable from contractor, if any, is to be adjusted from respective stage payments as per certification of Bill Certifying Authority. Moreover, release of payment is subject to clearance of ESI, P.F and other labour oriented mandatory liabilities of the Contractor if work is undertaken inside GRSE premises.

(a) Stages of Payment will be as follows:

Stage-I : 10% payment will be released on submission of detailed QAP, BAR/PERT Chart as per refit completion schedule.

Stage-II: 10% payment will be released on dry docking.

Stage-III: 10% payment will be released on completion of 1st version of undocking and completion of all underwater works as per main work package including Steel renewal except area under keel blocks which shall be undertaken during IIInd version of docking.

Stage-IV: 10% payment will be released on completion of IIInd version of un-docking.

Stage-V: 20% payment will be released on satisfactory completion of basin trials and harbor trials of major machinery/equipment.

Stage-VI: 20% payment will be released on completion of following activities:
On satisfactory completion of post refit trials and departure of the ship from the refitting firm minus the cost of deleted jobs and incomplete work.

Stage-VII: 20% payment will be released on following activities:
within 60 days of satisfactory completion of refit against PBG of equal amount valid for 60 days after completion of guarantee period or on completion of all guarantee liabilities (whichever later)

Note:

The Performance Bank Guarantee (PBG as per GRSE format)/retained amount of equivalent amount as above (at stage-VII) will be valid till expiry of Guarantee period plus sixty (60) days beyond guarantee period. Retained guarantee money / PBG will be released on getting certification by concerned authority (SR dept. through Contract Cell) of GRSE after satisfaction & after expiry of Guarantee period and on completion of all guarantee liabilities.

(b) Payment will be made on actual WDC certification basis.

(c) **Bill Certifying Authority:** CGM (SR), GRSE / his Nominated officer.

- v. **Liquidated Damages निर्णीत हर्जाना**
The vendor will be liable to pay minimum Liquidated Damages @ ½ % per week or part thereof on the undelivered work subject to a maximum of 5 % of the value of the order for delayed part. The amount of L.D. may be adjusted or set-off against any sum payable to the Contractor under this or any other Contract with the Company.
- vi. **Risk Purchase जोखिम खरीद**
In case the progress of work is not satisfactory and the contractor fails to maintain the schedule, GRSE reserves the right to get the work done by alternative source at the risk and cost of sub-contractor.
GRSE shall be at liberty to purchase/obtain the service from the alternative source as it deems fit, to make good such default and or in the event of the contract being terminated, the balance of the remaining service to be delivered there under. Any excess over the job price / service rates, paid and incurred by GRSE, as the case may be, over the contract price shall be recoverable from the firm. To make good the recoverable excess amount paid, GRSE shall be at liberty to invoke Bank Guarantee and/or with other available dues of the firm.
- vii. **Fire & Safety Precautions (As applicable): -**
The Vendor/Contractor shall abide by the Safety regulations/rules of the GRSE as detailed in Fire & Safety Guidelines (please refer www.grse.in). You should take all safety precautions and provide adequate supervision & control for your workmen in order to carry out the job safely. In case of any violation of safety precaution and none using of safety equipment, Contractor shall be liable for a penalty which is detailed in Fire and safety Guideline. Penalty amount depends on the type and frequency of violation mentioned in the safety guideline and the same will be deducted from the defaulter's bill.
Mandatory use of ISI marked PPE by Contractor Employees (As applicable): The Contractor shall ensure the use of ISI marked PPE by their engaged Employees. An indicative list of ISI marked Personal Protective Equipment, is appended below for mandatory compliance by the vendors without any deviation:

LIST OF PPES

Sl. No.	Name of PPE	Standard
(a)	Safety Helmet	IS: 2925 / EN 397.
(b)	Safety Footwear	IS 15298 / EN ISO 20345
(c)	Safety Goggles	ANSI Z87.1 / EN166.
(d)	Ear Plug	IS: 9167/ EN 352
(e)	Hand Gloves	(i) IS 4770 for electrical work (ii) EN 420 for general requirement (iii) EN 388 for mechanical hazard (iv) IS:6994 / EN 407 for heat applications (gas cutting / welding).
(f)	Welding Fume Respirator & Dust mask	IS: 9473 / EN: 149
(g)	Double lanyard Safety Belt & harness, automatic fall arrestor	IS: 3521
(h)	Cotton Boiler Suit Cloth	IS: 177 - 1989 (Amended up to date), Variety 3

Note: Apart from the above-mentioned PPE, vendors may consider any other type of standardized PPE as per job requirement, in consultation with GRSE Safety Department.

- viii. **Contractor's Safety Personnel (संविदाकार के बचाव कर्मचारी):** One fully specialist and certified Safety Personnel has to be posted at the site during progress of work. The responsibility of the safety personnel is to supervise and monitor the site safety obligations of all work places and to comply all laid down Fire & Safety Rules of GRSE. He also ensures all workmen working under the sub-contractor at site are made aware of and comply with all the safety norms.
- ix. **Time of completion shall always be considered as essence of the contract / PO (कार्य समापन अवधी निविदा का मूलतत्व)** and cannot be extended for any reason whatsoever. However, in an unlikely situation beyond the control of the contractor, application for extension of due time shall be submitted by the Contractor, one week in advance with proper justification duly endorsed by respective Berth Officer of GRSE with commensurate recording of events in the "Hindrance Register". Please note LD will be levied for the unexecuted portion for such time extension.
However, vendor has to compete the job within given schedule as per instruction of concerned authority of GRSE.
- x. **Please note that this is an extremely time bound job and requires proper scheduling and monitoring of each activity. Vendor is to maintain job register to log the activity for the job wet start time and completion time and also record major events interim. The hindrance register should be maintained as indicated.**
- xii. **Increase in quantity or introduction of items is strictly prohibited under any circumstances** मात्रा में वृद्धि या प्रवेशण किसी भी परिस्थिती में अमान्य. However in an unlikely situation for completion of the job in all respect demand a minor increase of quantity or item, the same has to be brought to the notice to the Engineer In-charge/concerned project head of GRSE, in writing, sufficient time in advance. Only on approval / amendment of PO/ Contract in writing and in advance has to be considered for this additional quantity or item. Contractor should not do any such additional work on verbal clearances of any Authority of GRSE. No post facto approval request for such deviation will be accepted.
- xiii. **Secrecy of Information:** - All documents and drawings of this project are of confidential in nature and should be used explicitly for the purpose for which they are provided. Technical information, Drawings should not be copied and should be returned to GRSE on completion of work. No information in respect of contracts/orders shall be released to the national or international media or any one not directly involved its execution without the express written approval of the GRSE. In the event of any breach of above provisions, the vendor would have to make good of any loss/ cost/ damage/ any other claim whatsoever preferred by anybody to GRSE in this respect.
- xiv. **Relationship between the Parties**
Nothing in this NIT/POs constitutes/shall constitute any fiduciary relationship between GRSE and the Contractor or any relationship of employer-employee, principal and agent or partnership between GRSE and the Contractor.
No party shall bind the other party in any manner whatsoever except as agreed under the NIT and POs to be issued.
GRSE has no obligation to the Contractor except as agreed under the terms of NIT.

xv. **Survival**

The provisions of NIT in relation to Confidential Information, Non-Disclosure, Intellectual Property Rights and Ownership shall survive the expiry or termination of the Purchase order.

xvi. **Entire Contract**

The terms and conditions laid down in the NIT and all the annexure and appendices shall be read and construed in conjunction with the POs and shall form integral part of the POs to be issued to the bidder.

xvii. **Cyber Security Secrecy**

The Contractor shall at all times keep all relevant data such as Statistics/Business processes and supporting records and materials compiled or prepared in course of its rendering services under the POs secret and confidential and shall give a declaration indemnifying GRSE against all actions, claims, demands, losses, damages, costs, charges and expenses whatsoever which GRSE may suffer or incur as a result of breach or default by divulging Confidential Information to any other person or party those which will be acquired by the Contractor during operation and/or implementation of the POs

ARTICLE 21 अनुच्छेद 21: SUBMISSION OF BID बिड की पेशी -

1. Last date of submission of Bid / Date of opening of bid is indicated in Tender Document. Tender is liable to be rejected if all the requisite documents are not enclosed with the Part I, Techno-Commercial offer.
2. Financial bid of all the Techno-Commercially qualified bidders will be opened in due course after conclusion of TNC/CNC meetings and acceptance of Techno-Commercial offer. After opening of financial bids, the techno-commercially qualified bidders can view the System Generated Price Comparison Sheet in E-procurement portal.
3. GRSE reserves the right to accept / reject the offer of **M/s. Yeoman Marine Services Pvt. Ltd.** in full or in part without assigning any reason.
4. Acceptance Format Matrix should be filled up and attached with techno-commercial bid as marks of acceptance of NIT/SOTR/STAC. In case of non-receipt of filled in STACs acceptance format matrix, it would be presumed that you have accepted all our terms& conditions as per GRSE tender until & unless deviation is specially mentioned in offer.

ARTICLE 22 अनुच्छेद 22: CONTRACT WORKMAN WAGE PAYMENT:-

- a. Contractor is liable for payment of PF, ESI to their engaged workmen and for other labour oriented mandatory liabilities as applicable for the job.
- b. Payment of wages to the contractor's employee should be made through individual bank account on monthly basis instead of cash payment. PF-UAN activation of all the contractor's employee/workmen is mandatory. Vendors are to comply all statutory provisions for disbursing payment to their workmen/employees.

ARTICLE 23 अनुच्छेद 23: STATUTORY RESPONSIBILITY OF CONTRACTOR DEPLOYING THEIR WORKMEN INSIDE GRSE PREMISES – AS PER APPENDIX-A AND APPENDIX-B ENCLOSED UNDER ANNEXURE-4.

**Debalina Chowdhury
JM (Contract)
Garden Reach Shipbuilders & Engineers Limited
61, Garden Reach Road, Kolkata – 700 024
Mobile: +91 9147162442**

GRSE Ltd.	TECHNICAL SPECIFICATION FOR CONDUCT OF SHORT REFIT OF SCG ZOROASTER (WORK PACKAGE-II)	SOTR No.: GRSE/SR/SCGZ/01
Yard No: SCG ZOROASTER		Rev:
Group: SR Dept		Date: 22 Mar 24
Prepared by: Ravikanth Panithy, DGM (SR)	Checked by: Cdr. Pinakesh Das, AGM (SR)	Approved by: CGM (SR)

1. INTENT

SR-1 of SCG Zoroaster is required to be carried out at GRSE, Kolkata as per the scope of work received from MEA. SCGS Zoroaster arrived at Kolkata on 11 Mar 24 and refit should be commenced immediately as per the schedule promulgated by GRSE. You are requested to plan for mobilization of team accordingly and planned for dry-docking at GRSE MW/RBD/KPDD or any other appropriate dry dock at Kolkata in two versions for requisite docking period to complete U/W package & dry dock related activities as per refit work package. Apart from UW package, the ship will be positioned at GRSE MW/ FOJ / RBD/KPD/KoPT for balance jobs. The total refit duration is **scheduled for 90 days**. The entire refit package is to be completed within 90 days from the day of refit commencement date. The summary of SR Work Package-II is appended below. Detailed scope of work for each DL is placed at **Enclosure-A**. Shipyard reserves the right to offload complete or part of the work package to the vendor as per GRSE requirement.

Job Description	Defect List under Vendor scope as per Enclosure-A
Work Package - II	DL - 20001 to 20504 as per Enclosure-A DL - 20505 to 20558 as per Enclosure-A (Except 20557) DL - 30001 to 30149 (Except 30081 to 30083) as per Enclosure-A DL - 300150 to 300176 as per Enclosure-A

2. CONTRACTOR'S SCOPE OF WORK

- a) Conduct repairs of Hull/ Electrical/ Engineering equipment onboard as per defect list placed at **Enclosure-A** for the work package and conduct pre & post refit trials along with OEM representatives for specific equipment as per the scope of job. Details of pre-refit and post-refit trials shall be intimated separately for conduct at Kolkata/ Padadip/ Raichak/ Visakhapatnam or at any Indian base port.
- b) All tools and tackles with material for repairs are also to be arranged by the vendor for completion of refit. All the spares (Mandatory & Anticipatory) for routines of equipment/repairs are to be identified and mobilized with in refit period without affecting completion schedule of refit. Spares management to be undertaken in consultation with GRSE/SS as per scope of job specified for each DL(Enclosure-A).

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- c) Repairs of hull structure will have to be conducted based on the assessment/ inspection and recommendations of class/ IRS. Vendor need to arrange third party inspection by Class for all necessary areas as per DL placed at Enclosure-A.
- d) Arrangement of Class / IRS surveyor where ever applicable as per scope of job w.r.t DL, conduct of UTG gauging, etc. will be within the scope of contractor.
- e) Contractor required to mobilize experienced manpower w.r.t department wise (Hull/Engg/Elect) and system wise on simultaneous manner to meet the completion schedule. All in way jobs for completion of reftt work package as per DL is under scope of vendor.
- f) CONTRACTOR shall prepare an exhaustive cost estimate and schedule for complete work package or part thereof, as the case may be (inclusive of material required for defect rectification) within the stipulated time, to enable GRSE to evaluate the estimate and schedule.
- g) Refit should be carried out by CONTRACTOR conforming to specifications of SOTR/DL.
- h) The CONTRACTOR shall give Six months guarantee for workmanship and material defects for items repaired/ overhauled and Twelve months guarantee for new installations (if any) under the contract from the Contract Completion Date (Contract completion date will be the date of Refit Completion date certified by GRSE/SS). The guarantee clause will also be applicable to the items repaired by the OEMs/PAC/ sub-contractor of shipyard. Any defects noticed during this guarantee period due to defective/ poor workmanship or sub-standard material shall be rectified free of cost by the CONTRACTOR or by the OEMs/PAC/sub-contractors under arrangements by the CONTRACTOR.
- i) If within the period of warranty, the repairs reported by the CUSTOMER to have failed to perform as per the specifications, the CONTRACTOR shall either replace or rectify the same free of charge, within TWO WEEKS of notification of such defect received by the CONTRACTOR provided that the equipment are used and maintained by the CUSTOMER as per instructions contained in the Operating Manual. Record of the downtime would be maintained by user in logbook. Spares required for warranty repairs shall be provided free of cost by CONTRACTOR.

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- j) CONTRACTOR has to provide all necessary service and repair backup, during the warranty period of the repair at the CUSTOMER's base port at Seychelles or any Indian port.
- k) Notice for Remedy/ Rectification of defects during Warranty Period shall be in writing and transmitted to each other by the fastest possible means.
- l) All applicable industry safety practices such as prescribed in Factories Act / governmental safety regulations applicable at GRSE would have to be strictly adhered to. Precautions for fire prevention have to be followed all the time.
- m) Conformity to quality specifications will have to be ensured through quality control activities that would include facilities, instruments, machines, labour and material for carrying out inspections/ trials of work undertaken.
- n) Refit planning and management activities will have to be undertaken in close coordination between both parties. Adequate resources would have to be devoted for monitoring and control in order to ensure completion of refit activities as per schedule.
- o) Quality Assurance & Quality Control: In order to assure the quality of repair/routines and exercise effective control, the work executed by the CONTRACTOR will be in accordance with GRSE/ CUSTOMER'S inspection schedule as applicable followed by preliminary, stage and final inspection. The repair work will be undertaken as per specified standards and quality norms. Ensuring and maintaining quality will be the responsibility of the Contractor.
- p) The CONTRACTOR shall submit a Quality Assurance (QA) Plan as applicable to the scope of work for approval of the GRSE/CUSTOMER. The approved QA plan will form the basis for inspection and acceptance of work executed by the CONTRACTOR under this contract. The CONTRACTOR shall submit detailed project plan/BAR chart with sub-contractors list including OEM/PAC firms within 05 days from the date of intimation from GRSE on contract finalization/issue of LOI/PO.
- q) Confidentiality clause/Non-disclosure agreement (NDA): Confidentiality clause/Non-Disclosure agreement shall have to be entered into.

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An undertaking regarding protection of Intellectual Property Rights and return of issued drawings without reproduction and retention of any copies, shall also have to be furnished.

- r) Vendor to depute reps including OEM reps for trials (Pre and Post refit trials) as required as part of scope. Out-put of pre-refit/Post-refit trials to be shared to GRSE immediately upon completion of trials.

3. GRSE SCOPE OF JOB/SUPPLY

- a) Dry docking & Undocking of the ship
- b) Shore power supply
- c) Space for vendor for safe keeping material if docking is within GRSE/KPDD.

4. CONTRACTOR'S SCOPE OF SUPPLY

- a) Supply of all material including weld consumables and gas for hot work will be within the scope of supply of contractor.
- b) All material including paint for surface preparation and painting. All material and paint mentioned as Yard supply as per Enclosure-A to be arranged by vendor.
- c) CONTRACTOR to arrange compressed air for undertaking blasting & painting job for refit and for liquidation of DLs as applicable.
- d) Arrangement of staging (including staging material) for underwater hull painting / onboard repairs /wherever required for repairs and dismantling of same after completion of repairs.
- e) Welders deployed for welding should be qualified by Class/ IRS. **This is a mandatory requirement.**
- f) All tools & tackles including grinding M/c. welding machine along with accessories like cable, holder etc. gas torches, safety gadgets like welding screen, gas goggles, gloves etc. hoses etc. which will be required for erection. Transportation of material, erection aid & consumables are to be arranged by sub-contractor.
- g) Personal protective equipment for all workers. Safety Harness to be used while working at height.
- h) All the paint for under water/ship side/deck and other areas as per DL scope of job to be arranged by vendor as per the paint scheme.
- i) Vendor to provide portable DG of required capacity as per ships load requirement during the period of Dry dock/Afloat services as and when required for undertaking trials of equipment/ships habitability requirement.

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- j) Contractor to cater for provision of crane services as required for completion of refit for the respective packages
- k) **All material and spares required for completion of DL/equipment wise scope of job for respective work packages.**
- l) Contractor to cater for provision of portable DG required for completion of refit for the respective packages as detailed below

Hull Package- During Docking and Undocking of the ship and undertaking trial of hull equipment as required

Engineering & Electrical package- For undertaking trials of equipment during non-availability of ships DA

- m) Any other material not listed in Para 3 above.

5. WORKMANSHIP

- a) Structural repairs conducted should be as per shipbuilding practice. Repairs are to be carried out as per approved QAP of Class/ IRS. Any structure having deformation or any welding/ structural defect beyond acceptable limits as per Class regulations will have to be rectified at no extra cost.
- b) Application of paint has to be as per recommendations of Paint OEM. Paint OEM to be mobilized by vendor.
- c) Suitably qualified personnel to be employed while attending to DL serials.
- d) Contractor is to plan his work for the day, one day in advance and conduct inspection of area along with ship staff before deployment of workmen. It should be ensured that area where hot work is planned is cleared of all paneling and insulation. Site clearance in the form of hot work certificate need to be obtained by vendor from ship staff well in advance (one day prior) before commencement of activity. No hot work is to be commenced without clearance from ship. Contractor has to maintain cleanliness of compartment where they are working and clear the compartment/ work area of all debris/ by products of work before securing for the day and dispose them in designated areas within Shipyard.
- e) Any damage caused on account of carelessness / poor workmanship has to be made good by the vendor at no extra cost.

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6. INSPECTION

- a) Inspection of structural repairs are to be carried by GRSE/Class / IRS surveyor/ Nominated agency of IN / ICG. Inspection to be offered to GRSE/SS/ agency of GRSE/SS.
- b) Paint OEM has to be mobilized by Contractor for inspection during paint application. Warranty certificate for paints to be obtained from Paint OEM and shared with ship/ GRSE.
- c) Non-destructive testing of welds are to be carried out as per the requirement of Class/ IRS.
- d) OEM reps are to be mobilized as per requirement wherever applicable for testing/ trials etc.

7. REQUIREMENT OF SEA/HARBOUR TRIALS

Contractor is to plan for mobilization of nominated OEM reps for harbour trials, pre & post refit sea trials as per the requirement of ship for the respective work packages.

8. MANPOWER

Sub-contractor should indicate actual data in regard to following aspects:-

- a) Skilled work force including no. of experienced marker, fitter, welder, gas cutter. Successful sub-contractor should undertake that these operatives will not be withdrawn jeopardizing the repair schedule/ undocking schedule.
- b) Details about engineers and / or Supervisors to be employed for the work. Firm should provide suitable Site Engineer and Supervisor with proper knowledge of nature of work at all times.
- c) All safety precautions/ PPE for workers and material handling is contractor's responsibility.
- d) Work has to progress job onboard ship as per docking & undocking schedule and refit completion schedule to be maintained. The vendor should deploy sufficient manpower and ensure refit completion schedule.

9. PLACE OF WORK

The work is to be executed in GRSE (RBD/MW/FOJ) or KPDD/KOPT premises. The job is to be undertaken in dry-dock/ afloat condition as per availability of the ship.

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10. JOB COMMENCEMENT & COMPLETION DATE

Job to be commenced immediately as per the schedule promulgated by GRSE. The job to be carried as per the priority given by GRSE and is to be completed to meet schedule promulgated by GRSE to complete total refit package within scheduled time of 90 days from the date of intimation/LOA/PO from GRSE/REFSTART as promulgated by GRSE.

Dry Docking is tentatively scheduled in last week of Mar 2024. Vendor to be ready for starting of underwater related works accordingly.

11. COMMUNICATION LANGUAGE.

Language of communication and language on plans/documents shall be in English.

12. INSPECTION AUTHORITY

SS, GRSE, WOT, Classification Society and Paint OEM.

13. PAYMENT TERMS

The Payment for each stage as mentioned below shall be payable by GRSE to Contractor (excluding taxes) (Taxes, Duties and Levies at actuals) (Stage wise Completion Certificate to be filled up as per GRSE format wherever bills are raised in accordance with terms of payments).

Stage No.	Activity Definition	Stage Payment
I	On submission of detailed QAP, BAR/PERT Chart as per refit completion schedule	10%
II	On dry docking	10%
III	On completion of 1st version of undocking and completion of all underwater works as per main work package including Steel renewal except area under keel blocks which shall be undertaken during 2nd version of docking.	10%
IV	On completion of 2nd version of un-docking	10%
V	On satisfactory completion of basin trials and harbor trials of major machinery/equipment	20%

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VI	On satisfactory completion of post refit trials and departure of the ship from the refitting firm	20% minus the cost of deleted jobs and incomplete work
VII	Within 60 days of satisfactory completion of refit	20% (Stage Completion Certificate not required) (20% payment will be released against PBG of equal amount valid for 60 days after completion of guarantee period or on completion of all guarantee liabilities (whichever later)

14. MODE OF QUOTING

While quoting vendor to indicate the lump sum rate for each DL as per Enclosure-A considering scope of job as per DL description and SOTR. Quote to be submitted as per price bid format provided in tender document. Breakdown cost for individual DL to be provided as per requirement of GRSE as applicable.

15. QUOTATION FOR DL/OEM/PAC FIRM JOBS

Vendor to quote for all DLs to be executed through OEM/PAC firms for mobilization/liquidation through respective OEM/PAC.

16. GOW (GROWTH OF WORK)/ADDITIONAL WORK & SPARES

Requirement of additional job or any additional spares arising for liquidation during the refit period other than scope of job as per work package is to be completed as per mutual discussion and accordingly order/amendment of existing order would be done for addition job executed. An additional 15% on basic contract value shall be considered against GoW/Additional work & spares.

WORK PACKAGE - II

ZOROASTER DEFECT LIST FOR SR-24

DL-I ENGINEERING DEPARTMENT

<u>Ser</u>	<u>Defect List No</u>	<u>Type of Routines</u>	<u>Equipment Name</u>	<u>Description</u>	<u>SS Remarks</u>
Equipment- Main Engine					
Make- MTU					
Model-16V4000M90					
Qty-03					
1.	20001	3000H-1	Main Engine (P)	Visually check engine & external pipes for leaks and general condition	DAN
2.	20002	3000H-2	Main Engine (P)	Check intercooler drain (if installed) for water discharge and obstructions	DAN
3.	20003	3000H-3	Main Engine (P)	Check for abnormal running noise, exhaust gas colour and vibrations.	DAN
4.	20004	3000H-4	Main Engine (P)	Drain water and contaminants from fuel per filter	DAN
5.	20005	3000H-5	Main Engine (P)	Check RPM, pressures and temperatures for correct operating range.	DAN
6.	20006	3000H-6	Main Engine (P)	Check thickness of oil residue layer. Clean centrifugal lub oil filter. Replace paper sleeve.	DAN
7.	20007	3000H-7	Main Engine (P)	Replace Lub oil filter elements	DAN
8.	20008	3000H-8	Main Engine (P)	Check inlet air and exhaust flaps for ease of movement	DAN
9.	20009	3000H-9	Main Engine (P)	Check valve clearances, Adjust if necessary	DAN
10.	20010	3000H-10	Main Engine (P)	Carry out Lub oil and engine coolant lab analysis. Change coolant if required.	DAN
11.	20011	3000H-11	Main Engine (P)	Replace fuel duplex filter and fuel pre filter elements	DAN
12.	20012	3000H-12	Main Engine (P)	Drain lub oil and replenish with fresh lub oil	DAN
13.	20013	3000H-13	Main Engine (P)	Check relief bore for obstruction: bilge pump, engine coolant pump and raw water pump	DAN
14.	20014	3000H-14	Main Engine (P)	Check condition of torsionally resilient coupling (visual inspection)	DAN
15.	20015	3000H-15	Main Engine (P)	Check charge state, electrolyte and specific gravity of battery	DAN
16.	20016	3000H-16	Main Engine (P)	Check exhaust system drain for obstructions	DAN
17.	20017	3000H-17	Main Engine (P)	Replace air filter elements	DAN
18.	20018	3000H-18	Main Engine (P)	Clean crankcase breather filter elements. Replace if required	DAN
19.	20019	3000H-19	Main Engine (P)	Check HP fuel pump relief bore for obstructions	DAN
20.	20020	3000H-20	Main Engine (P)	Check SV mounts for condition, securing and tightness	DAN
21.	20021	3000H-21	Main Engine (P)	Check visually serviceability of engine wiring	DAN
22.	20022	3000H-22	Main Engine (P)	Check monitoring/protection system for proper functioning	DAN
23.	20023	3000H-1	Main Engine (S)	Visually check engine & external pipes for leaks and general condition	DAN
24.	20024	3000H-2	Main Engine (S)	Check intercooler drain (if installed) for water discharge and obstructions	DAN
25.	20025	3000H-3	Main Engine (S)	Check for abnormal running noise, exhaust gas colour and vibrations.	DAN

26.	20026	3000H-4	Main Engine (S)	Drain water and contaminants from fuel per filter	DAN
27.	20027	3000H-5	Main Engine (S)	Check RPM, pressures and temperatures for correct operating range.	DAN
28.	20028	3000H-6	Main Engine (S)	Check thickness of oil residue layer. Clean centrifugal lub oil filter. Replace paper sleeve.	DAN
29.	20029	3000H-7	Main Engine (S)	Replace Lub oil filter elements	DAN
30.	20030	3000H-8	Main Engine (S)	Check inlet air and exhaust flaps for ease of movement	DAN
31.	20031	3000H-9	Main Engine (S)	Check valve clearances, Adjust if necessary	DAN
32.	20032	3000H-10	Main Engine (S)	Carry out Lub oil and engine coolant lab analysis. Change coolant if required.	DAN
33.	20033	3000H-11	Main Engine (S)	Replace fuel duplex filter and fuel pre filter elements	DAN
34.	20034	3000H-12	Main Engine (S)	Drain lub oil and replenish with fresh lub oil	DAN
35.	20035	3000H-13	Main Engine (S)	Check relief bore for obstruction: bilge pump, engine coolant pump and raw water pump	DAN
36.	20036	3000H-14	Main Engine (S)	Check condition of torsionally resilient coupling (visual inspection)	DAN
37.	20037	3000H-15	Main Engine (S)	Check charge state, electrolyte and specific gravity of battery	DAN
38.	20038	3000H-16	Main Engine (S)	Check exhaust system drain for obstructions	DAN
39.	20039	3000H-17	Main Engine (S)	Replace air filter elements	DAN
40.	20040	3000H-18	Main Engine (S)	Clean crankcase breather filter elements. Replace if required	DAN
41.	20041	3000H-19	Main Engine (S)	Check HP fuel pump relief bore for obstructions	DAN
42.	20042	3000H-20	Main Engine (S)	Check SV mounts for condition, securing and tightness	DAN
43.	20043	3000H-21	Main Engine (S)	Check visually serviceability of engine wiring	DAN
44.	20044	3000H-22	Main Engine (S)	Check monitoring/protection system for proper functioning	DAN
45.	20045	3000H-1	Main Engine (C)	Visually check engine & external pipes for leaks and general condition	DAN
46.	20046	3000H-2	Main Engine (C)	Check intercooler drain (if installed) for water discharge and obstructions	DAN
47.	20047	3000H-3	Main Engine (C)	Check for abnormal running noise, exhaust gas colour and vibrations.	DAN
48.	20048	3000H-4	Main Engine (C)	Drain water and contaminants from fuel per filter	DAN
49.	20049	3000H-5	Main Engine (C)	Check RPM, pressures and temperatures for correct operating range.	DAN
50.	20050	3000H-6	Main Engine (C)	Check thickness of oil residue layer. Clean centrifugal lub oil filter. Replace paper sleeve.	DAN
51.	20051	3000H-7	Main Engine (C)	Replace Lub oil filter elements	DAN
52.	20052	3000H-8	Main Engine (C)	Check inlet air and exhaust flaps for ease of movement	DAN
53.	20053	3000H-9	Main Engine (C)	Check valve clearances, Adjust if necessary	DAN
54.	20054	3000H-10	Main Engine (C)	Carry out Lub oil and engine coolant lab analysis. Change coolant if required.	DAN
55.	20055	3000H-11	Main Engine (C)	Replace fuel duplex filter and fuel pre filter elements	DAN
56.	20056	3000H-12	Main Engine (C)	Drain lub oil and replenish with fresh lub oil	DAN
57.	20057	3000H-13	Main Engine (C)	Check relief bore for obstruction: bilge pump, engine coolant pump and raw water pump	DAN
58.	20058	3000H-14	Main Engine (C)	Check condition of torsionally resilient coupling (visual inspection)	DAN
59.	20059	3000H-15	Main Engine (C)	Check charge state, electrolyte and specific gravity of battery	DAN
60.	20060	3000H-16	Main Engine (C)	Check exhaust system drain for obstructions	DAN
61.	20061	3000H-17	Main Engine (C)	Replace air filter elements	DAN
62.	20062	3000H-18	Main Engine (C)	Clean crankcase breather filter elements. Replace if required	DAN
63.	20063	3000H-19	Main Engine (C)	Check HP fuel pump relief bore for obstructions	DAN

64.	20064	3000H-20	Main Engine (C)	Check SV mounts for condition, securing and tightness	DAN
65.	20065	3000H-21	Main Engine (C)	Check visually serviceability of engine wiring	DAN
66.	20066	3000H-22	Main Engine (C)	Check monitoring/protection system for proper functioning	DAN
Equipment – Gear Box					
Make- ZF					
Model- ZF7600					
Qty-03					
67.	20067	6000 H-1/5Y-1	Gear Box (P)	Visually check flexible clutch.	DAN
68.	20068	6000 H-2/5Y-2	Gear Box (P)	Flexible check flexible engine and transmission mountings.	DAN
69.	20069	6000 H-3/5Y-3	Gear Box (P)	Visually check/ inspect clutch discs.	DAN
70.	20070	6000 H-4/5Y-4	Gear Box (P)	Visually check/ inspect running gear.	DAN
71.	20071	6000 H-5/5Y-5	Gear Box (P)	Check priming and trailing oil pump.	DAN
72.	20072	6000 H-6/5Y-6	Gear Box (P)	Check/ overhaul control unit.	DAN
73.	20073	6000 H-7/5Y-7	Gear Box (P)	Check actuation device.	DAN
74.	20074	6000 H-8/5Y-8	Gear Box (P)	Recalibrate display devices.	DAN
75.	20075	6000 H-9/5Y-9	Gear Box (P)	Cleaning and pressure testing of oil cooler.	DAN
76.	20076	6000 H-10/5Y-10	Gear Box (P)	Check input shaft seal.	DAN
77.	20077	6000 H-11/5Y-11	Gear Box (P)	Check output shaft seal.	DAN
78.	20078	6000 H-12/5Y-12	Gear Box (P)	Check hoses and cable for wear and tear / damage, replace as necessary.	DAN
79.	20079	6000 H-13/5Y-13	Gear Box (P)	Check flow limiting valve.	DAN
80.	20080	6000 H-14/5Y-14	Gear Box (P)	Check oil jet control valve.	DAN
81.	20081	6000 H-15/5Y-15	Gear Box (P)	Testing/ Calibration of all sensors/ switches/ safety devices and provide certificates	DAN
82.	20082	6000 H-1/5Y-1	Gear Box (S)	Visually check flexible clutch.	DAN
83.	20083	6000 H-2/5Y-2	Gear Box (S)	Flexible check flexible engine and transmission mountings.	DAN
84.	20084	6000 H-3/5Y-3	Gear Box (S)	Visually check/ inspect clutch discs.	DAN
85.	20085	6000 H-4/5Y-4	Gear Box (S)	Visually check/ inspect running gear.	DAN
86.	20086	6000 H-5/5Y-5	Gear Box (S)	Check priming and trailing oil pump.	DAN
87.	20087	6000 H-6/5Y-6	Gear Box (S)	Check/ overhaul control unit.	DAN
88.	20088	6000 H-7/5Y-7	Gear Box (S)	Check actuation device.	DAN
89.	20089	6000 H-8/5Y-8	Gear Box (S)	Recalibrate display devices.	DAN
90.	20090	6000 H-9/5Y-9	Gear Box (S)	Cleaning and pressure testing of oil cooler.	DAN
91.	20091	6000 H-10/5Y-10	Gear Box (S)	Check input shaft seal.	DAN
92.	20092	6000 H-11/5Y-11	Gear Box (S)	Check output shaft seal.	DAN
93.	20093	6000 H-12/5Y-12	Gear Box (S)	Check hoses and cable for wear and tear / damage, replace as necessary.	DAN
94.	20094	6000 H-13/5Y-13	Gear Box (S)	Check flow limiting valve.	DAN
95.	20095	6000 H-14/5Y-14	Gear Box (S)	Check oil jet control valve.	DAN

96.	20096	6000 H-15/5Y-15	Gear Box (S)	Testing/ Calibration of all sensors/ switches/ safety devices and provide certificates	DAN
97.	20097	6000 H-1/5Y-1	Gear Box (C)	Visually check flexible clutch.	DAN
98.	20098	6000 H-2/5Y-2	Gear Box (C)	Flexible check flexible engine and transmission mountings.	DAN
99.	20099	6000 H-3/5Y-3	Gear Box (C)	Visually check/ inspect clutch discs.	DAN
100.	20100	6000 H-4/5Y-4	Gear Box (C)	Visually check/ inspect running gear.	DAN
101.	20101	6000 H-5/5Y-5	Gear Box (C)	Check priming and trailing oil pump.	DAN
102.	20102	6000 H-6/5Y-6	Gear Box (C)	Check/ overhaul control unit.	DAN
103.	20103	6000 H-7/5Y-7	Gear Box (C)	Check actuation device.	DAN
104.	20104	6000 H-8/5Y-8	Gear Box (C)	Recalibrate display devices.	DAN
105.	20105	6000 H-9/5Y-9	Gear Box (C)	Cleaning and pressure testing of oil cooler.	DAN
106.	20106	6000 H-10/5Y-10	Gear Box (C)	Check input shaft seal.	DAN
107.	20107	6000 H-11/5Y-11	Gear Box (C)	Check output shaft seal.	DAN
108.	20108	6000 H-12/5Y-12	Gear Box (C)	Check hoses and cable for wear and tear / damage, replace as necessary.	DAN
109.	20109	6000 H-13/5Y-13	Gear Box (C)	Check flow limiting valve.	DAN
110.	20110	6000 H-14/5Y-14	Gear Box (C)	Check oil jet control valve.	DAN
111.	20111	6000 H-15/5Y-15	Gear Box (C)	Testing/ Calibration of all sensors/ switches/ safety devices and provide certificates	DAN

Equipment – Shafting

Make- Jaure Shaft Lines Jaure SA, Spain

Model- LAMIDISC

QTY-03

112.	20112	R-1	Port Shafting	Inspection should be carried out for the Lamidisc coupling as follows: (a) Check for any disc pack failure. If found failed, replace it and investigate the cause of the failure. (b) Inspect the Lamidisc coupling disc packs for any misalignment using stroboscopic method as enumerated in the user manual.	DAN
113.	20113	R-2	Port Shafting	Inspection of the Plummer block to be carried out as follows: (a) Check the Cooper roller bearings for wear. (b) Renew the lubricating grease.	DAN
114.	20114	R-3	Port Shafting	Calibration/renewal of pressure gauges to be carried out. Note: Shaft to be inspected by SS for Corrosion. Same to be polished off and new corrosion protection to be applied at every six month interval. The following procedure to be followed: - Apply anticorrosive protector abundantly (i.e. Rust Keeper 999) or equivalent. - Remove major oxide by a pad (i.e. ScotchBrite). Pad must be continuously wet with anticorrosive protector. - Apply Tectyl or anticorrosive paint.	DAN
115.	20115	R-1	STBD Shafting	Inspection should be carried out for the Lamidisc coupling as follows: (a) Check for any disc pack failure. If found failed, replace it and investigate the cause of the failure.	DAN

				(b) Inspect the Lamidisc coupling disc packs for any misalignment using stroboscopic method as enumerated in the user manual.	
116.	20116	R-2	STBD Shafting	Inspection of the Plummer block to be carried out as follows: (a) Check the Cooper roller bearings for wear. (b) Renew the lubricating grease.	DAN
117.	20117	R-3	STBD Shafting	Calibration/renewal of pressure gauges to be carried out. Note: Shaft to be inspected by SS for Corrosion. Same to be polished off and new corrosion protection to be applied at every six month interval. The following procedure to be followed: - Apply anticorrosive protector abundantly (i.e. Rust Keeper 999) or equivalent. - Remove major oxide by a pad (i.e. ScotchBrite). Pad must be continuously wet with anticorrosive protector. - Apply Tectyl or anticorrosive paint.	DAN
118.	20118	R-1	Centre Shafting	Inspection should be carried out for the Lamidisc coupling as follows: (a) Check for any disc pack failure. If found failed, replace it and investigate the cause of the failure. (b) Inspect the Lamidisc coupling disc packs for any misalignment using stroboscopic method as enumerated in the user manual.	DAN
119.	20119	R-2	Centre Shafting	Inspection of the Plummer block to be carried out as follows: (a) Check the Cooper roller bearings for wear. (b) Renew the lubricating grease.	DAN
120.	20120	R-3	Centre Shafting	Calibration/renewal of pressure gauges to be carried out. Note: Shaft to be inspected by SS for Corrosion. Same to be polished off and new corrosion protection to be applied at every six month interval. The following procedure to be followed: - Apply anticorrosive protector abundantly (i.e. Rust Keeper 999) or equivalent. - Remove major oxide by a pad (i.e. ScotchBrite). Pad must be continuously wet with anticorrosive protector. - Apply Tectyl or anticorrosive paint.	DAN
Equipment- Water Jet					
Make- Rolls Royce					
Model- 71S3NP					
Qty-03					
121.	20121	5Y-1	Port Waterjet	Carry out in-situ inspection of impeller, Guide vane chamber and transom flange assembly	DAN
122.	20122	5Y-2	Port Waterjet	Replacement of hub bearing.	DAN
123.	20123	5Y-3	Port Waterjet	Replace the hub seal.	DAN
124.	20124	5Y-4	Port Waterjet	Replace O rings in pump units.	DAN
125.	20125	5Y-5	Port Waterjet	Replace bolts of impeller/stub shaft in pump units	DAN
126.	20126	5Y-6	Port Waterjet	Carry out inspection of bulkhead seal. Renewal of diaphragm assembly	DAN
127.	20127	5Y-7	Port Waterjet	Carry out grease renewal of support bearing.	DAN

128.	20128	5Y-8	Port Waterjet	Carry out inspection of shaft & flange bolts.	DAN
129.	20129	5Y-9	Port Waterjet	Replace shaft seal assembly along with inflatable seal.	DAN
130.	20130	5Y-10	Port Waterjet	Replace the split cone ring.	DAN
131.	20131	5Y-11	Port Waterjet	Inspect mechanical interface between impeller shaft and impeller shaft journal.	DAN
132.	20132	5Y-12	Port Waterjet	Visual inspection of feedback transmitters	DAN
133.	20133	5Y-13	Port Waterjet	Replace the cylinder seals	DAN
134.	20134	5Y-14	Port Waterjet	Replace the Hydraulic hoses	DAN
135.	20135	5Y-15	Port Waterjet	Replace the feedback protection hose.	DAN
136.	20136	5Y-16	Port Waterjet	Carry out replacement of bushings and washers of buckets and cylinders	DAN
137.	20137	5Y-17	Port Waterjet	(a) Carry out functional test on PTO pump. Readjust, if required (b) Replace PTO pump after 25000 running hrs.	DAN
138.	20138	5Y-18	Port Waterjet	Carry out functional test on Electric motor driven lub oil pump. Readjust Pressure if required	DAN
139.	20139	5Y-19	Port Waterjet	Carry out functional test on Hydraulic oil tank with valve manifold. Readjust Pressure if required	DAN
140.	20140	5Y-20	Port Waterjet	Replace the high and low pressure filters.	DAN
141.	20141	5Y-21	Port Waterjet	Renew the complete hydraulic oil of the system.	DAN
142.	20142	5Y-22	Port Waterjet	Replace the counterbalance valve (V41, V42 & V18)	DAN
143.	20143	5Y-23	Port Waterjet	Replace hanging anodes.	DAN
144.	20144	5Y-24	Port Waterjet	Replace the anodes below shaft protection tube, on ship transom, water jet bucket and shaft seal.	DAN
145.	20145	5Y-25	Port Waterjet	Carry out the function test on control syatem. Readjust, if required. (If the controls system from MTU then controls- Rep from MTU required)	DAN
146.	20146	5Y-26	Port Waterjet	Carry out functional test of alarms switches and pressure gauges.	DAN
147.	20147	5Y-27	Port Waterjet	Calibration of levers, feedback units & adjust indicators. (if the controls system from MTU then controls-Rep from MTU required)	DAN
148.	20148	5Y-28	Port Waterjet	Replace the V4, V5 valve on HPP valve block.	DAN
149.	20149	5Y-1	STBD Waterjet	Carry out in-situ inspection of impeller, Guide vane chamber and transom flange assembly	DAN
150.	20150	5Y-2	STBD Waterjet	Replacement of hub bearing.	DAN
151.	20151	5Y-3	STBD Waterjet	Replace the hub seal.	DAN
152.	20152	5Y-4	STBD Waterjet	Replace O rings in pump units.	DAN
153.	20153	5Y-5	STBD Waterjet	Replace bolts of impeller/stub shaft in pump units	DAN
154.	20154	5Y-6	STBD Waterjet	Carry out inspection of bulkhead seal. Renewal of diaphragm assembly	DAN
155.	20155	5Y-7	STBD Waterjet	Carry out grease renewal of support bearing.	DAN
156.	20156	5Y-8	STBD Waterjet	Carry out inspection of shaft & flange bolts.	DAN
157.	20157	5Y-9	STBD Waterjet	Replace shaft seal assembly along with inflatable seal.	DAN
158.	20158	5Y-10	STBD Waterjet	Replace the split cone ring.	DAN

159.	20159	5Y-11	STBD Waterjet	Inspect mechanical interface between impeller shaft and impeller shaft journal.	DAN
160.	20160	5Y-12	STBD Waterjet	Visual inspection of feedback transmitters	DAN
161.	20161	5Y-13	STBD Waterjet	Replace the cylinder seals	DAN
162.	20162	5Y-14	STBD Waterjet	Replace the Hydraulic hoses	DAN
163.	20163	5Y-15	STBD Waterjet	Replace the feedback protection hose.	DAN
164.	20164	5Y-16	STBD Waterjet	Carry out replacement of bushings and washers of buckets and cylinders	DAN
165.	20165	5Y-17	STBD Waterjet	(c) Carry out functional test on PTO pump. Readjust, if required (d) Replace PTO pump after 25000 running hrs.	DAN
166.	20166	5Y-18	STBD Waterjet	Carry out functional test on Electric motor driven lub oil pump. Readjust Pressure if required	DAN
167.	20167	5Y-19	STBD Waterjet	Carry out functional test on Hydraulic oil tank with valve manifold. Readjust Pressure if required	DAN
168.	20168	5Y-20	STBD Waterjet	Replace the high and low pressure filters.	DAN
169.	20169	5Y-21	STBD Waterjet	Renew the complete hydraulic oil of the system.	DAN
170.	20170	5Y-22	STBD Waterjet	Replace the counterbalance valve (V41, V42 & V18)	DAN
171.	20171	5Y-23	STBD Waterjet	Replace hanging anodes.	DAN
172.	20172	5Y-24	STBD Waterjet	Replace the anodes below shaft protection tube, on ship transom, water jet bucket and shaft seal.	DAN
173.	20173	5Y-25	STBD Waterjet	Carry out the function test on control syatem. Readjust, if required. (If the controls system from MTU then controls- Rep from MTU required)	DAN
174.	20174	5Y-26	STBD Waterjet	Carry out functional test of alarms switches and pressure gauges.	DAN
175.	20175	5Y-27	STBD Waterjet	Calibration of levers, feedback units & adjust indicators. (if the controls system from MTU then controls-Rep from MTU required)	DAN
176.	20176	5Y-28	STBD Waterjet	Replace the V4, V5 valve on HPP valve block.	DAN
177.	20177	5Y-1	Centre Waterjet	Carry out in-situ inspection of impeller, Guide vane chamber and transom flange assembly	DAN
178.	20178	5Y-2	Centre Waterjet	Replacement of hub bearing.	DAN
179.	20179	5Y-3	Centre Waterjet	Replace the hub seal.	DAN
180.	20180	5Y-4	Centre Waterjet	Replace O rings in pump units.	DAN
181.	20181	5Y-5	Centre Waterjet	Replace bolts of impeller/stub shaft in pump units	DAN
182.	20182	5Y-6	Centre Waterjet	Carry out inspection of bulkhead seal. Renewal of diaphragm assembly	DAN
183.	20183	5Y-7	Centre Waterjet	Carry out grease renewal of support bearing.	DAN
184.	20184	5Y-8	Centre Waterjet	Carry out inspection of shaft & flange bolts.	DAN
185.	20185	5Y-9	Centre Waterjet	Replace shaft seal assembly along with inflatable seal.	DAN
186.	20186	5Y-10	Centre Waterjet	Replace the split cone ring.	DAN
187.	20187	5Y-11	Centre Waterjet	Inspect mechanical interface between impeller shaft and impeller shaft journal.	DAN
188.	20188	5Y-12	Centre Waterjet	Visual inspection of feedback transmitters	DAN
189.	20189	5Y-13	Centre Waterjet	Replace the cylinder seals	DAN

190.	20190	5Y-14	Centre Waterjet	Replace the Hydraulic hoses	DAN
191.	20191	5Y-15	Centre Waterjet	Replace the feedback protection hose.	DAN
192.	20192	5Y-16	Centre Waterjet	Carry out replacement of bushings and washers of buckets and cylinders	DAN
193.	20193	5Y-17	Centre Waterjet	(e) Carry out functional test on PTO pump. Readjust, if required (f) Replace PTO pump after 25000 running hrs.	DAN
194.	20194	5Y-18	Centre Waterjet	Carry out functional test on Electric motor driven lub oil pump. Readjust Pressure if required	DAN
195.	20195	5Y-19	Centre Waterjet	Carry out functional test on Hydraulic oil tank with valve manifold. Readjust Pressure if required	DAN
196.	20196	5Y-20	Centre Waterjet	Replace the high and low pressure filters.	DAN
197.	20197	5Y-21	Centre Waterjet	Renew the complete hydraulic oil of the system.	DAN
198.	20198	5Y-22	Centre Waterjet	Replace the counterbalance valve (V41, V42 & V18)	DAN
199.	20199	5Y-23	Centre Waterjet	Replace hanging anodes.	DAN
200.	20200	5Y-24	Centre Waterjet	Replace the anodes below shaft protection tube, on ship transom, water jet bucket and shaft seal.	DAN
201.	20201	5Y-25	Centre Waterjet	Carry out the function test on control syatem. Readjust, if required. (If the controls system from MTU then controls- Rep from MTU required)	DAN
202.	20202	5Y-26	Centre Waterjet	Carry out functional test of alarms switches and pressure gauges.	DAN
203.	20203	5Y-27	Centre Waterjet	Calibration of levers, feedback units & adjust indicators. (if the controls system from MTU then controls-Rep from MTU required)	DAN
204.	20204	5Y-28	Centre Waterjet	Replace the V4, V5 valve on HPP valve block.	DAN
Equipment – Diesel Alternator					
Make- Cummins India Limited, Pune					
Model – 6CTA 8.3 D(M) 120 KW					
Qty-03					
205.	20205	D-1	DA No-01	Start DG, Operate for few minutes & record all parameters. Stop and then drain lub oil, when warm	DAN
206.	20206	D-2	DA No-01	Drain water sediments from fuel water separator and fuel RU tank	DAN
207.	20207	D-3	DA No-01	Check engine for any leaks and correct, if noticed.	DAN
208.	20208	D-4	DA No-01	Check belts are in position and replace if necessary	DAN
209.	20209	D-5	DA No-01	Change fuel and lub oil filter	DAN
210.	20210	D-6	DA No-01	Clean fuel strainer	DAN
211.	20211	D-7	DA No-01	Check air intake piping for any damages/loose fasteners	DAN
212.	20212	D-8	DA No-01	Check vacuum indicator and clean/replace air filter based on its condition	DAN
213.	20213	D-9	DA No-01	Replace valve cover gaskets	DAN
214.	20214	D-10	DA No-01	Check all wiring connection	DAN
215.	20215	D-11	DA No-01	Check sea water pump strainer	DAN

216.	20216	D-12	DA No-01	Dismantle cylinder heads and recondition including all valves, guides, springs and related parts	DAN
217.	20217	D-13	DA No-01	Check vibration damper	DAN
218.	20218	D-14	DA No-01	Check and record engine crankshaft and turbocharger end plays	DAN
219.	20219	D-15	DA No-01	Check engine alternator alignment and correct, if required	DAN
220.	20220	D-16	DA No-01	Overhaul sea water pump	DAN
221.	20221	D-17	DA No-01	Check engine Blow Bye. Take corrective action, If required	DAN
222.	20222	D-18	DA No-01	Replace all rubber hoses of fuel, coolant, lub oil and air system	DAN
223.	20223	D-19	DA No-01	Replace all clamps of hoses	DAN
224.	20224	D-20	DA No-01	Drain coolant, flush cooling system and refill new coolant	DAN
225.	20225	D-21	DA No-01	Overhaul turbocharger	DAN
226.	20226	D-22	DA No-01	Calibrate fuel injection pump (FIP) and injectors	DAN
227.	20227	D-23*	DA No-01	Clean heat exchangers and pressure test (*may not be undertaken if carried out recently and performance is expected to be satisfactory till next cleaning due)	DAN
228.	20228	D-24	DA No-01	Check all engine mounted safeties for functionality and calibrate gauges. Replace if required	DAN
229.	20229	D-25	DA No-01	Check fuel tubings, Replace ferrules and rubber gaskets	DAN
230.	20230	D-26	DA No-01	Replace thermostat along with their seal	DAN
231.	20231	D-27	DA No-01	Overhaul fresh water pump, if required	DAN
232.	20232	D-28	DA No-01	Check the condition of engine mounts, renew if required	DAN
233.	20233	D-29	DA No-01	Change lub oil	DAN
234.	20234	D-30	DA No-01	Vent fuel line and injector supply line	DAN
235.	20235	D-31	DA No-01	Conduct lube oil wear analysis to determine the health of engine	DAN
236.	20236	D-32	DA No-01	Start DG and check all gauges for functionality on completion	DAN
237.	20237	D-1	DA No 02	Start DG, Operate for few minutes & record all parameters. Stop and then drain lub oil, when warm	DAN
238.	20238	D-2	DA No 02	Drain water sediments from fuel water separator and fuel RU tank	DAN
239.	20239	D-3	DA No 02	Check engine for any leaks and correct, if noticed.	DAN
240.	20240	D-4	DA No 02	Check belts are in position and replace if necessary	DAN
241.	20241	D-5	DA No 02	Change fuel and lub oil filter	DAN
242.	20242	D-6	DA No 02	Clean fuel strainer	DAN
243.	20243	D-7	DA No 02	Check air intake piping for any damages/loose fasteners	DAN
244.	20244	D-8	DA No 02	Check vacuum indicator and clean/replace air filter based on its condition	DAN
245.	20245	D-9	DA No 02	Replace valve cover gaskets	DAN
246.	20246	D-10	DA No 02	Check all wiring connection	DAN
247.	20247	D-11	DA No 02	Check sea water pump strainer	DAN

248.	20248	D-12	DA No 02	Dismantle cylinder heads and recondition including all valves, guides, springs and related parts	DAN
249.	20249	D-13	DA No 02	Check vibration damper	DAN
250.	20250	D-14	DA No 02	Check and record engine crankshaft and turbocharger end plays	DAN
251.	20251	D-15	DA No 02	Check engine alternator alignment and correct, if required	DAN
252.	20252	D-16	DA No 02	Overhaul sea water pump	DAN
253.	20253	D-17	DA No 02	Check engine Blow Bye. Take corrective action, If required	DAN
254.	20254	D-18	DA No 02	Replace all rubber hoses of fuel, coolant, lub oil and air system	DAN
255.	20255	D-19	DA No 02	Replace all clamps of hoses	DAN
256.	20256	D-20	DA No 02	Drain coolant, flush cooling system and refill new coolant	DAN
257.	20257	D-21	DA No 02	Overhaul turbocharger	DAN
258.	20258	D-22	DA No 02	Calibrate fuel injection pump (FIP) and injectors	DAN
259.	20259	D-23*	DA No 02	Clean heat exchangers and pressure test (*may not be undertaken if carried out recently and performance is expected to be satisfactory till next cleaning due)	DAN
260.	20260	D-24	DA No 02	Check all engine mounted safeties for functionality and calibrate gauges. Replace if required	DAN
261.	20261	D-25	DA No 02	Check fuel tubings, Replace ferrules and rubber gaskets	DAN
262.	20262	D-26	DA No 02	Replace thermostat along with their seal	DAN
263.	20263	D-27	DA No 02	Overhaul fresh water pump, if required	DAN
264.	20264	D-28	DA No 02	Check the condition of engine mounts, renew if required	DAN
265.	20265	D-29	DA No 02	Change lub oil	DAN
266.	20266	D-30	DA No 02	Vent fuel line and injector supply line	DAN
267.	20267	D-31	DA No 02	Conduct lube oil wear analysis to determine the health of engine	DAN
268.	20268	D-32	DA No 02	Start DG and check all gauges for functionality on completion	DAN
269.	20269	D-1	DA No 03	Start DG, Operate for few minutes & record all parameters. Stop and then drain lub oil, when warm	DAN
270.	20270	D-2	DA No 03	Drain water sediments from fuel water separator and fuel RU tank	DAN
271.	20271	D-3	DA No 03	Check engine for any leaks and correct, if noticed.	DAN
272.	20272	D-4	DA No 03	Check belts are in position and replace if necessary	DAN
273.	20273	D-5	DA No 03	Change fuel and lub oil filter	DAN
274.	20274	D-6	DA No 03	Clean fuel strainer	DAN
275.	20275	D-7	DA No 03	Check air intake piping for any damages/loose fasteners	DAN
276.	20276	D-8	DA No 03	Check vacuum indicator and clean/replace air filter based on its condition	DAN
277.	20277	D-9	DA No 03	Replace valve cover gaskets	DAN
278.	20278	D-10	DA No 03	Check all wiring connection	DAN
279.	20279	D-11	DA No 03	Check sea water pump strainer	DAN

280.	20280	D-12	DA No 03	Dismantle cylinder heads and recondition including all valves, guides, springs and related parts	DAN
281.	20281	D-13	DA No 03	Check vibration damper	DAN
282.	20282	D-14	DA No 03	Check and record engine crankshaft and turbocharger end plays	DAN
283.	20283	D-15	DA No 03	Check engine alternator alignment and correct, if required	DAN
284.	20284	D-16	DA No 03	Overhaul sea water pump	DAN
285.	20285	D-17	DA No 03	Check engine Blow Bye. Take corrective action, If required	DAN
286.	20286	D-18	DA No 03	Replace all rubber hoses of fuel, coolant, lub oil and air system	DAN
287.	20287	D-19	DA No 03	Replace all clamps of hoses	DAN
288.	20288	D-20	DA No 03	Drain coolant, flush cooling system and refill new coolant	DAN
289.	20289	D-21	DA No 03	Overhaul turbocharger	DAN
290.	20290	D-22	DA No 03	Calibrate fuel injection pump (FIP) and injectors	DAN
291.	20291	D-23*	DA No 03	Clean heat exchangers and pressure test (*may not be undertaken if carried out recently and performance is expected to be satisfactory till next cleaning due)	DAN
292.	20292	D-24	DA No 03	Check all engine mounted safeties for functionality and calibrate gauges. Replace if required	DAN
293.	20293	D-25	DA No 03	Check fuel tubings, Replace ferrules and rubber gaskets	DAN
294.	20294	D-26	DA No 03	Replace thermostat along with their seal	DAN
295.	20295	D-27	DA No 03	Overhaul fresh water pump, if required	DAN
296.	20296	D-28	DA No 03	Check the condition of engine mounts, renew if required	DAN
297.	20297	D-29	DA No 03	Change lub oil	DAN
298.	20298	D-30	DA No 03	Vent fuel line and injector supply line	DAN
299.	20299	D-31	DA No 03	Conduct lube oil wear analysis to determine the health of engine	DAN
300.	20300	D-32	DA No 03	Start DG and check all gauges for functionality on completion	DAN
Equipment – Emergency Diesel Alternator (Prime Mover)					
Make- Field Marshal					
Type- 4.7 KW					
Qty-01					
301.	20301	2000 H-1	Emergency DA	Inspect generator	DAN
302.	20302	2000 H-2	Emergency DA	Inspect generator set vibration	DAN
Equipment – Fuel Oil Centrifuge					
Make – GEA Westfalia					
Model –OTC 5-91-037					
Qty-01					
303.	20303	R-1	Centrifuge No 01	Carryout gasket replacement of bowl and hood	DAN
304.	20304	R-2	Centrifuge No 01	Clean inside of the upper section of frame	DAN
305.	20305	R-3	Centrifuge No 01	Replace gaskets and retaining ring	DAN
306.	20306	R-4	Centrifuge No 01	Replace drive belt	DAN

307.	20307	R-5	Centrifuge No 01	Replace grooved ball bearing and angular contact ball bearing of spindle.	DAN
308.	20308	R-6	Centrifuge No 01	Replace grooved ball bearings of centrifugal clutch and replace if necessary	DAN
309.	20309	R-7	Centrifuge No 01	Replace vibration absorber	DAN
310.	20310	R-8	Centrifuge No 01	Check thickness of clutch shoes & replace if necessary	DAN
311.	20311	R-9	Centrifuge No 01	Check thickness of brake lining, replace if necessary	DAN
312.	20312	R-10	Centrifuge No 01	Check the bowl height.	DAN
313.	20313	R-11	Centrifuge No 01	In case of direct current check the spindle speed (bowl)	DAN
314.	20314	R-12	Centrifuge No 01	Check the starting time	DAN
315.	20315	R-1	Centrifuge No 02	Carryout gasket replacement of bowl and hood	DAN
316.	20316	R-2	Centrifuge No 02	Clean inside of the upper section of frame	DAN
317.	20317	R-3	Centrifuge No 02	Replace gaskets and retaining ring	DAN
318.	20318	R-4	Centrifuge No 02	Replace drive belt	DAN
319.	20319	R-5	Centrifuge No 02	Replace grooved ball bearing and angular contact ball bearing of spindle.	DAN
320.	20320	R-6	Centrifuge No 02	Replace grooved ball bearings of centrifugal clutch and replace if necessary	DAN
321.	20321	R-7	Centrifuge No 02	Replace vibration absorber	DAN
322.	20322	R-8	Centrifuge No 02	Check thickness of clutch shoes & replace if necessary	DAN
323.	20323	R-9	Centrifuge No 02	Check thickness of brake lining, replace if necessary	DAN
324.	20324	R-10	Centrifuge No 02	Check the bowl height.	DAN
325.	20325	R-11	Centrifuge No 02	In case of direct current check the spindle speed (bowl)	DAN
326.	20326	R-12	Centrifuge No 02	Check the starting time	DAN
Equipment – Fuel Oil Transfer Pump Make – Roysons Engineers, Kolkata Model – RGB-4MF Qty-02					
327.	20327	Refit -1	Fuel Oil Transfer pp No 01	Overhaul the pump.	DAN
328.	20328	Refit -2	Fuel Oil Transfer pp No 01	Check the alignment of the pump with motor.	DAN
329.	20329	Refit -3	Fuel Oil Transfer pp No 01	Renew pump mechanical seal if worn out/leaking.	DAN
330.	20330	Refit -1	Fuel Oil Transfer pp No 02	Overhaul the pump.	DAN
331.	20331	Refit -2	Fuel Oil Transfer pp No 02	Check the alignment of the pump with motor.	DAN
332.	20332	Refit -3	Fuel Oil Transfer pp No 02	Renew pump mechanical seal if worn out/leaking.	DAN

Equipment – HP Air Compressor					
Make – ELGI Sauer					
Model – HP10 300					
Qty-02					
333.	20333	1000H-1	HP Compressor No 01	Remove the cylinder head and inspect the valve plates. Replace the worn out valve plates with spares if necessary.	DAN
334.	20334	1000H-2	HP Compressor No 01	All the pipe lines should be checked for leaks at joints and replace the packing if necessary.	DAN
335.	20335	1000H-3	HP Compressor No 01	Dismantle the non-return valve. Examine the spring for stiffness. Check the valve seat. Replace the spring and valve seat, if required.	DAN
336.	20336	1000H-4	HP Compressor No 01	Decarbonize the after cooler pipe and the inter cooler.	DAN
337.	20337	1000H-5	HP Compressor No 01	Clean the air flow passage internally	DAN
338.	20338	1000H-1	HP Compressor No 02	Remove the cylinder head and inspect the valve plates. Replace the worn out valve plates with spares if necessary.	DAN
339.	20339	1000H-2	HP Compressor No 02	All the pipe lines should be checked for leaks at joints and replace the packing if necessary.	DAN
340.	20340	1000H-3	HP Compressor No 02	Dismantle the non-return valve. Examine the spring for stiffness. Check the valve seat. Replace the spring and valve seat, if required.	DAN
341.	20341	1000H-4	HP Compressor No 02	Decarbonize the after cooler pipe and the inter cooler.	DAN
342.	20342	1000H-5	HP Compressor No 02	Clean the air flow passage internally	DAN
Equipment – Emergency HP Air Compressor					
Make – ELGI Sauer					
Model – HP05 301					
Qty-01					
343.	20343	500H-1	Emergency Air Compressor	Change Oil	DAN
344.	20344	500H-2	Emergency Air Compressor	Check Breather Valve	DAN
Equipment – Diesel Engine for Emergency HP Air Compressor					
Make – Greaves					
Model – 1510					
Qty-01					
345.	20345	500H-1	Engine for Air Compressor	Check & clean cooling system	DAN

346.	20346	500H-2	Engine for Air Compressor	Renew engine oil	DAN
347.	20347	500H-3	Engine for Air Compressor	Renew lub oil filter element/ cartridge	DAN
348.	20348	500H-4	Engine for Air Compressor	Renew fuel filter insert (pre-filter element/ spin on filter)	DAN
Equipment – RO Plant					
Make – M/s ROCHEM India					
Model – RO 200-DT 5S, 5 TPD					
Qty-01					
349.	20349	Y1	RO Plant	Overhaul of HP pump suction and discharge valves.	DAN
350.	20350	Y2	RO Plant	Replace Seal Kit of HP pump.	DAN
351.	20351	Y3	RO Plant	Inspect high pressure hoses.	DAN
352.	20352	Y4	RO Plant	Replace mechanical seals of PK 30 pump as applicable.	DAN
353.	20353	Y5	RO Plant	Calibrate Torque wrench.	DAN
354.	20354	Y6	RO Plant	Calibrate hand conductivity Meter.	DAN
355.	20355	Y7	RO Plant	Replace all low pressure hoses.	DAN
356.	20356	Y8	RO Plant	Inspect PS-51,PS-71&PS-81 pressure switches	DAN
357.	20357	Y9	RO Plant	Renew dolomite in DA filter.	DAN
358.	20358	Y10	RO Plant	Check and replace PT60 &potentiometer.	DAN
359.	20359	2Y1	RO Plant	Clean conductivity meter probe and calibrate.	DAN
360.	20360	2Y2	RO Plant	Overhaul Filter pump & HP pump motors.	DAN
361.	20361	2Y3	RO Plant	Replace all high pressure flexible hoses.	DAN
362.	20362	3Y1	RO Plant	Overhaul Filter pump & HP pump motors.	DAN
363.	20363	3Y2	RO Plant	Overhaul Filter pump & HP pump motors.	DAN
Equipment – AC Plant					
Make – M/s BOCK(Compressor), System – M/s Heinen & Hopman Engineering					
Model – Semi Hermetic HGX7/2110-4S					
Qty-02					
364.	20364	R-1	AC No 01	Withdraw and inspect compressor suction and delivery valves for wear down, scoring marks.	DAN
365.	20365	R-2	AC No 01	Withdraw pistonand inspect for wear down and scoring marks. Measure wear & tear of piston, piston rings and oil scraper rings. Replace, if not within tolerance limit.	DAN
366.	20366	R-3	AC No 01	Inspects mall end bushes and gudgeon pins and replace if not within tolerance.	DAN
367.	20367	R-4	AC No 01	Inspect allbearings for wear down andrecord. Renew the bearings, if necessary.	DAN
368.	20368	R-5	AC No 01	Measure ovulation of cylinder and record. Renew if necessary.	DAN
369.	20369	R-6	AC No 01	Inspection loading device for correct working.	DAN
370.	20370	R-7	AC No 01	Inspect crankshaft, undertake measurement, polish and refit if not within tolerance	DAN

				limit.	
371.	20371	R-8	AC No 01	Strip and examine Lube oil pump of compressor.	DAN
372.	20372	R-9	AC No 01	Inspect crank shaft, under take measurement polish and renew if not within tolerance limit.	DAN
373.	20373	R-10	AC No 01	Clean all motor bearings inspect for wear and tear and replace, if necessary.	DAN
374.	20374	R-11	AC No 01	Overhaul sea water cooling pumps.	DAN
375.	20375	R-12	AC No 01	Check and replace all valve stems glands in refrigerant line.	DAN
376.	20376	R-13	AC No 01	Clean condenser, inspect for corrosion and fouling. Carry out the pressure test to 1.5 times of working pressure for 24 hours. Replace condenser gasket/ O-ring.	DAN
377.	20377	R-14	AC No 01	Overhaul all isolating valves on cooling water (sea water) system and pressure test up to 1.5 times of working pressure.	DAN
378.	20378	R-15	AC No 01	Carry out pressure test, vacuum test, leak test of complete plant. Inspect cooling coil and return bends and check for weak spots, gland of valves, etc.by hydrostatic testing.	DAN
379.	20379	R-16	AC No 01	Check all cooling coils in AHUs for cleanliness and corrosions. If the coils are dirty (Choked) clean with water spray, soap solution and nylon brush and then carry out pressure test.	DAN
380.	20380	R-17	AC No 01	Remove refit and isolating valves on liquid and gas lines. Renew all Nylon/Teflon washers and seating.	DAN
381.	20381	R-18	AC No 01	Check ducts and out lets for dust. Clean and paint them if required.	DAN
382.	20382	R-19	AC No 01	Recharge the system with refrigerant on satisfactory completion of checks up to serial R-18 and undertake trials of plant including functional checks of all safeties and cut-outs.	DAN
383.	20383	R-1	AC No 02	Withdraw and inspect compressor suction and delivery valves for wear down, scoring marks.	DAN
384.	20384	R-2	AC No 02	Withdraw piston and inspect for wear down and scoring marks. Measure wear & tear of piston, piston rings and oil scraper rings. Replace, if not within tolerance limit.	DAN
385.	20385	R-3	AC No 02	Inspects mall end bushes and gudgeonon pins and replace if not within tolerance.	DAN
386.	20386	R-4	AC No 02	Inspect all bearings for wear down and record. Renew the bearings, if necessary.	DAN
387.	20387	R-5	AC No 02	Measure ovulation of cylinder and record. Renew if necessary.	DAN
388.	20388	R-6	AC No 02	Inspection loading device for correct working.	DAN
389.	20389	R-7	AC No 02	Inspect crankshaft, undertake measurement, polish and refit if not within tolerance limit.	DAN
390.	20390	R-8	AC No 02	Strip and examine Lube oil pump of compressor.	DAN
391.	20391	R-9	AC No 02	Inspect crank shaft, under take measurement polish and renew if not within tolerance limit.	DAN

392.	20392	R-10	AC No 02	Clean all motor bearings inspect for wear and tear and replace, if necessary.	DAN
393.	20393	R-11	AC No 02	Overhaul sea water cooling pumps.	DAN
394.	20394	R-12	AC No 02	Check and replace all valve stems glands in refrigerant line.	DAN
395.	20395	R-13	AC No 02	Clean condenser, inspect for corrosion and fouling. Carry out the pressure test to 1.5 times of working pressure for 24 hours. Replace condenser gasket/ O-ring.	DAN
396.	20396	R-14	AC No 02	Overhaul all isolating valves on cooling water (sea water) system and pressure test up to 1.5 times of working pressure.	DAN
397.	20397	R-15	AC No 02	Carry out pressure test, vacuum test, leak test of complete plant. Inspect cooling coil and return bends and check for weak spots, gland of valves, etc.by hydrostatic testing.	DAN
398.	20398	R-16	AC No 02	Check all cooling coils in AHUs for cleanliness and corrosions. If the coils are dirty (Choked) clean with water spray, soap solution and nylon brush and then carry out pressure test.	DAN
399.	20399	R-17	AC No 02	Remove refit and isolating valves on liquid and gas lines. Renew all Nylon/Teflon washers and seating.	DAN
400.	20400	R-18	AC No 02	Check ducts and out lets for dust. Clean and paint them if required.	DAN
401.	20401	R-19	AC No 02	Recharge the system with refrigerant on satisfactory completion of checks up to serial R-18 and undertake trials of plant including functional checks of all safeties and cut-outs.	DAN

Equipment – Air Handling Unit
Make – M/s Zeco Aircon Ltd
Model – ETU-ZDS-70, Air Qty: 6882 CFM
Qty-01

402.	20402	R-1	Air Handling Unit	Clean and check contacts, clean housing, check for proper operation and overload protection of motor starter.	DAN
403.	20403	R-2	Air Handling Unit	Check fan shaft as per manufacturer's recommendations.	DAN
404.	20404	R-3	Air Handling Unit	Check for dust, moisture, defective linkages, defective insulation and leaks of diffuser and ducts.	DAN
405.	20405	R-4	Air Handling Unit	Check and repair all damaged pipe insulation, fitting insulation, valve insulation, duct insulation, casing a housing insulation.	DAN
406.	20406	R-5	Air Handling Unit	Check louvers, dampers, filter frames, coils, casings, plenums and fans for corrosion. Clean and treat as recommended by the manufacturer.	DAN
407.	20407	R-6	Air Handling Unit	Overhauling of AHU blower including dynamic balancing	DAN
408.	20408	R-7	Air Handling Unit	Calibration of Expansion Valve. Renew if required	DAN

Equipment – Bilge and GS Pump
Make – M/s SPX Johnson Ltd
Model – CV-50-200(B3M2TL)
Qty-01

409.	20409	R-1	Bilge Pump	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew as necessary.	DAN
410.	20410	R-2	Bilge Pump	Check and flush all tube work and suction and delivery piping.	DAN
411.	20411	R-3	Bilge Pump	Renew mountings, if any sign of deterioration of rubber, lacquer of bond.	DAN
Equipment – Shower Bilge Pump					
Make – M/s EVAC- VAcman					
Model – Monoblock (Lowara)					
Qty-02					
412.	20412	R-1	Grey water pump No 01	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew as necessary.	DAN
413.	20413	R-2	Grey water pump No 01	Check and flush all tube work and suction and delivery piping.	DAN
414.	20414	R-3	Grey water pump No 01	Renew all mountings, if any sign of deterioration of rubber, lacquer of bond.	DAN
415.	20415	R-1	Grey water pump No 02	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew as necessary.	DAN
416.	20416	R-2	Grey water pump No 02	Check and flush all tube work and suction and delivery piping.	DAN
417.	20417	R-3	Grey water pump No 02	Renew all mountings, if any sign of deterioration of rubber, lacquer of bond.	DAN
Equipment – Fire and GS Pump					
Make – M/s SPX Johnson Ltd					
Model – CV-50-200(B3M2TL)					
Qty-01					
418.	20418	R-1	Fire main Pump	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew as necessary.	DAN
419.	20419	R-2	Fire main Pump	Check and flush all tube work and suction and delivery piping.	DAN
420.	20420	R-3	Fire main Pump	Renew all mountings, if any sign of deterioration of rubber, lacquer of bond.	DAN
Equipment – Domestic Fresh Water Pump					
Make – M/s SPX Johnson Ltd					
Model – BUS-49					
Qty-02					
421.	20421	R-1	Fresh water Pump No 01	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew, If necessary.	DAN
422.	20422	R-2	Fresh water Pump No 01	Check and flush all tube work and suction and delivery piping.	DAN
423.	20423	R-1	Fresh water Pump No 02	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew, If necessary.	DAN

424.	20424	R-2	Fresh water Pump No 02	Check and flush all tube work and suction and delivery piping.	DAN
425.	20425	R-1	AC sea Water Pump No 01	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew, If necessary.	DAN
Equipment – AC Sea Water Pump Make – M/s SPX Johnson Ltd Model – KGEFC 15-6 Qty-02					
426.	20426	R-2	AC sea Water Pump No 01	Check and flush all tube work and suction and delivery piping.	DAN
427.	20427	R-1	AC sea Water Pump No 02	Dismantle and overhaul the pump completely, clean and inspect each item thoroughly and renew, If necessary.	DAN
428.	20428	R-2	AC sea Water Pump No 02	Check and flush all tube work and suction and delivery piping.	DAN
Equipment – Hydrophore TANK Make – M/s SPX Johnson Ltd Model – 200 Ltrs Qty-01					
429.	20429	R-1	Hydrophore Tank	Chemically clean hydrophore tank.	DAN
430.	20430	R-2	Hydrophore Tank	Check and calibrate pressure gauge/pressure switch.	DAN
431.	20431	R-3	Hydrophore Tank	Repaint hydrophore tank with approved paint scheme.	DAN
432.	20432	R-4	Hydrophore Tank	Overhaul and pressure test LP air valve	DAN
Equipment – HP Air Bottle Make – M/s Fast Tech Engg Pvt Ltd Model – 500 Ltrs Qty-02					
433.	20433	R-1	HP Air Bottle No 01	Overhaul 100% air valves	DAN
434.	20434	R-1	HP Air Bottle No 02	Overhaul 100% air valves	DAN
Equipment – Oily Bilge Water Separator Make – M/s RWO, Germany Model – SKITS DEB/0.5 m³/Hr Qty-01					
435.	20435	R-1	Oily Water Separator	Open the inspection port of the oil separator housing, the oil separator housing and the absorber housing.	DAN
436.	20436	R-2	Oily Water Separator	Check for sludge deposits. If necessary, remove the sludge and clean the container	DAN
437.	20437	R-3	Oily Water Separator	Check the inner coating. if necessary, recoat damaged spots	DAN

438.	20438	R-4	Oily Water Separator	Checks seals and piston valves, If necessary, replace damaged seals and components.	DAN
439.	20439	R-5	Oily Water Separator	Overhauling of discharge pump.	DAN
Equipment – FM-200 Major Fire Fighting System Make – M/s Engie Axima India Pvt Ltd, Mumbai Model – FM-200 Qty-01					
440.	20440	2Y-1	FM-200 MAJOR FF SYSTEM	Blow out distribution piping as follows: Remove any nozzle from the piping to allow foreign matter to blow clear.(Donot use water or oxygen to blow out pipe lines)	DAN
441.	20441	2Y-2	FM-200 MAJOR FF SYSTEM	Remove all pressure operated control heads from the FM- 200 cylinders. (Do not disconnect the flexible hose from the pressure operated control head)	DAN
442.	20442	2Y-3	FM-200 MAJOR FF SYSTEM	Open the distributing valves and keep them open long enough to ensure the pipes are clean.	DAN
443.	20443	2Y-4	FM-200 MAJOR FF SYSTEM	Blow out all distribution piping with air or nitrogen to ensure it is not obstructed.	DAN
444.	20444	2Y-5	FM-200 MAJOR FF SYSTEM	Reconnect all control heads.	DAN
Equipment – Machinery Control System (MCS-5) Make – M/s MTU Model – MCS-5					
445.	20445	1000H1	MCS-5	ENGINE CONTROL UNIT (ECU 4) Clean and perform internal and external visual inspection. Rectify faults or defects detected during the inspection.	DAN
446.	20446	1000H2	MCS-5	PERIPHERAL INTERFACE MODULE (PIM) a) Close the housing door after testing Jumper terminal 305 of PIM & terminal X001-52. b) a) Close the housing door after testing Jumper terminal 305 of PIM & terminal X001-52. c) a) Close the housing door after testing Jumper terminal 305 of PIM & terminal X001-52.	DAN
447.	20447	1000H3	MCS-5	LOAD CIRCUIT TERMINAL STRIP Use a multimeter to check that all the phases of the mains voltage is applied on the input side	DAN
448.	20448	1000H4	MCS-5	ENGINE MONITORING UNIT (EMU 1) Clean and perform visual inspection of EMU 1. Check the following and rectify defects if any:-	DAN

				(a) Crankcase pressure alarm. (b) Hydraulic oil pressure and temperature alarms (applicable to water jet propulsion). (c) Bilge level alarm. (d) Tank level sensors and indication. (e) Analog gauges.	
449.	20449	1000H5	MCS-5	GEAR CONTROL AND MONITORING UNIT (GCU/GMU 1) Clean and perform visual inspection of Gear Control & Monitoring Unit	DAN
450.	20450	1000H6	MCS-5	LOCAL OPERATING PANEL (LOP 1) Clean LOP 1 and perform internal & external visual inspection.	DAN
Equipment – Portable Electric Pump Make – M/s Royson Engineers, Kolkata Model – 1MMF Qty-01					
451.	20451	A-1	Portable Electric Pump	Dismantle the pump completely, clean and inspect each item thoroughly and renew as necessary.	DAN
452.	20452	A-2	Portable electric pump	Check and flush all tube work and suction and delivery piping.	DAN
453.	20453	A-3	Portable electric pump	Recalibrate all the instruments connected to the pump.	DAN
454.	20454	A-4	Portable electric pump	Renew all mountings showing any sign of deterioration of rubber, lacquer or bond.	DAN
Equipment – Diving Air Compressor Engine Make – M/s Honda Model – G20D54S0270N2A Qty-01					
455.	20455	R-1	Diving air compressor engine	Clean fuel tank.	DAN
456.	20456	R-2	Diving air compressor engine	Overhaul the engine.	DAN
Equipment – Diving Air Compressor Make – M/s Bauer Kompression Model – Mariner 200-B Qty-01					
457.	20457	R-1	Diving Air Compressor	Overhaul Compressor and renew defective spares.	DAN

458.	20458	R-2	Diving air compressor	Clean and pressure test finned coolers.	DAN
Equipment – Shower Bilge Pump Make – M/s EVAC- Vacman Model – Monoblock (Lowara) Qty-02					
459.	20459	R-1	Shower bilge pump	Dismantle the pump completely, clean and inspect each item thoroughly and renew as necessary.	DAN
460.	20460	R-2	Shower bilge pump	Check and flush all tube work and suction and delivery piping.	DAN
461.	20461	R-3	Shower bilge pump	Recalibrate all the instruments connected to the pump.	DAN
462.	20462	R-4	Shower bilge pump	Renew all mountings showing any sign of deterioration of rubber, lacquer or bond.	DAN
463.	20463	R-5	Shower bilge pump	Carry out calibration / renewal of all pressure gauges.	DAN
Equipment – Sewage Treatment Pump Make – M/s EVAC- Vacman Model – ORCA IV-15 Qty- 01					
464.	20464	R-1	STP	Replace NON sacrificial anode of the UNICEL electrolytic cell.	DAN
Equipment – Air Horn Make – M/s Zollner Model – M75F Qty-01					
465.	20465	R-1	Air Horn	Overhaul the unit Change the parts if necessary, Prove the unit for smooth operation.	DAN
Equipment – Dirty Lub Oil Transfer Pump (Gear Type) Make – M/s Royson Engg, Kolkata Model – RGP-1MMF Qty-01					
466.	20466	R-1	Dirty lub oil transfer pump (gear type)	Overhaul the pump.	DAN
467.	20467	R-2	Dirty lub oil transfer pump (gear type)	Check the alignment of the pump with motor.	DAN

468.	20468	R-3	Dirty lub oil transfer pump (gear type)	Renew pump glands if worn out /leaking.	DAN
Equipment – 25 HP OBM Make – M/s Yamaha Model – 25 HP Qty-01					
469.	20469	R-1	25 HP OBM fitted in gemini	Overhaul the engine.	DAN
470.	20470	R-2	25 HP OBM fitted in gemini	Clean the feed tank and replace the flexible hoses, if required.	DAN
471.	20471	R-3	25 HP OBM fitted in gemini	Replace water pump impeller (More often if overheating occurs or reduced water pressure is noted)	DAN
Equipment – 75 HP OBM Make – M/s Yamaha Model – 75 HP Qty-01					
472.	20472	R-1	75 HP OBM (RUBBER INFLATABLE BOAT)	Overhaul the engine.	DAN
473.	20473	R-2	75 HP OBM (RUBBER INFLATABLE BOAT)	Inspect remote steering assembly and renew defective components.	DAN
474.	20474	R-3	75 HP OBM (RUBBER INFLATABLE BOAT)	Clean the feed tank and replace the flexible hoses, if required.	DAN
Equipment – Portable Submersible Pump Make – M/s WPIL Limited, Thane Model – M204NT Qty- 03					
475.	20475	R-1	Portable submersible pumps	Overhaul the pump and replace spares as required. Qty-03	DAN
476.	20476	R-2	Portable submersible pumps	Paint pump casing internally and externally. Qty-03	DAN

Equipment- Fresh Water System, Fuel Oil System, Lub Oil System, HP Air System, Bilge Pumping Out System, Firemain System, LP Air System, AC Sea water System, Ac Gas System, Main Engine Sea Water System, Main Engine Fuel System, Sprinkling System, Instrumentation, Quick Shut-Off Valve, AC Plant System Make- M/s GRSE					
477.	20477	R-1	Fresh Water System	Remove 50% of fresh water system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
478.	20478	R-2	Fresh Water System	Remove 25% of different sizes fresh water system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
479.	20479	R-1	Fuel oil System	Remove 50% of Fuel oil System valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
480.	20480	R-2	Fuel oil System	Remove 25% of different sizes Fuel system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
481.	20481	R-1	Lub oil System	Remove 50% of Lub oil System valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
482.	20482	R-2	Lub oil System	Remove 25% of different sizes Lub oil system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
483.	20483	R-1	HP air System	Remove 50% of HP Air system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
484.	20484	R-2	HP Air System	Remove 25% of different sizes HP Air system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
485.	20485	R-1	Bilge Pumping out System	Remove 50% of Bilge Pumping out System valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
486.	20486	R-2	Bilge Pumping out System	Remove 25% of different sizes Bilge pumping out system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
487.	20487	R-1	Firemain System	Remove 50% of Firemain System valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
488.	20488	R-2	Firemain System	Remove 25% of different sizes Firemain system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
489.	20489	R-1	LP air System	Remove 50% of LP Air system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
490.	20490	R-2	LP Air System	Remove 25% of different sizes LP Air system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN

491.	20491	R-1	AC Sea water System	Remove 50% of AC Sea water system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
492.	20492	R-2	AC Sea Water System	Remove 25% of different sizes Ac Sea water Systsem Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
493.	20493	R-1	AC Gas System	Remove 50% of AC Gas system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
494.	20494	R-2	AC Gas System	Remove 25% of different sizes AC Gas System system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
495.	20495	R-1	Main engine sea water system	Remove 50% of Main engine sea water system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
496.	20496	R-2	Main engine sea water system	Remove 25% of different sizes Main engine sea water system valve Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
497.	20497	R-1	Main engine fuel system	Remove 50% of Main engine fuel system valve, overhaul, pressure test all valve upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
498.	20498	R-2	Main engine Fuel oil system	Remove 25% of different sizes Main engine Fuel oil system Pipelines, Chemical clean, pressure test all line upto 1.5 times working pressure and refit in the system. Renew if required.	DAN
499.	20499	R-1	Sprinkling System	Chemically clean, pressure test and refit all sprinkler set in magazine compartment and nozzles Set boat swain store. Renew defective sprinklers.	DAN
500.	20500	R-1	Instrumentation	Carryout calibration/ renewal of all pressure gauges.	DAN
501.	20501	R-1	Quick shut Off Valve	Overhaul all quick closing valves including operating mechanism.	DAN
502.	20502	R-1	AC Plant No 01	Chemical cleaning and pressure testing of condenser no 01 upto 1.5 times of its working pressure in both sea water and gas side	DAN
503.	20503	R-2	AC Plant No 02	Chemical cleaning and pressure testing of condenser no 02 upto 1.5 times of its working pressure in both sea water and gas side	DAN
504.	20504	R-1	AC Plant	Calibration of the all expansion valve fitted in the system including ATU. Renew if required	DAN

ENGINEERING DEPARTMENT (DL-II)

<u>Ser</u>	<u>Defect List No</u>	<u>Equipment Name</u>	<u>Description</u>	<u>SS Remarks</u>
1.	20505	Air Bottle	RA for pressure testing of the air bottles and necessary documents to be issued. Qty-02	DAN
2.	20506	FM-200	Carry out Hydrostatic pressure test of FM-200 cylinders, Nitrogen cylinders and flexible hoses. (Full hydraulic test including determination of cylinder expansion)	DAN
3.	20507	AC Sea water Pump No 01	AC sea water frequently loosen suction. Assistance required for overhauled the pump and renewed the defective spare parts. Make- SPX Jonson, Model KGEFC 15-6.	DAN
4.	20508	AC Sea water Pump No 02	AC sea water frequently loosen suction. Assistance required for overhauled the pump and renewed the defective spare parts. Make- SPX Jonson, Model KGEFC 15-6.	DAN
5.	20509	AC sea water system	04 in no valves not holding pressure. RA for overhauling the valves and pressure tested up to 1.5 times of working pressure. Renewed if required (a) 80 mm SDNR – 02 (b) 65 MM SDNR – 02	DAN
6.	20510	AC sea water system	AC sea water system pipelines corroded at different places. RA for cutting, welding, renew the damage portion of line and pressure testing up to 1.5 times of working pressure. Mat- Cu Ni, Dia- 65 mm	DAN
7.	20511	AC Plant Gas system	RA for calibration of 02 in no of Thermostatic Expansion valve.	DAN
8.	20512	AC Plant Gas System	RA for overhauling of Gas system Valve. Qty-03, Make- DANFOSS	DAN
9.	20513	AC Plant Gas System No 02	RA for modification of Ac no 02 Gas system line view minimized the backpressure of the gas in discharge system	DAN
10.	20514	Air Treatment Unit	RA for chemical cleaning and pressure testing of ATU as per FOST guidelines. Qty-01	DAN
11.	20515	Ac Plant No 02	RA for serviceability checks of Compressor motor winding view motor drawing frequently high current. Make- BOCK	DAN
12.	20516	DD Pump	RA for overhauling of engine and pump of 37 TPH DD pump view pump not taking suction and engine not starting. Make – Mody Pump. Qty-01. Renew if required,	DAN
13.	20517	Air trunking	RA for cleaning of Air trunking view trunking choked	DAN
14.	20518	AC system instrumentation	RA for serviceability checks of the following:- (a) LP Cut out – 05 (b) HP Cut out – 04 (c) Sea water pressure Gauge – 02 (d) AC pressure Gauge – 04 (e) AC temperature gauge - 02	DAN

15.	20519	ATU	RA for modification of ATU condense water drain line to overboard as per FOST guidelines	DAN
16.	20520	Main Engine Sea water System	RA for overhauling of sea chest valve view not holding pressure. Dia- 100 mm. Qty-02	DAN
17.	20521	Main Engine Fuel system	RA for overhauling of 02 in no of fuel system valve view not holding. Dia- 25 mm	DAN
18.	20522	Main engine exhaust system	Exhaust flap switch not working properly. RA for DI/DR the flap switches. Qty- 02	DAN
19.	20523	DA exhaust System Pipe	RA for renewal of the compensator view exhausts leaking. Qty-02	DAN
20.	20524	DA sea Chest valve	RA for overhauling of 02 in no of DA sea chest valve. Dia- 02	DAN
21.	20525	Main engine Instrumentation	Ra for calibration of following gauges: (a) Pressure Gauge (0-4.2 Kg/cm ²)- 10 Nos	DAN
22.	20526	DA instrumentation	Ra for calibration of following gauges: (a) Lub oil Pressure gauge – 03 (b) Lub oil temperature gauge – 03 (c) Exhaust temperature gauge – 03 (d) Sea water pressure gauge – 03 (e) RPM Gauge – 03 (f) Fresh water pressure gauge - 03	DAN
23.	20527	Fire main System	RA for repair of firemain line bulkhead connection in ship's galley view bulkhead connection damage	DAN
24.	20528	Miscellaneous	RA for calibration of following gauges:- (a) Pressure gauge (0-7 Kg/cm ²)- 08 Nos (b) Pressure gauge (-1 to +1 Kg/cm ²)- 08 Nos (c) Pressure gauge (0-4.2 Kg/cm ²)- 07 Nos	DAN
25.	20529	Miscellaneous	Bilge plate of various compartments (Fwd Engine Room, Aft Engine Room, Water Jet Compartment, Bosun Store) corroded and not secured properly. RA for fitment of new bilge plate with proper securing (Hinges and screw) as per FOST guidelines.	DAN
26.	20530	Miscellaneous	Bilge plate of various compartments (Fwd Engine Room, Aft Engine Room, Water Jet Compartment, Bosun Store) to be fitted with proper application of rubber sheet as per FOST guidelines.	DAN
27.	20531	Port Air Compressor	RA for DR on bypass solenoid valve view compressor not tripping frequently. Renewal of solenoid if solenoid declared BER	DAN
28.	20532	RO Plant	RA for DR on Solenoid Valve (VE82/VE83) view malfunctioning and Solenoid coil overheating when plant start up. Renewal of solenoid if solenoid declared BER.	DAN
29.	20533	Port Diesel Alternator	RA for manufacturing of exhaust compensator view exhaust gas leaking	DAN

30.	20534	Port Diesel Alternator	RA for overhauling of DA sea water pump view not taking suction. Renewal of pump if declared BER	DAN
31.	20534	Miscellaneous	RA for fitment of main engine side guard with proper securing arrangements as per FOST Guideline	DAN
32.	20535	Bilge System	All valve to be inspected if valve not taking suction or some part damage then overhauling of the valve to be carried out. Qty – 20 in Nos. Dia - Different sizes	DAN
33.	20536	Sea Chest Valve	03 In no of sea chest valve not holding pressure. RA for overhauling and pressure testing (1.5 time of working pressure) of the valves. Renewal required if declared BER	DAN
34.	20537	Steering Gear Control System	RA for DI/DR of faulty alarms and indicator coming frequently (PV 315503 WJ1)	DAN
35.	20538	Steering Gear Control System	RA for DI/DR of faulty low lub oil flow alarms and indicator coming frequently (FS 21 PMU PV3311112 WJ3)	DAN
36.	20539	Sonihull	RA for faulty indicator of sonihull transducer fail alarm coming frequently (PV321186 WJ2)	DAN
37.	20540	Main Engine	RA for overhauling of fuel system valve for separator view pressure not holding. Dia-50mm, Qty-04 (Renewal if required)	DAN
38.	20541	Fresh water system	RA for overhauling of fresh water system valve of fresh water pump no 02 view pressure not holding. Dia-50mm, Qty- 02 (Renewal if required)	DAN
39.	20542	Main Engine	03 in no of vacuum indicator of main engine defective. RA for DR (Renew if required)	DAN
40.	20543	RO Plant	RA for all gauges of RO Plant to be calibrated and issued necessary documents. (Renew if required)	DAN
41.	20544	Main Engine	RA for all gauges and instrumentation of main engine (Port, STBD, Centre) to be calibrated and issued necessary documents. (Renew if required)	DAN
42.		Diesel alternator	RA for all gauges and instrumentation of Diesel alternator (Port, STBD, Centre) to be calibrated and issued necessary documents. (Renew if required)	DAN
43.	20545	Main Engine	RA for calibration of main engine(Port, STBD, Center) raw water pressure sensor. (renew if required). Qty – 03	DAN
44.	20546	MD Compressor	RA for DI/DR of port MD compressor solenoid valve view solenoid defective. Qty-02	DAN
45.	20547	RO Plant	RA for DI/DR of RO Plant solenoid valve view solenoid defective. Qty-06	DAN
46.	20548	Tank Level sensor	RA for calibrated of tank level sensors and DR on circuitry faults:- (a) Fuel oil tank- 02 (b) RU tank – 02 (c) Lub oil tank – 02 (d) Fresh water tank -01 (e) Dirty oil tank- 01 (f) Dirty water tank – 01	DAN
47.	20549	AC System	RA for modification of ATU condensed water drained line into the compartment to overboard.	DAN
48.	20550	DD pump	RA for overhauling of the pump view the pump loosing suction frequently (Renew all defective parts if required)	DAN

49.	20551	DD pump	RA for overhauling of the engine view excessive abnormal noise observed from engine (Renew all defective parts if required)	DAN
50.	20552	Sea Chest	RA for manufacturing of sea chest strainer as per sample view strainer corroded. Qty-12	DAN
51.	20553	Bilge suction system	RA for manufacturing of suction strainer as per sample view strainer damage. Qty-08	DAN
52.	20554	Miscellaneous	RA for making zinc plugs as per sample. Qty-37	DAN
53.	20555	Fresh water pump	RA for procurement of fresh water pump. Qty-01, Make- M/s SPX flow, Model- BUS 49	DAN
54.	20556	Pre filter Pump	RA for procurement of pre filter pump of RO Plant. Qty-01, make- ROCHEM	DAN
55.	20557	MCS-5	RA for upgradation to new generation MPU 14 type processor unit (along with associated with input/output module, power supply unit . The following scope of work to be undertaken during upgradation:- (a) Software Engineering(for pilot project only)(b) Provide all hardware parts (c) Installation of all hardware components onboard ship (d) Removal of all existing obsolete components (e) Software installation onboard (f) Setting to work commissioning and proving complete functionality of upgrade system(The upgrade system shall perform all functions of the existing system)	DELETED
56.	20558	MCS-5	RA for defect rectification of alarms for centre waterjet bucket position. Suspect control card defective and circuitry fault.	DAN

ZOROASTER SHIP DEFECT LIST (I) - ELECTRICAL DEPARTMENT

<u>Ser</u>	<u>Defect List No</u>	<u>Type of Routines</u>	<u>Equipment Name</u>	<u>Description</u>	<u>SS Remarks</u>
Equipment- Main DA Alternator, Qty - 03					
Make- STAMFORD					
Model- 415V 3PH 50Hz,120 KW (EACH) UCM274H1					
57.	30001	R1	Main DA Alternator	Overhaul complete generator including starter motor, dynamo, AVR, battery circuit and thoroughly inspect winding state. If found insulation is low, cleaning, varnishing and baking for improvement of insulation and replacement of bearings to be carried out.	DAN
58.	30002	R2	Main DA Alternator	Overhaul DA starting control panel and replace defective components, if any.	DAN
59.	30003	R3	Main DA Alternator	After overhauling carry out test and full load trial and parallel operation of DAs. i.e. 100%,75%,50% with load bank/ships load	DAN
60.	30004	R4	Main DA Alternator	Undertake droop settings w.r.t AVR and governors and prove correct parallel operation w.r.t all parameters, i.e. Frequency, voltage, and power factor regulations for all three DAs	DAN
61.	30005	R5	Main DA Alternator	Following Safety trips and alarm along with sensors for all the main generator to be calibrated and proved (03 nos each) (i) Low Lub oil Pressure (ii) High Lub Oil Temperature (iii) High water temperature (iv) Over Speed Trip	DAN
Equipment – Main Switchboard, Qty - 01					
Make- L&T, Kolkata					
Model- 415V, 50HZ, 3Phase					
62.	30006	R1	Main Switchboard	Make sure that there are no mechanical damages. Disconnected cables and wires. All the bus bars and wired connections to be tightened.	DAN
63.	30007	R2	Main Switchboard	Remove dust, dirt, moisture, oil and fuel from equipment external parts using clean rags and vacuum cleaners.	DAN
64.	30008	R3	Main Switchboard	Seal off any cracks or opening which have allowed moisture to enter the enclosure. Eliminate the source of any dripping on the enclosure and any other source of moisture. Inspect all component devices. Replace any component device which shows evidence of moisture damage or has been subjected to water damage or flooding.	DAN
65.	30009	R4	Main Switchboard	Check proper grounding, condition, of nameplates, inscriptions and other required informative designations.	DAN
66.	30010	R5	Main Switchboard	Replace fused (burned-out) signal lamps and protection devices in control section of switchboards.	DAN
67.	30011	R6	Main Switchboard	Measure insulation resistance in set points using the mega-ohm meter provided on switchboard or(if required) portable mega-ohm meters.	DAN

68.	30012	R7	Main Switchboard	Make sure that there is no corrosion on metal surface and no damage of paints coatings, clean and renew coating, if required.	DAN
69.	30013	R8	Main Switchboard	Parts which show evidence of overheating or looseness should be cleaned and re-torque or replaced, if damaged. Tighten all bolts and nuts at bus joints with torque wrench to the torque values defined.	DAN
70.	30014	R9	Main Switchboard	Check circuit breakers, switches to ensure they the proper ampere, voltage and interrupting ratings.	DAN
71.	30015	R10	Main Switchboard	Inspect all door gaskets for wear. Replace where necessary.	DAN
72.	30016	R11	Main Switchboard	Ensure that the earth wires are connected to the main earth bar expect electronic devices earthing connection.	DAN
73.	30017	R12	Main Switchboard	Renew all defective mountings.	DAN
74.	30018	R13	Main Switchboard	Check the alignment at bottom & rear locations as per the orientation shown in GA drawing. Check the securing bolts are tight to foundation. refer to torque chart.	DAN
75.	30019	R14	Main Switchboard	Calibrate all meters and check for their satisfactory performance.	DAN
76.	30020	R15	Main Switchboard	Check and ensure the satisfactory performance of inter-switchboard interfaces and interfaces with other on-board external systems.	DAN
Equipment – MCR Console Make- M/s L&T, Kolkata Model- -					
77.	30021	R-1	MCR Console	Check the mounting bases for any corrosion and renew if required.	DAN
78.	30022	R-2	MCR Console	Check the proper operation of MCBs, switches & control units.	DAN
79.	30023	R-3	MCR Console	Check the insulation of the internal wiring cables.	DAN
80.	30024	R-4	MCR Console	Check the condition of the paint if required, repaint.	DAN
81.	30025	R-5	MCR Console	Calibrate all Engine control gauges and parameters are to be recorded for proper functioning for permissible limits.	DAN
Equipment- Distribution Board, Qty - 21 Make- M/s Aim Engineering Model- 415V/230 V AC & 24V DC					
82.	30026	R1	Distribution Board	Check the corroded mounting platform.	DAN
83.	30027	R2	Distribution Board	Check the proper operating of MCBs, switches & control units. Replace defective components with correct ratings	DAN
84.	30028	R3	Distribution Board	Check the insulation of the cable.	DAN
85.	30029	R4	Distribution Board	Check the condition of the paint. If required, re-paint	DAN
Equipment- SCB, Qty - 02 Make- M/s Aim Engineering Model- 415V/230 V AC, 100 Amps					
86.	30030	R1	SCB	Check the corroded mounting bases.	DAN
87.	30031	R2	SCB	check the insulation of the cable	DAN
88.	30032	R3	SCB	Check the condition of the paint if required, repaint.	DAN
Equipment – Starters, Qty - 36 Make – M/s Rolls Royce, ECC, Marine Electricals, RWO-Veolia, Rochem, H&H, Gea West, Palfinger, IMC, EVAC, Engie Axima					

Model –415v, 230V, Star Delta, DOL						
89.	30033	R1	Starters	Check the corroded mounting bases.	DAN	
90.	30034	R2	Starters	Check the proper operating of MCBs, switches, control units, contractors and OLRs. Renew defective components, if any	DAN	
91.	30035	R3	Starters	Check the insulation of the cable.	DAN	
92.	30036	R4	Starters	Check the condition of the paint if required, repaint.	DAN	
93.	30037	R5	Starters	Carry out overhauling of panel.	DAN	
94.	30038	R-6	Starters	Calibrations of OLRs to be carried out by using CIT set	DAN	
Details of Starters are tabulated below: -						
Ser	Equipment		Make	Type	No. Fitted	Location
(a)	Waterjet Hydraulic power pack starter panel		M/s Rolls Royce	415 V AC, 2.2 KW	03	Water jet Compartment.
(b)	DOL starter for Dirty Oil Pump		M/s ECC	DOL	01	FER
(c)	Fire & Bilge Pump Starter		M/s Marine Electricals	STAR DELTA	01	FER
(d)	Fire & GS Pump Starter		M/s Marine Electricals	STAR DELTA	01	AER
(e)	F.W Hydrophore Pump Starter		M/s Marine Electricals	415 V, 1.5 KW	02	FER
(f)	Oily Water Separator Control Panel		M/s RWO-VEOLIA	415V,0.37 KW	01	FER
(g)	RO Plant control panel		M/s Rochem	----	01	FER
(h)	Air Condition Plant Control Panels		M/s H & H	415V,3Ph,50 Hz	01	FER
(j)	FO Transfer Pump Starter		M/s ECC	415 V,2.25 KW	02	FER
(k)	Fuel Oil Purifier Control Cabinet		M/S Gea West	415 V, 4.0 KW	01	FER
(l)	FWD Engine Room Supply Fan Starter		M/s H & H	415 V,7.5 KW	02	FER
(m)	FWD Engine Room Exhaust Fan Starter		M/s H & H	415 V, 3.7KW	02	FER
(n)	AFT Engine Room Supply Fan Starter		M/s H & H	415 V, 7.5 kW	01	AER

(o)	AFT Engine Room exhaust Fan Starter	M/s H & H	415 V, 3.7KW	01	AER
(p)	Water jet supply fan starter	M/s H & H	415 V, 1.5KW	01	Water jet Compartment.
(q)	Galley supply /exhaust fan starter	M/s H & H	415 V,0.37KW	02	Lower deck lobby.
(r)	Paint store supply fan starter	M/s H & H	415 V,0.37KW	01	18 Navik Mess.
(s)	Garbage disposable Unit	M/s IMC	415 V,0.56 KW	01	Galley
(t)	Shower& bilge pump Control Panel	M/s EVAC	415 V,1.5 KW	01	Void space(below Navik bathroom)
(ab)	FM 200 control panel	M/s Engie Axima,	230V AC,/ 24 VDC	01	MCR

Equipment – HP Air Compressor Panel, Qty - 02

Make – M/s ELGI

Model – 415/230 V AC

95.	30039	R1	HP Air Compressor Panel	Calibration of OLRs to be carried out using CIT set	DAN
96.	30040	R2	HP Air Compressor Panel	All defective components to be renewed.	DAN
97.	30041	R3	HP Air Compressor Panel	Check the corrosion in mounting bases.	DAN
98.	30042	R4	HP Air Compressor Panel	Check the proper operating of MCBs, switches &	DAN
99.	30043	R5	HP Air Compressor Panel	Control units, contractors and OLRs.	DAN
100.	30044	R6	HP Air Compressor Panel	Check the insulation of the cable.	DAN
101.	30045	R7	HP Air Compressor Panel	Check the condition of the paint if required, repaint. Carry out overhauling of panel	DAN

Equipment – Transformers, Qty - 01

Make – M/s Radiant Electronics

Model – Air Cooled 10 KVA

102.	30046	R1	Transformer	Once in every two years give a coat of air drying varnish on frame parts.	DAN
103.	30047	R2	Transformer	Remove dust from bolts and nuts.	DAN
104.	30048	R3	Transformer	In case of any doubt of dampness dry the transformer by using hot air blower.	DAN

105.	30049	R4	Transformer	Overhaul the transformer including cleaning, varnishing and baking of windings.	DAN
106.	30050	R5	Transformer	Check and clean earthing straps.	DAN
107.	30051	R6	Transformer	Check and records insulation resistance of windings before and after varnishing.	DAN
108.	30052	R7	Transformer	Replace defective components.	DAN
Equipment – Trans Rectifier cum Battery Charger, Qty - 05 Make – M/S Electronics Control Corporation Model – 100A, 60A, 30A					
109.	30053	R1	Trans rectifier cum Battery Charger	Calibrate all meters. Replace if found defective. Overhaul the transformer-rectifier unit.	DAN
Equipment – Fire Detection System, Qty - 01 Make – M/S Autonica Model – --					
110.	30054	R1	Fire Detection system	Overall complete system along with all sensors & calibration of system.	DAN
Equipment – Electric Cooking Range, Qty - 01 Make – M/s Sushma & CO Model – 15 KW					
111.	30055	R1	Electric Cooking Range	Overhaul complete cooking range along with control panel.	DAN
Equipment – Water Boiler, Qty - 01 Make – M/s Sushma & CO Model – 20L, 3 KW					
112.	30056	R1	Water Boiler	Dismantle the water boiler from its position after disconnecting water & electrical connection.	DAN
113.	30057	R2	Water Boiler	Dismantle the heating elements and clean or rescale them thoroughly. Check the switches, MCBs, dry cut out, thermostat, temperature gauge and reassemble them correctly as per drawing.	DAN
Equipment – Refrigerator and Deep Freezer, Qty – 04 Make – Samsung/Whirlpool/Godrej/Metos Model – 253 ltrs/99 ltrs/ 263 ltrs					
114.	30058	R1	Refrigerator and Deep Freezer	Overhaul the complete system & check for any mechanical damage / corrosion. Repair /replace them if required.	DAN
115.	30059	R2	Refrigerator and Deep Freezer	Inspect the surface & paint whole assembly if required.	DAN
116.	30060	R3	Refrigerator and Deep Freezer	Ensure that following are checked & functioning correctly: - (a) Door seal (b) Door hinges (c) Door fastening & handle (d) Door closing correctly with proper sealing. Replace seal if necessary.	DAN
Equipment – Emergency DA, Qty - 01					

Make – M/S CROMPTON GREAVES (Alternator)					
Model – G2R160S1E, 4.7 KW,230V, 1Ph, 50Hz, 0.8 Lag					
Overhaul the complete units after 3500 hrs running for both Engine and Alternator. The following procedure may be adopted for dismantling Alternator: -					
117.	30061	R1	Emergency DA	Disconnect cable connected to terminal box.	DAN
118.	30062	R2	Emergency DA	Remove cowl.	DAN
119.	30063	R3	Emergency DA	Remove fan locking bolt and washer.	DAN
120.	30064	R4	Emergency DA	Two M8 tapped holes are provided on the collar of the fan Tighten M8x65 mm long full thread bolts to remove the fan from the shaft.	DAN
121.	30065	R5	Emergency DA	Remove outer bearing cover. Remove End shield. Check the bearing condition. Re-grease bearing or replace on the case may be.	DAN
122.	30066	R6	Emergency DA	Remove rotor if necessary, by unscrewing packing sheet bolts securing rotor to Engine flywheel.	DAN
123.	30067	R7	Emergency DA	Blow clean dry air and clean the stator & rotor windings.	DAN
124.	30068	R8	Emergency DA	Check revolving diodes.	DAN
125.	30069	R9	Emergency DA	Check insulation resistance of the winding. If windings need re-varnishing procedure given in the manual be followed. However, before re-varnishing the revolving diode disc must be removed and refitted in exactly same position after re-varnishing.	DAN
126.	30070	R10	Emergency DA	Re-assemble the generator. Reconnect the cables. Start & check the performance.	DAN
Equipment – ICCP, Qty - 01					
Make – M/s Cathodic Control					
Model – 230VAC (I/P)- 12V DC(O/P)					
127.	30071	R1	ICCP	The power supply to the auto control unit must be switched of at least one hour before the ship enters the dry dock.	DAN
128.	30072	R2	ICCP	Inspect the anode and the reference electrode for any mechanical damage.	DAN
129.	30073	R3	ICCP	Inspect the shield paint and paste around the anode and reference electrodes. If any peeling off is found, the area must be recoated. In this case the surface preparation is required as same as new procedures. Measure the resistance between hull and anode after dry up.	DAN
130.	30074	R4	ICCP	Inspect the water seepage in the junction boxes.	DAN
131.	30075	R5	ICCP	Check the condition of underwater hull.	DAN
132.	30076	R6	ICCP	Check all the circuit and thoroughly inspect the wiring / unit / sub-unit, renew them wherever necessary.	DAN
133.	30077	R7	ICCP	All control panel meters are to be calibrated.	DAN
134.	30078	R8	ICCP	Clean and preserve all anodes and reference electrodes after docking and ensure cleaning of same before undocking.	DAN
Equipment – Waterjet Control, Qty - 03					
Make – M/s Kamewa, Rolls Royce					
Model – RCS					

135.	30079	R1	Waterjet Controls	Carry out functional test and replace components if required	DAN
136.	30080	R2	Waterjet Controls	Following alarms and sensor are to be calibrated: - (a) Low hydraulic oil Pressure (b) High Temperature and low oil level (c) Low oil flow and low lube oil Pressure	DAN
Equipment – IBS, Qty - 01 Make – M/s Sperry Marine Model – RS4 Multifunction workstations					
137.	30084	R1	IBS	Open panels and check all terminal block connections in processors and tighten if becoming loose.	DAN
138.	30085	R2	IBS	First redundancy check, switch off Matrix # 1 and test all system operations as per daily	DAN
139.	30086	R3	IBS	Second redundancy check, switch off Matrix # 2 and test all system operations as per daily checks, assure to switch Matrix # 2 back on.	DAN
Equipment – Radar, Qty - 02 Make – M/s Sperry Marine Model – 25KW, 10 KW					
140.	30087	R1	Radar	Check transmitter power output.	DAN
141.	30088	R2	Radar	Check condition of Transmitter mounts and replace or repair if needed	DAN
142.	30089	R3	Radar	Check condition of earth bondage strap and replace or repair if needed	DAN
143.	30090	R4	Radar	Assess general condition of transmitter units [e.g. array, rotary joints] and repair if needed.	DAN
144.	30091	R5	Radar	Carry out complete overhauling including scanner motor and replace bearing, belts etc.	DAN
Equipment – AIS, Qty - 01 Make – M/s Jotron Model – TR-8000					
145.	30092	R1	AIS	Check condition of antenna mounts/brackets for corrosion and repair if needed.	DAN
146.	30093	R2	AIS	Open transponder and power supply unit. Check internal wiring and tighten terminals if loose.	DAN
Equipment – DGPS, Qty - 01 Make – M/s Furuno Model – GP-170					
147.	30094	R1	DGPS	Check condition of antenna mounts/brackets for corrosion and repair if needed.	DAN
148.	30095	R2	DGPS	Open multiplexer unit and check internal wiring and tighten terminals if loose.	DAN
Equipment – ECDIS, Qty - 01 Make – M/s Sperry Marine Model – --					
149.	30096	R1	ECDIS	Check chart permit licenses/ permit expiry and arrange updates.	DAN

150.	30097	R2	ECDIS	Open panels and check all terminal block connections and tighten if becoming loose.	DAN
Equipment – Echosounder, Qty – 01 (Panel), 02 (Transducers) Make – M/s Skipper Model – GDS 102					
151.	30098	R1	Echosounder	Check condition of transducer mounts/ brackets for corrosion and repair if needed.	DAN
152.	30099	R2	Echosounder	Check external transducer condition of sensor pins for build up or wear.	DAN
153.	30100	R3	Echosounder	Open output distribution junction box and check all terminal block connections and tighten if becoming loose.	DAN
154.	30101	R4	Echosounder	Overhaul the equipment and replace defective components, if any.	DAN
155.	30102	R5	Echosounder	On dry docking of vessel, after seating on blocks, clean and preserve transducers and before undocking ensure preservation material to be removed and transducers are to be thoroughly cleaned.	DAN
Equipment – EM Log, Qty - 01 (Panel), 01 (Transducer) Make – M/s Lilley & Gillie Model – Walker 7080					
156.	30103	R1	EM Log	Check condition of transducer mounts/ brackets for corrosion and repair if needed.	DAN
157.	30104	R2	EM Log	Check external transducer condition of sensor pins for build up or wear.	DAN
158.	30105	R3	EM Log	Open output distribution junction box and check all terminal block connections and tighten if becoming loose.	DAN
159.	30106	R4	EM Log	Overhaul the equipment and carryout calibration of EM Log by measured distance run procedure.	DAN
160.	30107	R5	EM Log	On dry docking of vessel, after seating on blocks, clean and preserve transducers and before undocking ensure preservation material to be removed and transducers are to be thoroughly cleaned.	DAN
Equipment – Gyro Compass, Qty - 01 Make – M/s Anschutz Model – STD 22					
161.	30108	R1	Gyro Compass	Complete overhauling of Gyro compass to be carried out. Change the 'O' rings / gaskets, Gyro liquid and fused bulbs. Check the Gyro compass for optimum performance.	DAN
162.	30109	R2	Gyro Compass	Ensure repeaters are aligned with main Gyro and Gyro feed is available to RADAR and other connected equipment.	DAN
Equipment – VDR, Qty -01 Make – M/s DANELEC MARINE Model – DM-100					
163.	30110	R1	VDR	Annual performance test (APT) carried out by certified Service Engineer.	DAN
164.	30111	R2	VDR	Open panels and check all terminal block connections and tighten if becoming loose.	DAN

Equipment – Anemometer and weather sensor					
Make – M/s Lilley & Gillie					
Model – Walker 7080					
165.	30112	R1	Anemometer and weather sensor	Check condition of wind vane mounts/brackets for corrosion and repair if needed	DAN
166.	30113	R2	Anemometer and weather sensor	Overhaul the equipment including sensors and calibrate anemometer for speed and direction with reference to hand held anemometer and standard readings.	DAN
Equipment – AutoPilot, Qty - 01					
Make – M/s Sperry marine					
Model – Navipilot 4000+					
167.	30114	R1	AutoPilot	Complete overhaul the auto pilot system.	DAN
Equipment – MainBroadcast/SRE					
Make – M/s PHI Audiocom					
Model – ACS5967-1607					
168.	30115	R1	MainBroadcast/SRE	Overhaul complete system.	DAN
Equipment – Auto Telephone System, Qty- 01					
Make – M/s NAVICOM					
Model – SBDX					
169.	30116	R1	Auto Telephone System	Overhaul complete system.	DAN
170.	30117	R2	Auto Telephone System	Check all telephones lines/ cables, junction boxes and replace defective components, if any	DAN
Equipment – Sound Powered Telephone, Qty - 15					
Make – M/s Linia Engineering Industries					
Model – SPT-12M(Bulk Head Mounted)					
171.	30118	R1	SPT	Overhaul complete system.	DAN
Equipment – SMART-F, Qty - 01					
Make – M/s BEL					
Model – 4563R					
172.	30119	R1	Smart -F	Check co-axial cable for any damage if defective replace.	DAN
173.	30120	R2	Smart -F	Carry out complete overhauling of system.	DAN
Equipment – LoudHailer, Qty - 01					
Make – M/s PHI Audiocom					
Model – ACS-5911-1607,120W					
174.	30121	R1	LoudHailer	Overhaul complete system.	DAN
Equipment – PA SYSTEM(FIXED TYPE), Qty - 01					
Make – M/s PHI Audiocom					
Model – ACS-5913-1607,240W					
175.	30122	R1	PA System	Overhaul complete system.	DAN
Equipment – Navigation Intercom, Qty - 06					
Make – M/s PHI Audiocom					
Model – --					

176.	30123	R1	Navigation intercom	Overhaul complete system.	DAN
Equipment – Armament Intercom, Qty - 05 Make – M/s PHI Audiocom Model – --					
177.	30124	R1	Armament Intercom	Overhaul complete system.	DAN
Equipment – Machinery Intercom, Qty - 06 Make – M/s PHI Audiocom Model – --					
178.	30125	R1	Machinery Intercom	Overhaul complete system.	DAN
Equipment – MF/HF TX/RX SSB Radio Telephone, Qty - 02 Make – M/S JRC(Marine Electrical) Model – 500W, JSS-2250N/2500N					
179.	30126	R1	MF/HF TX/RX SSB Radio Telephone	Overhaul the complete system.	DAN
180.	30127	R2	MF/HF TX/RX SSB Radio Telephone	Carryout performance check and tuning of system as per service manual	DAN
Equipment – INMARSAT- C, Qty - 01 Make – M/S THRANE & THRANE Model – SAILOR 6110					
181.	30128	R1	INMARSAT - C	Overhaul the complete units internally, check the performance in all functional modes and prove it for satisfactory operation.	DAN
Equipment – VHF Radio Telephone, Qty - 02 Make – M/S Sailor Model – 6222 VHF DSC					
182.	30129	R1	VHF Radio Telephone	Overhaul the complete units internally, check the performance in all functional modes and prove it for satisfactory operation.	DAN
Equipment – Fleet Broadband, Qty - 01 Make – M/S THRANE & THRANE Model – SAILOR FBB 500					
183.	30130	R1	Fleet Broadband	Overhaul the complete units internally, check the performance in all functional modes and prove it for satisfactory operation.	DAN
Equipment – NAVTEX Receiver, Qty - 01 Make – M/S Sailor (MEL power) Model – Sailor 6004					
184.	30131	R1	NAVTEX Receiver	Overhaul the equipment.	DAN
Equipment – Portable HF TX/RX, Qty - 02 Make – M/S BEL Model – PRC 6020					
185.	30132	R1	Portable HF TX/RX	Overhaul the complete units internally, check the performance in all functional modes and prove it for satisfactory operation.	DAN
Equipment –V/UHF TX RX (M7), Qty - 02 Make – M/S ECIL					

Model – M7					
186.	30133	R1	V/UHF TX RX (M7)	Overhaul the complete system along with painting of antenna with Navy grey polyurethane paint. Carryout performance checks & tuning of system.	DAN
Equipment – Navigation Lights & Control Panel, Qty - 13 Nos(Lights), 01no (Control Panel) Make – M/S ECC Model – 230V AC /24 V DC					
187.	30134	R1	NLCP	Overhaul the complete Unit, check the performance in all lights and its rotary switches for satisfactory operation.	DAN
Equipment – General Alarm System, Qty - 09 Make – M/S EMF Model – --					
188.	30135	R1	General Alarm System	Overhaul the complete system. Replace defective/ deteriorated components , if any	DAN
Equipment – Window Wiper, Qty - 05 Make – M/S Wynn Marine Model – --					
189.	30136	R1	General Alarm System	Overhaul the equipment. Replace defective/deteriorated components.	DAN
Equipment – Flood Alarm System, Qty - 14 Make – M/S ECC Model – --					
190.	30137	R1	Flood Alarm System	Overhaul the equipment. Replace defective/deteriorated components including sensors.	DAN
Equipment – Service Call up, Qty - 04 Make – M/S EMF Model – 24V DC					
191.	30138	R1	Service Call up	Overhaul the complete assembly, check the performance all indication lights and its toggle switches including hooter for satisfactory operation.	DAN
Equipment – Galley Call Bell system, Qty - 03 Make – M/S EMF Model – 24V DC					
192.	30139	R1	Galley Call Bell system	Overhaul the complete assembly, check the performance all indication lights and its push buttons switches including hooter for satisfactory operation.	DAN
Equipment – Electric Siren, Qty - 01 Make – M/S Zollner Model – --					
193.	30140	R1	Electric Siren	Overhaul the equipment. Replace defective/deteriorated components.	DAN
Equipment – Search Light, Qty - 01 Make – M/S Wiska Enterprises Model – SH400, FL-20					
194.	30141	R1	Search Light	Overhauling of complete assembly along with control unit.	DAN
Equipment – Signalling Projector, Qty - 02 Make – M/S Ray Enterprises					

Model – RAYEN-20						
195.	30142	R1	Signalling Projector	Overhauling of both signalling projectors.	DAN	
Equipment – SART, Qty - 02						
Make – M/S Sailor (MEL Power)						
Model – Sailor SART-II						
196.	30143	R1	SART	Perform the functional tests.	DAN	
197.	30144	R2	SART	Replace battery after confirming expiry date.	DAN	
Equipment – EPRIB, Qty - 01						
Make – M/S Thrane & Thrane						
Model – Sailor SE 406-II						
198.	30145	R1	EPRIB	Replacement of HRU to be carried out as per procedure laid down in EPRIB users manual page. Note: Replace battery after confirming expiry date marked on set.	DAN	
Equipment – Magnetic Compass, Qty - 01						
Make – M/s Sperry Marine						
Model – Navipol - 1						
199.	30146	R1	Magnetic Compass	Overhaul complete system.	DAN	
Equipment – Dish Antenna System, Qty - 01						
Make – M/S KNS, Korea						
Model – KNS-S8						
200.	30147	R1	Dish Antenna System	Overhauling of complete assembly along with control unit.	DAN	
Equipment – IR Communication, Qty - 06						
Make – M/S Jacobs Radio						
Model – --						
201.	30148	R1	IR Communication	Overhaul complete system.	DAN	
Equipment – General Motors, Qty - 57						
Make – M/S ROYSON/SPX/NARAHARI/EVAC/VEOLIA/GEA						
Model – 415V, 50 HZ						
202.	30149	R1	General Motors	Overhauling of motors includes following a) Checking insulation and varnishing of motor winding. b) Painting of motor body. c) Examine for rotor impeller shaft & bearing housing for flaws, cracks or corrosion. Make good or replace as necessary. d) Balance of rotor e) Repair of terminal box as necessary f) Replacements of bolts & nuts where necessary. g) Preparation of the foundation of motor and fitment. h) Running test after assembling & installation onboard ship.	DAN	
List of Motors are tabulated below: -						
Ser	Equipment motors		Rating	No. Fitted	Location	Remarks

(a)	EMERGENCY DA COMPT. EXHAUST FAN MOTOR	0.37 KW	01	EMERGENCY DA COMPT.
(b)	AHU MOTOR	11 KW	01	ATU COMPT
(c)	EXHAUST FAN MOTOR FOR CO'S BATHROOM(AE-1)	0.062 KW	01	CO'S BATHROOM
(d)	FM 200 EXHAUST FAN(AE-5)	0.062 KW	01	FM COMPT.
(e)	NAVAL STORE SUPPLY MOTOR(AS-1)	0.157 KW	01	NAVAL STORE
(f)	BAGGAGE STORE SUPPLY FAN(AS-4)	0.157 KW	01	BAGGAGE STORE
(g)	STP EXHAUST FAN MOTOR(AE-2)	0.318 KW	01	STP COMPT
(j)	STP SUPPLY FAN MOTOR	1.5 KW	01	STP COMPT
(k)	JET COMPT. SUPPLY FAN(AS-3)	3.7 KW	01	JET COMPT
(l)	EXHAUST FAN MOTOR FOR SO'S & OFFICER'S BATHROOM	0.318 KW	01	NAVIK BATHROOM
(m)	DIRTY OIL PUMP MOTOR	1.1 KW	01	FER
(n)	SEA WATER PUMP MOTOR	0.75 KW	01	FOR STP (FER)
(p)	GALLEY SUPPLY FAN / EXHAUST MOTOR(GS-1& GE-1)	0.37 KW	02	GALLEY
(q)	BILGE & GS PUMP MOTOR	11 KW	01	FER
(r)	BILGE & FIRE PUMP MOTOR	11 KW	01	AER
(s)	FRESH WATER HYDROPHORE PUMP MOTORS	1.5 KW	02	FER
(t)	OILY BILGE WATER SEPARATOR MOTOR	0.37 KW	01	FER
(u)	PRE FILTER PUMP MOTOR FOR R.O PLANT	0.55 KW	01	FER
(v)	FILTER PUMP MOTOR R.O PLANT	0.55 KW	01	FER
(w)	HP PUMP MOTOR FOR RO PLANT	2.2 KW	01	FER
(ab)	FUEL OIL PURIFIER SEPARATOR PUMP MOTOR	4 KW	01	FER
(ac)	FUEL OIL PURIFIER FEEDER PUMP MOTOR	1.5 KW	01	FER
(ad)	FUEL OIL PURIFIER BOOST PUMP MOTOR	1.5 KW	01	FER
(ae)	SHOWER & BILGE PUMP MOTOR 1 & 2	1.5 KW	02	VOIDE SPACE (BELOW NAVIK BATHROOM)
(af)	FUEL OIL PURIFIER PUMP MOTOR	4 KW	01	FER
(ag)	AIR COMPRESSOR MOTORS	7.5 KW	02	FER
(ah)	AC SEA WATER PUMP MOTOR(MAIN)	5.5 KW	02	FER
(aj)	EXHAUST FAN MOTOR FOR 02 OFFICER BATHROOM AND SO'S BATHROOM	0.318 KW	01	OFFICER'S BATHROOM
(ak)	AC COMPRESSOR MOTOR	7.5 KW	02	FER
(al)	FUEL OIL TRANSFER PUMP MOTORS	2.25 KW	02	FER
(am)	FWD E/R EXHAUST FAN MOTORS(EE-1&EE-2)	3.7 KW	02	GEMINI DECK
(an)	FWD E/R SUPPLY FAN MOTORS(ES-1&ES-2)	7.5 KW	02	GEMINI DECK
(ap)	AFT E/R EXHAUST FAN MOTORS(EE-3)	3.7 KW	01	Q/DECK
(aq)	AFT E/R SUPPLY FAN MOTORS(ES-3)	7.5 KW	01	Q/DECK
(as)	WATER JET POWER PACK MOTOR	2.20 KW	03	WJ COMPT
(au)	PAINT STORE EXHAUST FAN(AE-4)	0.37 KW	01	PAINT STORE
(av)	GARBAGE DISPOSAL MOTOR	0.56 KW	01	GALLEY
(aw)	NAVIK'S TOILET EXHAUST FAN MOTOR	0.37 KW	01	NAVIK'S BATHROOM

ZOROASTER SHIP DEFECT LIST (II) - ELECTRICAL DEPARTMENT

Ser	Defect List No	Equipment Name	Description	SS Remarks
1.	300150	Main DA Alternator	Excitation supply not available to Dynamo. Defect rectification of availability of supply to Dynamo to be undertaken.	DAN
2.	300151	Main DA Alternator	Greasing of bearings of all three alternators to be undertaken.	DAN
3.	300152	Main DA Alternator	All three DA's starting batteries are not holding charging, to be replaced by new one, Qty - 06	DAN
4.	300153	Main Switchboard	Repair/replacement of 230V, 100 Apms breaker for domestic supply to be undertaken.	DAN
5.	300154	Main Switchboard	Repair/Replacement of Earthing strips of Main Switchboard to be undertaken.	DAN
6.	300155	Main Switchboard	Replacement of rubber mats in Main Switchboard to be undertaken.	DAN
7.	300156	Main Switchboard	Calibration of the following to be undertaken: - (a) Incoming breakers of all three DA's – 03 (b) Shore incoming breaker – 01 (c) Busbar couplers – 02 (d) Feeder breakers – 30	DAN
8.	300157	Main Switchboard	Calibration of the following to be undertaken: - (a) Overvoltage/undervoltage relay – 03 (b) Short circuit/Overcurrent relay – 04 (c) Insulation Monitor – 01 (d) Reverse Power Relay – 03	DAN
9.	300158	Main Switchboard	Das tripping during paralleling of Das. Defect rectification and Paralleling trails to be undertaken.	DAN
10.	300159	Distribution Board	Repair/Replacement of defective breakers in 230V DB to be undertaken. Qty – 13	DAN
11.	300160	Distribution Board	Repair/ Replacement of Hylum board for DBs in FER and AER to be undertaken. Qty – 04	DAN
12.	300161	SCB	Repair/ Renewal of Shore supply box. Qty – 02	DAN
13.	300162	SCB	Calibration of Shore supply breaker to be undertaken. Qty – 02	DAN
14.	300163	HP Air Compressor Panel	Repair/Replacement of defective MCBs – 02, contactors – 04 and switches – 02 to be undertaken.	DAN
15.	300164	Trans rectifier cum Battery Charger	Repair/Replacement of defective control card of Transrectifier. Qty – 02	DAN

16.	300165	Trans rectifier cum Battery Charger	Repair/Replacement of defective Ammeter of Transrectifier. Qty – 02	DAN
17.	300166	Fire Detection system	Repair/Renewal of defective heat sensors, temp sensors and hooters to be undertaken.	DAN
18.	300167	Electric Cooking Range	Renewal of heating element of cooking range and oven to be undertaken. Qty – 06	DAN
19.	300168	Emergency DA	Starting push button of EDA control panel defective. Replacement of Starting push button of EDA control panel to be undertaken.	DAN
20.	300169	IBS	Repair/Replacement of 1 KVA UPS for Nav aids to be undertaken. Qty – 02	DAN
21.	300170	CCTV	03 in no's CCTV base fitment is defective to be repaired.	DAN
22.	300171	NLCP	Repair of NLCP and Navigation bulb holders at various places. Qty - 06	DAN
23.	300172	LoudHailer	LoundHailer 100 watts Speaker is burnt out, it to be replaced by new one, Qty - 01	DAN
24.	300173	Navigation intercom	Port & Stbd wing's speakers to be replaced by new one, Qty - 02	DAN
25.	300174	RO Plant	RA for DR on 230 V RO plant solenoid malfunctioning frequently. Renewal if required.	DAN
26.	300175	Navigation Light	Towing light and astern lights damaged. RA for DR . (Renewal if required). Qty-02	DAN
27.	300176	Search light	Search light non ops, RA for providing new search light. Qty-01, Make-M/s Wiska Enterprises, Model-SH 400, FL -20	DAN



Annexure-2

Job Title कार्य का नाम:	“CONDUCT OF SHORT REFIT OF SCG ZOROASTER (WORK PACKAGE-II)” (to be executed as per SOTR No. GRSE/SR/SCGZ/01 Date: 22 Mar 24 [Annexure-I] with DL List.
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STANDARD TERMS & CONDITIONS (STAC)

मानक निबंधन और शर्तें (एसटीएसी)

(1) **INTEGRITY PACT समग्रताअनुबंध:**

All the participating vendors in this tender are required to enter into agreement by signing an Integrity Pact.

“The Pact essentially envisages as agreement between the prospective vendors/bidders and the buyer, committing the persons/officials of both the parties, not to exercise any corrupt influence on any aspect of the contract”.

Signing of Integrity Pact will be preliminary qualification for participation of this tender, only those vendors who have entered into this Pact with GRSE will qualify for the contract. This Integrity Pact will be effective from the stage of invitation of bids till the date of complete execution of this contract.

Signing Authority for Integrity Pact:

- (A) Vendor: Proprietor / Director / Authorized representative
(B) GRSE: Head of the ordering department, not below the rank of DGM / AGM

Vendors need to sign on each page of the Integrity Pact document and provide the same on a Govt. issued bond paper of Rs.100/-. The scanned copy of the same need to be uploaded along with the technical Bid documents and original copy of the same to be forwarded to Tendering Department before the due date of the tender.

The vendor has to submit Integrity Pact as per GRSE Format along with Techno-commercial bid, wherever applicable as per NIT.

(2) **MICRO & SMALL ENTERPRISE (सूक्ष्म और छोटे उद्यम) -**

- a) Purchase preference will be given to eligible Micro and Small Enterprise firms as per MSME Act on submission of valid Udyam Registration Certificate (URC) or NSIC copy along with their offer to claim the benefit. Tendered Service is to be listed in the URC or NSIC submitted else they are disqualified to avail the benefit.
- b) Out of 25% target of annual procurement from MSEs, 4% (within the 25%) reservation will be provided for MSEs owned by Schedule Caste (SC) /Scheduled Tribe (ST) entrepreneurs and 3% (within the 25%) reservation will be provided for MSEs owned by women entrepreneurs. Necessary documents to be submitted along with the techno-commercial bid as evidence failing which benefit shall not be accorded. However, in the event of failure of such MSEs to participate in the tender process or meet the tender requirements and L1 price, 4% reservation for MSEs owned by SC/ST entrepreneurs



and 3% reservation for MSEs owned by women entrepreneurs will be met from other MSEs.

- c) Following facilities/benefits may be given to MSEs: -
(i) Exemption for payment of Tender Fee & Earnest Money Deposit.
(ii) Relaxation in prior Turnover and prior Experience Criteria (Specially for Start Ups- Certificate of DIPP is required to Claim the benefit)
- d) (i) MSEs registered with MSME authority as stated above, quoting price within the band of L1 +15% will be allowed to supply a portion of the requirement by bringing down their price to L1 price in a situation where the L1 price is from someone other than MSE. Such MSEs will be allowed to supply at least 25% of total tendered value. To avail this purchase preference, submission of Udyam Registration Certificate /NSIC is mandatory failing which the benefit will not be accorded.

(ii) In case L1 is not an MSE and there is more than one MSE within the range of L1 +15%, only the lowest MSE shall be considered for 25% order in case of divisible item or 100% in case the order quantity is not divisible, subject to matching the L1 prices.

(iii) If the lowest MSE refuses to accept the L1 price, then the second lowest MSE within the range of L1 +15% will be considered. This process will continue till a MSE in the range accepts the L1 price or the MSEs in the L1 + 15% range are exhausted.

(iv) In case no MSE accepts the L1 price or there is no MSE available in the L1 +15% range, then the order shall be placed to the L1 bidder without applying this principle.
- e) Non-Divisibility of Tender Items: - In case of non-divisible / non-splittable item in tenders, an MSE quoting in the price band of L1+15% may be awarded for full/complete supply of total tendered value, considering the spirit of policy for enhancing the government procurement from MSEs subject to matching the L1 prices by the MSE concerned. However, contract will be awarded as per GOI policy and at discretion of GRSE.
- f) To qualify for entitlement as SC/ST owned MSE, the SC/ST certificate issued by the District Authority must be submitted along with the offer or the same should be indicated in the relevant document NSIC / Udyam Registration Certificate.
- g) For the MSEs owned by SC/ST owned entrepreneur, the benefits as stated above shall be accorded only in the following cases:
(i) For proprietary MSE, proprietor(s) shall be SC/ST.
(ii) For partnership MSE, the SC/ST partners shall be holding at least 51% shares in the unit.
(iii) For Private Limited Companies, at least 51% share shall be held by SC/ST promoters.
- (3) **TENDER FEE (निविदाशुल्क): NON-REFUNDABLE (गैर वापसी योग्य) – Not applicable for this tender**
i. Amount of declared non-refundable tender fee is to be submitted in the form of Demand Draft / Pay Order, Payable at Kolkata and issued in favour of "Garden Reach



Shipbuilders & Engineers Limited” by any Nationalized/Scheduled Bank other than Co-operative Bank. Physical DD/PO to be forwarded to Tendering Department of GRSE within 07 days of tender due date. A scanned copy of the same is to be uploaded as an attachment to the PART I of e-bid submission.

ii. MSE registered firms having the tendered service listed in their MSE document will be eligible for exemption of tender fee. To claim the exemption, a copy of the valid MSE certificate with its annexure is to be scanned and uploaded as an attachment to the PART I of e-bid submission. The same is to be confirmed in the techno-commercial concurrence format.

iii. Non-submission of tender fee or a valid MSE certificate may lead to offer rejection.

(4) **EARNEST MONEY DEPOSIT (INTEREST FREE) बयाना जमा (ब्याज रहित) - Not applicable for this tender**

i. Amount of declared interest free Earnest Money Deposit (EMD) is to be submitted in form of Demand Draft / Pay Order, Payable at Kolkata and issued in favour of “Garden Reach Shipbuilders & Engineers Limited” by any Nationalized/Scheduled Bank other than Co-operative Bank. Physical DD/PO to be forwarded to Tendering Department of GRSE within 07 days of tender due date. A scanned copy of the same is to be uploaded as an attachment to the PART I e-bid submission.

ii. EMD may also be submitted in the form of Bank Guarantee with six months validity as per enclosed GRSE format of Bank Guarantee and is to be forwarded directly to GM (Finance), GRSE in Bankers’ sealed envelope failing which same will not be accepted. Details of B.G. are to be in Techno-Commercial part of offer.

iii. MSE registered firms having the tendered service listed in their MSE document will be eligible for exemption from submitting EMD. To claim the exemption a copy of the valid MSE certificate with its annexure is to be scanned and uploaded as an attachment to the General Document part of E-PROCUREMENT. The same is to be confirmed in the PART I concurrence format.

iv. MSE Registered Firms has to be submit Bid Security Declaration In lieu of Earnest Money Deposit as per GRSE format.

v. Non-submission of EMD /Bid Security Declaration and valid MSE certificate may lead to rejection of offer.

vi. **Refund of Earnest Money Deposits (बयाना जमा की वापसी)**

a. EMD of unsuccessful bidders will be refunded/ returned within 30 days of finalisation of order on surrendering the original copy of GRSE Money Receipt with an application by bidder addressed to HOD of Ordering Department, GRSE on receipt of intimation from GRSE.

b. EMD of disqualified bidders in TNC/CNC will be returned within 30 days from the date of receipt of application along with original copy of Money Receipt from the



bidder. EMD, if not claimed within 1 year from the date of notification EMD will be forfeited.

- c. EMD of successful bidder will be returned after receipt of security deposit against work order as per contractual terms.

vii. Forfeiture of Earnest Money Deposit (बयाना जमा की जब्ती)

EMD may be forfeited under the following circumstances:

- a. The bidder withdraws the bid after opening of Price Bid during the period of validity of offer.
- b. The bidder does not accept the correction of error in bid price as indicated in **Clause 37** hereinafter.
- c. The successful bidder fails within the specifies time limit to:
 1. Acknowledge the LOA/Order
 2. Furnish the required Security Deposit
 3. Non-performance of the contract by the Contractor

(5) VALIDITY OF OFFER (प्रस्ताव की वैधता) :-

Your offer should remain valid for a period of 90 days (as per terms of specific NIT) from the due date of the tender.

(6) SECURITY DEPOSIT (INTEREST FREE) प्रतिभूति (ब्याज रहित):

- i. Successful bidder will deposit an amount equivalent to the declared per cent of the total contract value as interest free Security Deposit (SD) in the form of Pay Order/D. D/Bank Guarantee (with validity of sixty days beyond contract period as per GRSE format) on any schedule bank other than Co-operative bank payable at Kolkata, duly crossed favouring Garden Reach Shipbuilders & Engineers Limited., within 15 days from the date of site clearance/receipt of LOA or PO/as specified in the NIT. In case of non-submission of SD as per schedule, penal interest will be charged for delayed period of submission of SD beyond 15 days at the prevailing SBI cash credit rate on the amount of SD to be submitted.
- ii. If S.D is submitted in the form of B.G then same is to be forwarded directly to Gen. Mgr. (Finance) in Banker's sealed envelope failing which same will not be accepted. Details of B. G. should also be confirmed to Ordering Department, GRSE.
- iii. S.D. amount would be refunded / returned after successful execution of the job and certification of Material Reconciliation Statement by Internal Audit, if applicable. Vendor is to apply for release of their SD along with Job Completion Certificate which has to be certified by PL/Engineer-in-charge/authorized representative of concerned department through GRSE Ordering Dept. In the event of failure to execute the order satisfactorily or default by the contractor/ sub-contractor, the security deposit will be forfeited.



- (7) **WORK DONE CERTIFICATE (W.D.C.) (किए हुए काम का प्रमाणपत्र)** :- Firm will put up Work Done for certification to site engineer /PL /or as specified in the NIT, along with clear inspection report signed by Quality Assurance Authority. W.D.C. is to include whether work has been completed as per delivery schedule or the delay in days/weeks occurred in completion of work.
- (8) **BILL SUBMISSION(बिल प्रस्तुति):**
On obtaining WDC, bills are to be raised on monthly/quarterly/half-yearly/annually(as specified in NIT) progressive basis in accordance with the Checklist as per GRSE format. Bills are to be submitted at the Bill Receiving Counters located at the respective unit of Company. Bill is to be submitted (in 03 copies) in sealed envelope super-scribing on the envelope the Purchase Order No., Vendor code, Bill / Invoice No., Name of person /employee to whom bill is addressed, for processing. For this Service Name of the person to be mentioned on sealed envelope will be concerned Project Leader of the Ship/Bill certifying officer.
- (9) **COMPLIANCE OF ESI & PF (ईएसआई और पीएफ़ का अनुपालन): -**
a) Compliance of ESI & PF of the engaged workman is the responsibility of the contractor.
b) For execution of job inside GRSE premises, vendor has to obtain clearance from HR Dept. regarding statutory compliance of minimum wages, PF, ESI, etc. of their engaged workmen for release of payment.
- (10) **POLICE VERIFICATION FOR CONTRACT LABOUR WORKMEN (ठेका श्रमिकों का पुलिस सत्यापन) :-**
(a) Police Verification certificates of character antecedents in respect of all employees of Contractors/Sub-contractors for operating inside GRSE Ltd. are required to be submitted to Security Dept./GRSE Ltd. before processing of Gate Passes.
(b) A certificate from the contractor's labour, clearly endorsing that characters of all his labourers have been duly verified and found to be satisfactory be submitted to GRSE at the time of making Gate Pass.
(c) Photo Identity Card /Gate Pass as required by GRSE will be arranged by the contractor for his employees at his own cost.
- (11) **GST REGISTRATION (जी एस टी पंजीकरण): -** The vendor will have to submit copy of GST registration certificate (Part A & Part B) along with the Technical bid. Any bidder without having GST Registration Certificate will not be considered for Ordering.
- (12) **GUARANTEE PERIOD (गारंटी अवधि):-**



Workmanship will be guaranteed for satisfactory performance for a period **as stated in NIT**. Any faulty work carried out by the sub-contractor is to be rectified by them within the time stipulated by the GRSE. In case of failure of sub- contractor to meet the ship's programme, outstanding deficiencies shall be rectified by GRSE and all costs of such work shall have to be borne by the sub-contractor).

During guarantee/ warranty period if any equipment or any component thereof supplied by the contractor, suffers due to defective material and/ or due to improper design and/ or due to defective drawing or due to faulty workmanship the contractor will assume full responsibility of rectification of such defective equipment or component thereof including all direct expenses relating to removal and re-positioning of the replacement/ repaired equipment or component thereof and subsequent test & trial, incurred thereon without any financial implication to GRSE.

(13) **PRICE (मूल्य):**

A. For Tender in NIC Portal (एन आई सी पोर्टल टेंडर हेतु): - NA

a) Price bid need to be filled up (excluding GST) in html format only through e-portal. No other attachment regarding price will be allowed, if so, then offer will be rejected. For break-up of prices, GRSE may attach excel sheet with the html format price bid and the bidder has to fill up their prices in excel sheet and also in html format as per instruction in NIT.

B. For Tender in GeM Portal (जे ई एम पोर्टल टेंडर हेतु):

a) Price bid needs to be filled up (with or without GST as specified in NIT) only through GeM portal for the total job.

b) The Bidder may have to upload the breakup of their quoted price in line with BOQ, as specified in NIT, along with their price offer in GeM portal.

c) The price should remain firm & fixed till satisfactory execution of the entire contract as per NIT. GST percentage has to be indicated in the offer. GST registration certificate for the service being tendered is to be enclosed with the techno-commercial bid. GST registration number is to be quoted in all bills.

(14) **QUANTITY VARIATION (मात्रा भेद) : As per term of NIT.** Quantity as specified in the NIT/SOTR/Price Bid is tentative and it may vary according to the actual requirement of the job. The selected bidder has to execute the required quantity at the same rate, terms & conditions up to variation (+/-25%) or as specified in the NIT in addition to the initial tendered quantity. Necessary amendment of Purchase Orders will be issued accordingly.

(15) **UNREASONABLE QUOTES अतर्कसंगत भाव –**

A. For Job Contract (कार्य संविदा हेतु) :

i) In case the price of L-1 Bidder is found to quote unreasonably low and/or express desires to withdraw from the tender then such bid will be cancelled and EMD will be



forfeited and punitive action will be taken in line with the provision as per GRSE Vendor Policy.

- ii) However, in case the L1 Bidder agrees to take-up the job with such unreasonable low quote, lower by 30% or more than estimate and also if the difference in price between L1 & L2 is 30% or more, then the quoted price to be analysed w.r.t tender requirement and if the L1 bidder fails to justify their quoted rate, the obtained L1 quote will be rejected and punitive action will be taken in line with the provision as per GRSE Vendor Policy.
- iii) If the justification is acceptable to GRSE, then the bidder has to submit Bank Guarantee of 10% of the total Contract value (inclusive of GST) in addition to the Security Deposit (SD) and Performance Bank Guarantee (PBG) (as applicable) for execution of the job till satisfactory completion of entire contract. There shall be no exemption / relaxation for the Guarantee against unreasonable quote. In case of breach of contract GRSE shall reserve the right to invoke the BG and may impose tender holiday for a period as per GRSE Vendor policy.

B. For Manpower Contract (श्रमशक्ति संविदा हेतु): NA

- i) The quoted price of the L1 bidder should comply with the prevailing Minimum Wages Act & Other Statutory requirements i.e PF, ESI etc.
- ii) In case the quoted price of the L1 bidder is found unreasonably low i.e does not comply with the Minimum Wages Act & Other Statutory requirements and the L1 bidder fails to justify their quoted rate then the obtained L1 quote will be rejected and punitive action will be taken in line with the provision as per GRSE Vendor Policy.

(16) JOINT VENTURE (संयुक्त ऊधम) :

The bids submitted by a joint-venture company of two or more firms/persons/entities as partners/promoters shall comply with the following requirements:

- i) The Joint Venture Agreement must be a registered document under the Indian Registration Act and must be an independent and registered entity under the Companies Act/Indian Partnership Act, having its own trade name and having separate CIN, PAN, GST and other Statutory Licenses/Registrations independent of its promoters/partners.
- ii) All partners/promoters of the joint venture shall be liable jointly and severally for the execution/performance of the project/contract and for all sorts of contractual obligations, responsibilities and liabilities and consequences arising out of breach of terms and conditions of contract.
- iii) A Certified/True copy of the Joint Venture Agreement shall have to be submitted with the bid along with the resolution of Board of Directors (in case of a company) or a Power of Attorney to be executed by all the Partners (in case of Partnership Firm) of JV entity authorizing such person who will sign on behalf of JV entity.



- iv) Submission of EMD/SDs/Performance Guarantee etc., to be made by the Joint Venture Company/Firm and similarly all payments would also be remitted to/in favour of the JV entity.
- v) In order for a joint venture to qualify/meet the minimum criteria as may be specified in the Tender, the experience and financial capability of each of its promoters/partners would be considered jointly to judge the experience and/or the financial capability of the JV entity as an independent entity. That is to say that the individual experience/qualification of each partner/promoter of the JV would be considered together for ascertaining the experience/qualification criteria of the JV. However, if any specific criteria/qualification is mentioned in the Tender that has to be met by each of the partners, then in such case each of the JV partner/promoters have to meet the same.
- vi) Neither the JV entity nor any of its partners/promoters should have been blacklisted, banned or debarred from issuing any Tender or suffering Tender Holiday from participating in any Tender process of Government of India or any of its Agencies or by any State Government or by an PSU (both Central & State included) or by any Court/Tribunal. If so, then the bid is liable to be rejected.
- vii) If selected, PO would be issued in favour of the JV.

(17) **CONSORTIUM (अल्पकालीन संघटन): Not applicable for this tender**

The bids submitted by a Consortium of two or more firms as partners shall comply with the following requirements:

- i) There must be a written Agreement for formation of the Consortium amongst its members which should *inter alia* include the role of each member, the ratio of investment and the ratio of profit/loss sharing. The terms of the Agreement cannot be modified post submission of the bid and during execution of Contract, if awarded, without the express consent of GRSE. The Consortium Agreement must record that as to which member would act as the Lead Member in the Contract/Tender. This authorization shall be evidenced by submitting with the bid a Power of Attorney authorizing such member to act on its behalf as Lead Member, signed by legally authorized signatories of all other partners/members.
- ii) Each partner firm/company of a Consortium must legally authorize its representative who will represent the partner firm/company to sign and execute the Consortium Agreement and all other necessary papers/documents required for the formation of Consortium and all other purpose relating to activities of Consortium.
- iii) The leader shall be authorized to incur liabilities and to receive instruction for and on behalf of any and all partners/members of the consortium and the entire execution of



the contract and all other related documents shall be done under the supervision and involvement of the lead member.

- iv) All partners of the consortium shall be liable jointly and severally for the execution of the project or contract without any limitation of liability. Any default or lapse on the part of any of the members of the Consortium regarding performance of the contract will be treated as default on the part of the Consortium as a whole and the Lead Member alone will be responsible for all consequential losses and damages that may be sustained by GRSE for such default or lapse on the part of a member.
- v) A Certified True copy of the Consortium contract/agreement entered into by and between the consortium partners and a certified True copy of the Power of Attorney, referred above, must be submitted with the bid and failure to submit any of such documents will make the bid of the Consortium liable to be rejected.
- vi). If Contract is awarded to the Consortium, an Agreement would be executed by and between GRSE and all the Consortium members wherein, inter alia, the role of each member and the mode of payments to be specifically defined and/or mentioned. However, all the consortium members shall remain, jointly and severally, responsible for execution and completion of the Contract and also to make good for all losses and damages if any sustained or to be sustained by GRSE in the subject contract due to default and/or negligence of the Consortium as a whole or of any of its members. Any statement or clause seeking to limit the liability of each member of the Consortium, such statement or clause to be treated as incompatible with the principle of joint and several liability and the bid of the Consortium will be liable to be rejected as not in compliance of tender specifications, without further evaluation.
- vii) In order to qualify/meet the qualification criteria, each of its partners/members or combination of partners/members must meet the minimum criteria set for the individual bidder. Failure to comply with this requirement will result in rejection of the Consortium's bid. The data/figures of each of the partners/members of the Consortium shall be added together in proportion to their participation in the Consortium, to determine the bidder's capacity as a whole to comply with the minimum criteria.
- viii) The percentage of partnership of the lead partner shall be highest among all the Consortium partners. Bid has to be submitted by the Lead Partner in its name however it should be clearly indicated that the lead partner is submitting such bid on behalf of a Consortium of which it is the Lead Partner.
- ix) The lead partner shall be responsible for payment of Bid Security/EMD as well as the Security Deposit & Performance Guarantee. However, the same has to be submitted by MSME/NSIC firms also if such firm acts as a Lead partner.
- x) All Payments to be made to the Lead Member pursuant to satisfactory execution of the job as specified in the Contract irrespective of the performance by all the members. Payments made to Lead partner of the Consortium would be construed as valid payment. Further the Consortium members agree not to entangle GRSE in any



internal dispute between the Consortium members regarding payment/non-payment or any other issue and accordingly waives their rights, if any in this regard.

- xi) None of the consortium partners/members should have been blacklisted, banned or debarred or issued any Tender holiday from participating in Government Contracts by either the Government of India or any of its Agencies or by any State Government or by an PSU (both Central & State included) or by the Courts/Tribunals. If so, then the bid is liable to be rejected.

Note: The Consortium Agreement & the PoA is to be submitted by the Consortium's Lead partner along with the Bid for examination by GRSE. If the Consortium Agreement or the PoA does not meet the criteria as specified in the clause then such bid would be liable to be rejected.

- (18) **MAINTENANCE OF MACHINES (यंत्रों का अनुरक्षण):** - The maintenance of machines brought in by contractors are to be undertaken as per OEM recommendations. Certificate to this effect is to be rendered by the contractor.

- (19) **SUB-CONTRACTING OF SUB-CONTRACTED JOB (उप संविदा कार्य का उप संविदा) :** -

- a) Sub-Contracting of the Sub-Contracted job is usually discouraged. When a contract is being finalised with a Vendor/ Contractor for execution of a particular job, the Contractor shall not sub-contract the job / a part of the job.
- b) However, in case of requirement, the job in part or full could be sub-contracted with an approval from GRSE and copy of the same has to be forwarded to Ordering Dept. & HR Dept. for their information.
- c) For sub-contracting of the sub-contracted job, the Vendor/Contractor has to submit the details of the sub-contractor to whom the job will be loaded including their name, credentials, document of past performance etc. for approval of GRSE Engineer In-Charge/ In-charge of User Dept./Project Leader / Project Superintendent /Head of Units.

- (20) **EXCESS/WASTE/REJECTED MATERIALS (अतिरिक्त/बेकार/ अस्वीकृत सामग्री) :** -

Removal of excess/waste/rejected materials etc. generated during execution of work should be arranged by the Contractor at their own cost immediately after completion of work each day and for non-removal of same by the Contractor, the expenditure incurred by GRSE (if any) in removing these materials will be recovered from the available dues of the Contractor.

- (21) **FIRE & SAFETY PRECAUTIONS अग्नि एवं संरक्षा सावधानियाँ :** - The Vendor/Contractor shall abide by the Safety regulations/rules of the GRSE as detailed in Fire & Safety Guidelines (please refer www.grse.in). The Vendor/Contractor should take all safety precautions and provide adequate supervision & control for their workmen in order to carry out the job



safely. In case of any violation of safety precaution and non-usage of safety equipment, Contractor shall be liable for a penalty which is detailed in Fire and Safety Guidelines (please refer www.grse.in). Penalty amount depends on the type and frequency of violation mentioned in the safety guideline and the same will be deducted from the defaulter's bill.

- (22) **SAFETY GUIDELINE FOR MATERIAL HANDLING EQUIPMENT (सामग्री चलन उपकरण हेतु मार्गदर्शन)**: The Vendor/Contractor shall abide by the Safety Guidelines /regulations of GRSE as detailed in NIT. The Vendor/Contractor should comply with all the Safety requirements like Statutory Examination and Certification of Crane & associated lifting tackles, Display of SWL, Competency requirement of Crane Operators, PUC etc. in order to carry out the job safely. In case of any violation GRSE will take appropriate action as per policy.
- (23) **MANDATORY USE OF ISI MARKED PPE BY CONTRACTOR EMPLOYEES (संविदा कर्मचारी द्वारा आई एस आई निशान पी पी ई व्यवहार की अनिवार्यता)**: The Contractor shall ensure the use of ISI marked PPE by their engaged Employees. An indicative list of ISI marked Personal Protective Equipment, is appended below for mandatory compliance by the vendors without any deviation:

LIST OF PPES (पी पी ई की सूची)

Sl. No.	Name of PPE	Standard
(a)	Safety Helmet	IS: 2925 / EN 397.
(b)	Safety Footwear	IS 15298 / EN ISO 20345
(c)	Safety Goggles	ANSI Z87.1 / EN166.
(d)	Ear Plug	IS: 9167/ EN 352
(e)	Hand Gloves	(i) IS 4770 for electrical work (ii) EN 420 for general requirement (iii) EN 388 for mechanical hazard (iv) IS:6994 / EN 407 for heat applications (gas cutting / welding).
(f)	Welding Fume Respirator & Dust mask	IS: 9473 / EN: 149
(g)	Double lanyard Safety Belt & harness, automatic fall arrestor	IS: 3521
(h)	Cotton Boiler Suit Cloth	IS: 177 - 1989 (Amended up to date), Variety 3

Note: Apart from the above-mentioned PPE, vendors may consider any other type of standardized PPE as per job requirement, in consultation with GRSE Safety Department.

- (24) **ENVIRONMENT MANAGEMENT AND OCCUPATIONAL HEALTH & SAFETY (पर्यावरण प्रबंधन एवं व्यावसायिकस्वास्थ्य सुरक्षा)**: - The vendor shall ensure compliance of Environment Management System (ISO14001:2014), Occupational Health & Safety (ISO



45001:2018) & Energy Management System (ISO 50001:2011) while carrying out their activity in the yard.

(25) **ENERGY CONSERVATION (ऊर्जा संरक्षण): -**

GRSE will provide power supply at free of cost for execution of job. The vendor should ensure that the power during execution of job shall be used in a very economic way to save energy as per Energy Management System of ISO 50001: 2011.

(26) **GUARANTEE FOR RAW MATERIAL(अनिर्मित सामग्री की गारंटी) :** This Clause will be applicable for Collection of Raw materials /Free Issue materials from GRSE for the jobs which are to be executed outside GRSE premises.

a) Raw materials will be required to collect from GRSE against submission of Bank Guarantee as per GRSE format for the equivalent value of material as specified in NIT/Purchase Order. Transportation of materials from GRSE to Sub-contractor's premises and transportation of finished materials from Sub-contractor's premises up to GRSE is the responsibility of the contractor or as specified in NIT.

b) Indemnity Bond affixing the Common Seal from the registered sub-contractors may be accepted in lieu of Bank Guarantee but it should be backed by Insurance Coverage with GRSE as the beneficiary on case to case basis. If the contractor is unable to take coverage, GRSE will cover such risk and cost of premium will be borne by the contractor/recovered from their dues.

c) Indemnity Bond has to be submitted as per GRSE Format on the non-judicial Stamp paper of value Rs. 100/- and to be Notarized if Common Seal is not applicable.

d) During collection of material, the Transporter of the Sub-Contractor has to submit L-R copy, failing which materials will not be issued to the Sub-Contractor.

e) For the jobs which are to be executed inside GRSE premises, submission of Bank Guarantee or Indemnity Bond for Collection Raw materials is not required.

(27) **MATERIAL RECONCILIATION STATEMENT (MRS) (सामग्री मिलान विवरण) :-**

(a) Firms are to furnish the material reconciliation statement (running MRS) to GRSE, for items supplied by GRSE for execution of a job at vendor's premises. Furnishing of MRS to be done immediately on delivery of the Finished item/Block but not later than 30 days of delivery of the finished item showing details of raw materials received, material actually consumed, excess material returned, wastage etc. This statement should be submitted with documentary evidence of material issued/returned/wastage duly accepted by competent authority of GRSE and as per the GRSE format and filled up check list for MRS. Permissible variation in MRS is 1.5% of design weight of structure. MRS certification is to be completed by GRSE within 60 days of receipt of the same from vendors.

(b) Quantity of stiffeners used in transportation are to be mentioned in delivery challan



clearly indicating whether the stiffeners are: -

- i) Temporary stiffeners supplied by vendor.
- ii) Sections of ABS quality supplied by GRSE.

(c) While submitting MRS of Finished item/Block, copies of certified MRS of all previous Finished items/Blocks are to be enclosed. This will be called the final MRS.

(28) **INSURANCE (बीमा):** - In case the sub-contracted job has to be executed at contractor's premises, the Insurance has to be taken by the contractor with appropriate value coverage for the underlying risks (the beneficiary would be GRSE by endorsement) e.g. Loss due to following:

- (i) Fire as per AIFT including EQ, STFI at Contractors premises.
- (ii) Burglary including theft during Storage at Contractors premises.
- (iii) Marine transit to and fro as per ITC(A) including SRCC (on the basis of agreed valuation between GRSE & contractors).
- (iv) Loading & unloading including TP liability at all fabricator's premises.
- (v) Loss due to infidelity of contractors whilst in storage.
- (vi) Spoilage of material by contractors by any accidental reasons whatsoever.

If the contractor is unable to take coverage, GRSE will cover such risk and cost of premium will be borne by the contractor/recovered from their dues.

For the jobs which are to be executed inside GRSE premises, Insurance coverage will not be the responsibility of contractor.

(29) **SITE-INCHARGE/ LOG BOOK/ HINDRANCE & OTHER RECORDS (कार्यस्थान प्रभार/कार्यपंजी/बाधा एवं अन्य रिकार्ड):** -

- a) One fully responsible and Qualified Site-in-charge has to be posted at the site during progress of work.
- b) Attendance Register, Wage Register etc. are to be maintained daily for the particular job on board and to be shown as and when required.
- c) Details of technical personnel deployed for the job.
- d) Monthly progress report.
- e) Log book for re-work/ modification.
- f) Details of materials brought by vendor along with copies of challan.
- g) Proper record of hindrances is to be maintained by the sub-contractor for the purpose of timely removal of the hindrance and is to be put up for approval by Project Leader/Site Engineer on weekly basis. A copy of the same would have to be enclosed while submitting any request for waiver of liquidated damages.
- h) Sufficient Supervisory Staff should be provided by the contractor during execution of work and in case of any accident/ damage to GRSE properties, full responsibility will be attributed to the contractor and loss incurred will be recovered from the contractor.



(30) **WORKING HOURS (कार्य समय) :**

The Contractor's normal working hours shall be in between 8 AM-5:06 PM from Monday to Friday & from 8:00 AM to 1:00 PM on Saturday. 1st & 3rd Saturday is Non-Duty Saturday. Work may also be required to be carried out in shifts (A, B & G shifts) as per GRSE's requirement. Also, work may be required to be carried out on Sunday/Holiday or beyond schedule working hours as per requirement of GRSE and the Contractor will have to arrange for same as per SOTR/NIT Terms.

(31) **RISK PURCHASE (जोखिम खरीद):**

In case the progress of work is not satisfactory and the contractor fails to maintain the schedule, GRSE reserves the right to get the work done by alternative source at the risk and cost of sub-contractor.

GRSE shall be at liberty to purchase/obtain the service from the alternative source as it deems fit, to make good such default and or in the event of the contract being terminated, the balance of the remaining service to be delivered there under. Any excess over the job price / service rates, paid and incurred by GRSE, as the case may be, over the contract price shall be recoverable from the firm. To make good the recoverable excess amount paid, GRSE shall be at liberty to invoke Bank Guarantee and/or with other available dues of the firm.

(32) **INDIVIDUALITY OF THE CONTRACT (संविदा की वैयक्तिकता):**

This Contract should be treated as an individual contract and should not be related with other orders with GRSE in respect of progress of work or payment.

(33) **SECURITY OF INFORMATION (सूचना की गोपनियता): -**

All documents and drawings of this project are of confidential in nature and should be used explicitly for the purpose for which they are provided. Drawings should not be copied and should be returned to GRSE on completion of work.

No information in respect of contracts/orders shall be released to the national or international media or any one not directly involved its execution without the express written approval of the Integrated Headquarters, MOD (NAVY). In the event of any breach of above provisions, the vendor would have to make good of any loss/ cost/ damage/ any other claim whatsoever preferred by anybody to GRSE in this respect.

Non-Disclosure Agreement (NDA) as specified in the NIT has to be submitted as per GRSE Format.

(34) **REGISTRATION OF NEW VENDOR (नए बिक्रेता का पंजीकरण):**

The contractor has to confirm if they are registered with GRSE and Indicate Vendor Code (5 digits) and Product Code group accordingly in their offer. If the contractor is not registered with GRSE, then documents required for provisional vendor registration has to be submitted to the Ordering Department. For Permanent Vendor Registration with GRSE, the contractor has to submit their application to GRSE Vendor Development Cell.



(35) **CONTRACT WORKMAN WAGE PAYMENT (संविदा कामगार का मजदूरी भुगतान): -**

Payment of wages to the contractor's employee/workmen should be made through individual bank account on monthly basis instead of cash payment. PF-UAN activation of all the contractor's employee/workmen is mandatory.

(36) **INSPECTION (निरीक्षण): -**

- (i) Quality assurance authority: As per NIT/SOTR.
- (ii) Inspection to be carried out stage wise by Quality Assurance Authority. On completion of work for any stage, vendor has to submit Inspection Offer to GRSE (Inspection Agency) for stage inspection. GRSE (Inspection Agency) shall co-ordinate with the Outside Inspection Authorities (as applicable) for carrying out inspection of completed job.
- (iii) GRSE reserve the right to inspect all operations to be carried out by the contractor. Free access to the work site at all the time shall be ensured by contractor. The presence or absence of GRSE representative does not relieve contractor of the responsibility for quality control. The contractor shall provide all assistance for carrying out inspection of completed work.
- (iv) Repeat inspection for any particular job is to be discouraged as far as possible. Hence the vendor should complete the job in all respect prior to submission of Inspection Offer to avoid reoffering. In case of repeat inspection happens for more than two occasions then the additional cost implication incurred by GRSE will be deducted from the bills of the vendor at actual. Number of occasions of repeat inspection for any particular job is to be indicated by GRSE in inspection note and same is to be incorporated in the work done certificate for deduction of additional cost implication for repeat inspection. Cost of deduction shall be calculated by Executing Dept., GRSE with the help of Finance Dept., GRSE.

(37) **CORRECTION OF ERRORS (त्रुटि सुधार):**

Bids determined to be responsive will be checked by GRSE for any arithmetic error. Errors will be corrected by GRSE as follows:

(i) For Manual Tendering: - NA

- a) Where there is a discrepancy between the rates in figures and in words, the rates in words will govern.
- b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.

(ii) For Tendering through NIC Portal: - NA

Where there is a discrepancy between the rates in html format and the attachment to price bid (if applicable), the rates in attachment to price bid will govern. In attachment to Price bid; if any discrepancy found between the unit rate and the line item total



resulting from multiplying the unit rate by the quantity, the unit rate as quoted will be considered.

(iii) For Tendering through GeM Portal: -

Where there is a discrepancy between the total price quoted in GeM Portal and the attachment (i.e break up of quoted price in line with BOQ) to price offer, the total price quoted in GeM portal will govern. In attachment to the Price offer, if any discrepancy found between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will be considered.

(38) **FORCE MAJEURE (अप्रत्याशित घटना)** :

In the event of contractor being unable to fulfil the obligation under the agreement owing to force majeure, such as War, Fire, Earthquake, Flood, Strike/ Lockout at GRSE premises where the contractor is working, the party affected shall not be held responsible for any failure or non-performance of the duties and obligations under the agreement, provided that all responsible efforts have been made to overcome the consequences of such failure, or non-performance. The time for performances of the contractual obligation shall then be extended by period not more than the duration of such events.

In the event of Force Majeure condition existing at contractor's site in GRSE Premises or CPT areas for GRSE work, GRSE is to be intimated with details of such happenings and cessations thereof, within 3 days. Force Majeure is to be limited to contractor's site in GRSE/CPT premises for GRSE's work only. Lock out/ Closure of contractor's factory premises or office or any other place outside GRSE/CPT/GRSE nominated place as indicated above cannot be considered as a Force Majeure condition under this contract.

(39) **TERMINATION OF CONTRACT (अनुबंध की समाप्ती)**: In the event of non-performance or non-engagement of manpower for the execution of the job within the notice period, GRSE reserves the right to cancel the order in part or in full, and no compensation whatsoever will be entertained.

(40) **DAMAGE OF MATERIALS / EQUIPMENTS (सामग्री/उपकरण की छती)**: The contractor will ensure that no damage is caused to the materials, equipment or any other property of GRSE due to negligence and / or any reason whatsoever by the contractor's personnel. The cost of such damage will be suitably recovered from contractor's bills.

(41) **OFFICE & STORAGE SPACE (कार्यालय एवं भंडारण स्थान)**: The contractor will have to arrange their office & storage required for execution of job, for cumulative order value of Rs.75 lakhs and above, of their own. However, space for placing up to one container will be provided free of cost by GRSE. Container will have to be removed by the contractor within 03 months from the date of final settlement with GRSE. In case of non-removal of container within specified period penalty as deemed fit will be imposed for the occupied area of GRSE.

(42) **ARBITRATION (मध्यस्थता)**: -



- i. If at any time, before during or after the contract period, any unsettled claim, question, dispute or difference arises between the parties, upon or in relation to or in connection with or in any way touching or concerning this order, the same shall be settled/adjudicated through Arbitration to be conducted by a Sole Arbitrator, to be appointed by the parties on mutual consent, in accordance with the provisions of the Arbitration and Conciliation Act, 1996.
 - ii. In the event the parties fail to mutually appoint a Sole Arbitrator within 30 days from the receipt of a request by one party from the other, then either of the parties may approach the Hon'ble High Court at Calcutta under the provisions of the Arbitration and Conciliation Act, 1996 for appointment of a Sole Arbitrator by the Hon'ble Court.
 - iii. Such arbitration shall, in all respects, be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the rules framed there under or any statutory modification or re-enactment thereof for the time being in force.
 - iv. The Award of the Sole Arbitrator shall be final, conclusive and binding upon the Parties.
 - v. In the event of the death or resignation or incapacity or whatsoever of the said Sole Arbitrator if appointed by the parties mutually the said parties may again appoint a suitable Substitute Arbitrator in place of the erstwhile Sole Arbitrator to continue with the proceedings. In the event of appointment of the Sole Arbitrator by the Hon'ble High court at Calcutta on death or resignation or incapacity or whatsoever of the said Sole Arbitrator, either of the parties in this behalf, may make an application to the Hon'ble High court at Calcutta for appointment of a Substitute Arbitrator and the Hon'ble Court may pass such orders as it deems fit and proper.
 - vi. Also, in the event an Arbitration award is set aside by a competent court the parties may appoint a Sole Arbitrator mutually or on failing to appoint a Sole Arbitrator mutually within the statutory period then either of the parties may file an application before the Hon'ble High Court at Calcutta under the provisions of the Arbitration and Conciliation Act, 1996 for appointment of a Sole Arbitrator by the Hon'ble Court in accordance with the provisions of the Arbitration & Conciliation Act.
 - vii. The cost of the arbitration, fees of the arbitrator, remuneration of the stenographer and clerk, stamp paper etc. shall be shared equally by the parties, unless otherwise directed by the Sole Arbitrator. The venue of arbitration shall be at Kolkata and unless otherwise decided by the parties or by the Sole Arbitrator himself, the venue shall be the premises of Garden Reach Shipbuilders & Engineers Ltd. located at 43/46, Garden Reach Road, Kolkata 700 024.
 - viii. The language of the proceeding shall be in English.
- (43) **JURISDICTION (न्याय अधिकार):** Litigation, if any, pertaining to this contract will come under the jurisdiction of High Court at Kolkata.



- i) All contracts shall be deemed to have been wholly made in Kolkata and all claims there under are payable in Kolkata City and it is the distinct condition of the order that no suit or action for the purpose of enforcing any claim in respect of the order shall be instituted in any Court other than that situated in Kolkata City, West Bengal State, India.
 - ii) The Firm is warranted that all service rendered by them shall conform to applicable city, states & central laws, ordinances and regulations and the said Firm shall indemnify / defend / relieve GRSE harmless, from / of against loss, cost of damage, by reason or any actual or alleged violation thereof.
 - iii) GRSE shall not be liable under the workmen's compensation Act of 1923; in case any employee or workmen receives injury while actually serving his employer in connection with the latter's work inside the compound of GRSE Ltd.
 - iv) All existing applicable Laws such as ESI, PF, SERVICE, CONTRACT LABOUR, CHILD LABOUR etc. as applicable, shall be binding for the contract.
1. For any discrepancy between SOTR/NIT (Notice Inviting Tender) and STAC, SOTR/NIT statement may be taken as final.
 2. Clarification required, if any, regarding Tender Document, should be got resolved by contacting competent authority of GRSE prior to submission of bid.

INTEGRITY PACT

Between

M/s Garden Reach Shipbuilders & Engineers Limited (GRSE) hereinafter referred to as "The Principal" and hereinafter referred to as "the Bidder/Contractor"

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for "Name of the job: --- -----". The principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness /transparency in its relations with its Bidder(s)/ or Contractors(s).

In order to achieve these goals, the principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principals mentioned above.

Section 1- Commitments of the principal

[1] The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

a. No employee of the principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept for self or third person, any material or immaterial benefit which the person is not legally entitled to.

b. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The principal will in particular, before and during the tender process, provided to all Bidder(s) the same information and will not provide to any Bidder(s) confidential /additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contact execution.

c. The principal will exclude from the process all known prejudiced persons.

[2] If the principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2- Commitments of the Bidder(s)/Contractor(s)

[1] The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

a. The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the principal's employees involved in the tender process or the execution of the contract or to any third

person any material or other benefit which he/she is not legally entitled to in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act, further the Bidder(s)/Contractor(s) will not use improperly, for purpose of competition or personal gain, or pass on to others, any information or document provided by the principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s) / Contractor(s) of Indian Nationality shall furnish the name and address of the foreign particulars, if any. Further details as mentioned in the "Guidelines on Indian agents of Foreign suppliers" shall be disclosed by the Bidder(s)/Contractor(s). Further as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only, copy of the "Guidelines on Indian agent of foreign supplier" is annexed and marked as annex.

e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

[2] The Bidders(s)/ Contractor(s) will not instigate third persons to commit offences, outline above or be an accessory to such offence.

Section 3- Disqualification from tender process and exclusion from future contracts.

If the Bidder(s)/Contractor(s) before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the extant procedure of the company.

Section 4- Compensation for Damages.

1) If the principal has disqualified the Bidder(s) from the tender process prior to the award according to section 3, the principal is entitled to demand and recover the damages equivalent to earnest Money deposit/Bid security.

2) If the Principal has terminated the contract according to section 3, or if the principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee.

Section 5- Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

2) If the Bidder makes incorrect statement on this subject he can be disqualified from the tender process or action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealing"

Section 6- Equal treatment of all Bidders/Contractors/Sub-contractors.

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all sub-contractors a

- commitment in conformity with this integrity pact, and to submit it to the principal before contract signing.
- 2) The principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Sub-Contractors.
 - 3) The Principal will disqualify from the tender process all bidders who do not sign this pact or violates its provisions.

Section 7- Criminal charges against violating Bidder(s) Contractor(s)/Sub-Contractor(s)

If the principal obtains knowledge of conduct of a Bidder, contractor or subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Sub contractor which constitutes corruption, or if the principal has substantive suspicion in this regard, the principal will inform the same to the Chief Vigilance Officer.

Section 8- Independent External Monitor/Monitors

- 1) The Principal appoints competent and credible Independent External Monitor for this pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 2) The Monitor is not subject to instructions by the representative of the parties and perform his functions neutrally and independently. He reports to the Chairman GRSE.
- 3) The Bidder(s)/Contractor (s) accepts that the Monitor has the right to access without restriction to all project documentation of the principal including that provided by the contractor. The contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) /Subcontractor(s) with confidentiality.
- 4) The Principal will provide to the Monitor sufficient information about all meeting among the parties related to the project provided such meetings could have an impact on the contractual relations between the principal and the contractor, The parties offer to the Monitor the option to participate in such meetings.
- 5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the management of the principal and request the management to discontinue or take corrective action, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 6) The Monitor will submit a written report to the Chairman, GRSE within 8 to 10 weeks from the date of reference or intimation to him by the principal and should the occasion arise, submit proposals for correcting problematic situations.
- 7) Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors on the GRSE Board.
- 8) If the Monitor has reported to the Chairman GRSE a substantiated suspicion of an offence under relevant IPC/PC act, and the Chairman GRSE has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- 9) The word `Monitor' would include both Singular and plural.

Section 9- Pact Duration:

This pact begins, when both parties have legally signed it. It expires for the contractor 18 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairman of GRSE.

Section 10- Other provisions:

- 1) This agreement is subject to Indian Law, place of performance and jurisdiction is the Registered Office of the principal i.e. Kolkata.
- 2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & On behalf of the principal)

(For & On behalf of the Bidder/Contractor)
(name, designation & official seal)

Place

Place.....

Date

Date

Witness 1

(Signature)

(Name & Address)

Witness 2

(Signature)

(Name & Address)

CHECK LIST OF STATUTORY RESPONSIBILITY OF CONTRACTOR
THE CONTRACT LABOUR (R& A), ACT, 1970 AND CENTRAL RULES, 1971

SL. NO.	NATURE OF STATUTORY REQUIREMENTS	FORM NO.	RESPONSIBILITY	REMARKS
01	Labour License	Form –II	Contractor	Contractors engaging 20 or more contract labours would apply for obtaining labour license (in triplicate) to the ALC (C), Kolkata. A copy of the license should be submitted to concerned Unit HR Department. <i>Note:</i> The Contractor cannot deploy more than the number of workmen mentioned in the license on any day.
02	Renewal of labour license	Form –II	Contractor	The contractor shall apply to the ALC(C), Kolkata for renewal of license at least 30 days prior to its expiry. A copy of the acknowledgement / renewed license should be submitted to concerned Unit HR Department.
03	Notice for commencement / completion of work	Form-VII	Contractor / Principal Employer	The contractor shall submit Form – VII to the Inspector / Labour Enforcement Officer (C), Kolkata within 15 days intimating the actual date of commencement / completion of the work. The receipted copy of Form – VII should be submitted to concerned Unit HR Department.
MAINTENANCE OF REGISTERS				
04	Employee Register	FORM – A	Contractor	Comprising of personal details like name, father's name, DOB, Address etc. of the workmen engaged by the contractor.
05	Wages Payment Register	FORM – B	Contractor	Comprising of current rate of minimum wages, employees PF & ESI contribution and other allowances, if any.
06	Register of Loan / Recoveries / Fines etc.	FORM – C	Contractor	To maintain record of loans, fines and advances given, if any and monthly record of recoveries.
07	Attendance Registers	FORM – D	Contractor	Data of daily attendance of each workmen engaged by the contractor indicating their in and out time.

SL. NO.	NATURE OF STATUTORY REQUIREMENTS	FORM NO.	RESPONSIBILITY	REMARKS
08	Employment Card	Form – XII	Contractor	Every contractor shall issue employment card / appointment letter to their contract workers within 03 days from their date of employment.
09	Service Certificate	Form – VIII	Contractor	To be issued by the contractor upon termination of employment / completion of work etc.
10	Wage-slip	Form – XIX	Contractor	Contractors shall issue wage-slip to their workmen at least 01 day prior to disbursement of wages.
11	Annual Return	Online Submission	Contractor	Every Contractors shall prepare Annual Return for the previous year which is submitted online by the Contractors' in <i>Shram Suvidha</i> Portal to the Registering Officer within 31st Jan of the following year.

CHECK LIST OF STATUTORY RESPONSIBILITY OF CONTRACTOR
COMPLIANCE OF OTHER STATUES FOR ENGAGEMENT OF CONTRACTORS' WORKMEN

Sl. No.	Relevant Statues	Responsibility	Compliances to be ensured as per the Statute
01	The Factories Act, 1948 & West Bengal Factories Rules, 1958	Contractor	<p>1. <u>Leave with Wages</u>: Every worker who has worked for a period of 240 days or more is entitled to get leave with wages to be calculated one day for every 20 days of work performed by him.</p> <p>2. <u>Payment of Overtime</u>: Where a worker has worked for more than 09 hours in any day or for more than 48 hours in a week, he shall, in respect of overtime work, be entitled to wages twice the hourly rate.</p> <p>3. <u>Hours of Work</u>: The total nos. of hours of work in a week, including overtime, shall not exceed sixty.</p> <p>4. <u>Hours of Overtime</u>: The total hours of overtime shall not exceed fifty in any quarter i.e. during three consecutive months for any worker.</p>
02	Payment of Wages Act, 1936	Contractor	Contractors (employer) engaging less than 1,000 persons have to pay wages before expiry of the 7th day after the last day of wage period.
03	The Minimum Wages Act, 1948	Contractor	Contractors (employer) shall pay minimum wages to every worker as per the Central rates circulated by the Management from time to time.
04	The EPF & MP Act, 1952	Contractor	<p>1. Every contractor shall obtain the following before commencement of work:</p> <p>(a) PF Code No. of the firm.</p> <p>(b) PF UAN i.r.o of the workmen engaged by him.</p> <p>(c) Ensure submission of nominee and dependent details while applying for UAN of workmen.</p>
		Contractor	<p>2. Every contractor shall contribute towards PF @ 12% of the monthly wages of each workman as employer's share and recover 12% of monthly wages from each employee, as employees share and thereafter remit the entire amount to EPFO i.r.o every workman engaged by him. The contribution for the preceding month should be remitted prior to expiry of the 15th day of the following month. Contractors (Employers) are also required to bear the administrative charges as applicable.</p>

Sl. No.	Relevant Statues	Responsibility	Compliances to be ensured as per the Statute
05	The ESI Act, 1948	Contractor	1. Every contractor shall obtain the following: a) ESI Code No. of the firm (b) ESI code no. i.r.o of the workmen engaged by him (c) Ensure submission of nominee and dependent details while applying for ESI TIC (E-Pehchan Card).
		Contractor	2. Every contractor shall remit ESI contribution (employers' share @ 3.25% and employees' share @ 0.75%) i.r.o every workman engaged by him for the preceding month prior to expiry of the 15th day of the following month.
06	The Payment of Bonus Act 1965 & Rules	Contractor	1. Contractors shall pay annual bonus to their workmen (Contract Labour) drawing wages below and upto Rs. 21,000/- per month. Bonus will be payable minimum @ 8.33% and maximum @ 20% of annual wages.
		Contractor	2. Register in Form - C format {Rule 4(b)} of 'The Payment of Bonus Act, 1965' is to be maintained by the contractor for submission of Annual Return as per the Act.

**RESPONSIBILITIES OF CONTRACTORS OVER AND
ABOVE THE STATUTORY REQUIREMENTS**

- (i) Contractors shall take all necessary steps for disbursement of wages through bank-transfer and issue a payment notice at least 02 days prior to such bank-transfer for information of respective unit HR Dept. as well his workers. (should be incorporated in the contract document in the Payment Terms).
- (ii) All contractors should obtain labour-licenses prior to commencement of work. Principal Employer shall not allow any contractor without license.
- (iii) All outsourced jobs are required to be supervised by a Supervisor duly appointed by the Contractor. The contractor should declare the name and contact number of the supervisor(s) against each P.O before commencement of work and submit the details of the supervisor(s) to the respective unit HR Department. He should keep adequate nos. of supervisors to supervise and co-ordinate the execution of job by contract labours. (The principal employer must check that the name and number of the supervisor which has been provided by the contractor, whether the same person is coming as the said supervisor).
- (iv) The supervisor's name should not be mentioned in the employee register as he is not a contract labour.
- (v) Supervisor of concerned contractor should be present in the work-site where the contract labours of the concerned contractor are supposed to work. To ensure the presence of the supervisor, their attendance may be recorded by the user department on daily basis.
- (vi) Contractor should mention the name of his Supervisor / agent / manager in Form-II which is to be submitted to ALC (C) for obtaining labour license.
- (vii) The supervisor should maintain the attendance register of their contract labours (Form-D) which may be randomly checked by the Officers of the user department. This attendance register will be submitted by the contractors on monthly basis along with the wages-payment registers to the respective unit HR Depts. for obtaining certification of payment of wages to each contractor labour based on their daily / monthly attendances.
- (viii) Contractors must submit details of their firms in the Appendix B1 format prior to commencement of work. They must also submit details of their contract labours in B2 formats for making new gate-passes for the purpose of entry / exit prior to the engagement of such contract labour.

CHECK LIST FOR BILL SUBMISSION - for Service Contracts**A. GENERAL PARTICULARS: (to be checked and submitted by Contractor/Vendor)**

- A.1 BTN (as per BTS System):-
 A.2 Invoice No and date / E-Invoice No. & Date
 (if applicable for the vendor) (Original & in triplicate)
 A.3 PO Number
 A.4 Name of Vendor
 A.5 Location of work: MW / RBD/ FOJ/ TU / 61Park/Vendor's premises

I. For RA Bill (Running/Progressive bill) (Put √ Mark)		YES	NO	NA
A.6	PO Number and date verified with Invoice:			
A.7	Vendor Name & Address in Invoice verified with Purchase Order:			
A.8	Vendor Code as in PO verified with Invoice:			
A.9	Original certified WDC enclosed :			
A.10	Whether WDC is Certified by the Authorized Person as per PO / SOTR with Rubber Stamp			
A.12	HSN/SAC code is as per PO			
A.13	GSTIN No. is as per PO			
A.14	GST % is as per PO			
A.15	Security Deposit (SD) submitted as per PO			
A.16	PBG of equivalent amount submitted, as per PO			
A.17	Compliance of Statutory Liabilities of labour as per PO			
II. Applicable for Final/Balance Bill (Put √ Mark)				
A.20	Certified Job Completion Certificate (JCC) enclosed			
A.21	MRS as per PO terms enclosed (If applicable)			
A.22	Guarantee Period (GP) expired as per PO term			
A.23	PBG of equivalent amount submitted, if GP is not over (If Yes, copy to enclose with the bill)			

 Signature of Vendor's representative
 with Seal/Stamp

For GRSE Use Only

B.	To be checked and verified by Bill certifying authority (Put √ Mark)	YES	NO	NA
B.1	Whether Bill has been forwarded through BTS			
B.2	Whether WDC is Certified by the Authorized Person as per PO / SOTR with Rubber Stamp			
B.3	Job starting & Completion Date (Schedule & Actual) indicated in WDC			
B.4	Certification of Penalty/ Recovery from bill indicated in WDC, if applicable			
B.5	Whether Bill is Certified by the Authorized Person as per PO / SOTR with Rubber Stamp			
B.6	Certification of Penalty/ Recovery from bill as per WDC, if applicable			
B.7	Service Entry Sheet (SES)/GR in line with WDC, PO & Invoice			
For Final/Balance Bill (Put √ Mark)				
B.8	Certified MRS copy as per PO terms enclosed (If applicable)			
B.9	Guarantee Period (GP) expired as per PO term and JCC			
B.10	PBG copy of equivalent amount till GP validity enclosed (if GP is not over)			

 Signature of GRSE Bill Certifying Authority
 with Designation

CONFIRMATION BY BIDDER and CHECKLIST FOR BID SUBMISSION

(To be filled by the Bidder)

Annexure 6

NIT SLA No:

Description: CONDUCT OF SHORT REFIT OF SCG ZOROASTER (WORK PACKAGE-II)

ATTRIBUTES	Particulars (to be filled by the Bidder and submitted with Technical bid with sign and stamp)
Bidder's/Firm's Name	
Firm's Address	
Contact Person with Designation	
Contact details (Mob No. , e-mail ID)	
Proprietorship/Partnership/Pvt. Ltd./PSU/ Public Ltd. / (as applicable for the Bidder)	
Vendor registration no. with GRSE (if any)	
PAN no.	
GST no. with Annexure-A &B	
Company Registration certification /trade licence/Memorandum/ others as applicable	
Registered Office or Branch Office address in Kolkata	
INTEGRITY PACT (as per Annexure 3)	
MSE Udyam (Micro / Small) , NSIC if any	
PF Registration no.	
ESI Registration no.	
Average Annual Turnover of last 3 F.Y. ending on 31.03.2022/31.03.2023	FY 2019-20 - Rs. _____ FY 2020-21 - Rs. _____ FY 2021-22 - Rs. _____ FY 2022-23 - Rs. _____ Average of 03 years : Rs. _____

Note: All above documents to be submitted with Technical (Part-I) bid.