

INVITATION TO BID

ARMD/2023/07 - TECHNICAL, MAINTENANCE AND REPAIR SERVICES FOR THE SUBMARINE PLATFORMS AT ARMSCOR DOCKYARD IN SIMONS TOWN

TABLE OF CONTENTS

KD17:	12 Pages
Annexure/Appendix:	
KD18:	2 Pages
KD21:	1 Page
KD22:	2 Pages
KD24:	4 Pages
KD25:	1 Page
KD26:	2 Pages
KD27	5 Pages
Annexure 1 to KD 24	1 Page
Annexure 2 to KD24	1 Page
Annexure 1 to KD 25	2 Pages

PROPRIETARY INFORMATION

- Bid documents may **ONLY** be obtained from the Armscor Supply Chain Management Department.
- Bid documents obtained from Armscor may **NOT** be given to a third party.
- Bid proposals received from companies whose bid documents were **NOT** obtained from Armscor will **NOT** be considered.

Bids must ONLY be submitted in hard copy; electronic bids submissions are NOT acceptable.

Kindly register on the National Treasury's Central Supplier Database (CSD) via www.csd.gov.za

RETURNABLE DOCUMENTS CHECKLIST

Bidders are required to develop a returnable schedule annexure in accordance with the following table of contents

	List of documents required.	Submitted [Yes or No]	
		Yes	No
1.	Central Supplier database (CSD) registration report or Unique Registration Reference Number	Yes ☐	No ☐
2.	Valid Tax Clearance Certificate (s) and or proof of application endorsed by SARS and / or SARS issued verification pin code.	Yes ☐	No ☐
3.	Copies of bidders CIPC Company registration documents listing all members with percentage, See bidding structure for required documents.	Yes ☐	No ☐
4.	Copy of the Joint Venture / Consortium Agreement duly signed by all parties	Yes ☐	No ☐
5.	Copy of the Sub-Contracting Agreement duly signed by all parties	Yes ☐	No ☐
6.	Valid proof of BBEE status for the bidder and its sub-contractor(s)	Yes ☐	No ☐
7.	Designated sectors: Local production and content. (Where applicable)	Yes ☐	No ☐
8.	Originally certified copy of Identity Document for the Company representative	Yes ☐	No ☐
9.	Copy of latest audited financial statements	Yes ☐	No ☐
10.	Bid conditions acceptance form on KD17 (Mandatory)	Yes ☐	No ☐

**ARMAMENTS CORPORATION OF SOUTH AFRICA SOC LTD
(ARMSCOR)**

Company registration: 1968/008611/06 Vat registration: 4500101169

**REQUEST FOR BID: ARMD/2023/07 - TECHNICAL, MAINTENANCE AND
REPAIR SERVICES FOR THE SUBMARINE PLATFORMS AT ARMSCOR
DOCKYARD IN SIMONS TOWN**

1. INSTRUCTIONS ON SUBMISSION OF BIDS

- 1.1 Bid Closing at **11:00 am** on **12/06/2023 (SOUTH AFRICAN TIME)**
- 1.2 Bids must be submitted in a sealed envelope marked with this bid reference number.
- 1.3 The sealed envelope must be deposited in the bid box at Armscor Dockyard, Cole Point Security gate, Simon's Town before the bid closing date and time addressed to:

The Divisional Manager Procurement & Logistics
Armscor Dockyard

Postal address: Armscor Dockyard
Private Bag X3
Simon's Town, 7995

Delivery address: Armscor Dockyard Tender Box
Dockyard Security Entrance
Cole Point Road
Simon's Town

- 1.4 Bids dispatched by the courier service Company must be marked with bid reference number on the delivery note / packaging and the courier must ensure that the bid document is deposited in the bid box before the closing date and time. **Armscor will not be held responsible for any delays where bid documents are handed to the Armscor Dockyard Reception.**
- 1.5 Bid proposals received after the closing time and date will not be considered.

2. ENQUIRIES

- 2.1 All queries regarding this bid must be addressed in writing to:
The Procurement & Logistics Division
E-mail Address: **BambananiT@armscordy.co.za**

3. BID VALIDITY PERIOD

Bid proposals to remain valid for acceptance for a period of **hundred and twenty (120)** days counted from the closing date.

NOTE: Bids for the supply of the goods and/or services described in the attached documents are invited in accordance with the provisions of the General Conditions of Contract (A-STD-0020) Issue 5 dated 22 June 2022 , as well as any special condition contained in these documents. Copies of the General Conditions of Contract and the Rules of Procedure are available on Armscor's website at www.armscor.co.za.

BID AWARD RESULTS:

Result on bid awarding information is not sent to unsuccessful bidders.

Particulars of successful bidders are also NOT published on the Armscor Acquisition Bulletin.

BIDDING STRUCTURE

Indicate the type of bidding structure by marking with an 'X' in an appropriate box.	
Individual Bidder	
Joint Venture	
Consortium	
Using Sub-contractors	
Other	

Only fill the relevant category:

If individual bidder, indicate the following:	
Name of Bidder	
Company / Close Corporation Registration Number	
VAT Registration Number	
National Treasury Supplier Number	
Unique Registration Reference Number	
Contact Person	
Telephone Number	
Fax Number	
Email Address	
Postal Address	
Physical Address	
NB: Submit with the bid the following documents:	
Copies of the bidder's CIPC company registration documents listing all members with percentages, in case of a CC.	
In case of individual supply ID document for local and if foreigner supply passport number or identification as applicable in that country.	
Latest copies of all share certificates, in case of a company or any other form of a legal entity.	
Shareholding breakdown per race, gender and percentage shareholding with shareholders of the bidding entity.	

If Joint Venture or Consortium, indicate the following: (To be completed for each JV/Consortium member)

Name of Joint Venture / Consortium	
Company / Close Corporation Registration Number	
VAT Registration Number	
National Treasury Supplier Number	
Unique Registration Reference Number	
Contact Person	
Telephone Number	
Fax Number	
Email Address	
Postal Address	
Physical Address	

NB: Submit with the bid the following documents:

Copies of the bidder's CIPC company registration documents listing all members with percentages, in case of a CC.

In case of individual supply ID document for local and if foreigner supply passport number or identification as applicable in that country.

Latest copies of all share certificates, in case of a company or any other form of a legal entity.

Shareholding breakdown per race, gender and percentage shareholding with shareholders of the bidding entity.

If using subcontractors, indicate the following:	
Name of Prime -Contractor	
Percentage Value to be subcontracted	
Company / Close Corporation Registration Number	
VAT Registration Number	
National Treasury Supplier Number	
Unique Registration Reference Number	
Contact Person	
Telephone Number	
Fax Number	
Email Address	
Postal Address	
Physical Address	
Subcontractor Details:	
Name of Subcontractor	
Company / Close Corporation Registration Number	
VAT Registration Number	
National Treasury Supplier Number	
Unique Registration Reference Number	
Contact Person	
Telephone Number	
Fax Number	
Email Address	
Postal Address	
Physical Address	
NB: Submit with the bid the following documents for both Prime and Sub-Contractors:	
Copies of the bidder's CIPC company registration documents listing all members with percentages, in case of a CC.	
In case of individual supply ID document for local and if foreigner supply passport number or identification as applicable in that country.	
Latest copies of all share certificates, in case of a company or any other form of a legal entity.	
Shareholding breakdown per race, gender and percentage shareholding with shareholders of the bidding entity.	

Other:	
Name of Bidder	
Company / Close Corporation Registration Number	
VAT Registration Number	
National Treasury Supplier Number	
Unique Registration Reference Number	
Contact Person	
Telephone Number	
Fax Number	
Email Address	
Postal Address	
Physical Address	
NB: Submit with the bid the following documents:	
Copies of the bidder's CIPC company registration documents listing all members with percentages, in case of a CC.	
In case of individual supply ID document for local and if foreigner supply passport number or identification as applicable in that country.	
Latest copies of all share certificates, in case of a company or any other form of a legal entity.	
Shareholding breakdown per race, gender and percentage shareholding with shareholders of the bidding entity.	

Declaration:

I, as the duly authorized representative of the bidder hereby authorize Armscor to request, investigate and process company information including tax compliance via the SARS website.

.....
Name

.....
ID number

BID CONDITIONS ACCEPTANCE FORM

Bidders shall complete and sign this bid conditions acceptance form

I/We hereby offer to supply all of the supplies and/or services described in the Pricing Schedule and /or attached documents on the terms and conditions and in accordance with the conditions set out in A-STD-0020 Issue 5 dated 22 June 2022 (and I/we acknowledge that I/we am/are acquainted therewith) at the price and on the terms of delivery/execution inserted by me/us.

I/We agree -

1. that this bid shall remain binding on me/us and open for acceptance for the period stipulated above;
2. that if my/our bids is accepted, the acceptance will be communicated to me/us by letter or order through the post, and such acceptance shall constitute a contract between me/us and Armscor, subject to the terms and conditions set out in Armscor's General Conditions of Contract (A-STD-0020), Issue 5 dated 22 July 2022, the contents of which I/we acknowledge ourselves to be acquainted with.

I/We choose as domicilium citandi et executandi in the Republic

.....
.....
(no post box or private bag)

IN BLOCK LETTERS ON BEHALF OF -

Complete registered:

Name of bidder:

AUTHORISED SIGNATURE

..... Date:

Name in block letters:

Capacity:

NB: FAILURE TO COMPLETE AND SIGN THIS PAGE SHALL INVALIDATE THE BID AND WILL BE DISQUALIFIED FROM FURTHER EVALUATION.

SUPPLIER REGISTRATION

- 1.1 Bidders must register on the National Treasury Central Supplier Database (CSD) in terms of National Treasury Instruction Note 3 of 2016/17.
- 1.2 Bidders must electronically register for Security on Armscor website to be considered for orders which are administered by Armscor SOC Ltd on Behalf of clients.

For more information on security registration contact:-

The Security Registration
Private Bag X337
PRETORIA
0001

E-mail:- register@armscor.co.za

ALL BIDDERS SHALL COMPLY WITH THE FOLLOWING:

1. The pages of the KD17 document are numbered from one, and the final page bears the words "and last". Bidders should check the numbers of the pages as no liability arising from claims owing to the omission or duplication of pages will be recognised by Armscor. The appendices mentioned in these pages form part of the bids.
2. **All bidders shall -**
 - 2.1. insert their name at the top of each price schedule form used (a rubber stamp may be used);
 - 2.2. insert the information in the spaces provided in the price schedules by writing or typing on the dotted lines only (additional information should be contained in a separate annexure);
 - 2.3. if they wish to make more than one bid against an item, as an alternative, apply for additional copies of the bid documents or photocopy one or more pages, and not retype or redraft any of the forms used;
 - 2.4. indicate the prices quoted in the units shown and quote them per item;
 - 2.5. indicate in respect of each item whether the goods/services quoted comply strictly with the specified requirements, and furnish particulars of deviations if this is not so;
 - 2.6. complete all appendices.
3. **Value-added tax, customs duties, *ad valorem* customs duties and surcharges:**
 - 3.1. Value added tax levied by the Receiver of Revenue must not be included in the prices quoted but be shown as a separate line item.
 - 3.2. Where supplies are quoted which are subject to levying of any customs duty, *ad valorem* customs or excise duty or surcharge by the Department of Customs and Excise, such charges must not be included by the bidder in the prices quoted. The applicable customs duty, *ad valorem* customs or excise duty or surcharge must, however, be indicated separately where provided for on Armscor's Questionnaire (KD 18).
4. **Security:**
 - 4.1. Classified bids are to be handled in the manner set out in Armscor's Security Instruction, document number A-WI-014, copies of which are obtainable on request from the Contractor Security Section, P O Box 411, Pretoria, 0001.
 - 4.2. Attention is drawn particularly to the procedure set out in chapter 4 of the manual, which is to be complied with when forwarding classified documents.

5. MANDATORY REQUIREMENTS IN TERMS OF THE 2019 DEFENCE SECTOR CODE (Where applicable)

- 5.1 Bidders, excluding exempted entities, must comply with a minimum black equity ownership target of 35% in line with the Defence Sector Code, where applicable.
- 5.2 Mandatory requirements in terms of the defence sector code are applicable to all Department of Defence/Armcor requirements and all entities as envisaged in the Defence Sector Code.

6. Advance payments:

Bidders shall furnish the price without advance payment.

7. Performance Guarantee:

Armcor reserves the right to request the successful bidders to submit a performance guarantee for the proposed contract. Bidders must submit prices without provision for the performance guarantee as well as prices including the cost of such a guarantee.

9. Commissions:

If any commission is payable by yourself to any person(s) or body as a result of any order which may arise from this Request for Proposal, you must submit full details of the applicable person(s) or body and the amount payable, with this bids.

10. Compliance with Arms Control and Non-Proliferation requirements

Any bidder responding to this Request for Proposal (RFP) shall comply with the following when dealing with defence matériel:

10.1 All relevant South African legislation, including, but not restricted to, the following:

- a) National Conventional Arms Control Act, Act No. 41 of 2002, and its implementing Regulations; and
- b) Non-proliferation of Weapons of Mass Destruction Act, Act No. 87 of 1993, as amended, and its implementing Regulations.

10.2 Defence export legislation of supplier countries, i.e. countries from which defence matériel is exported to South Africa as well as countries of origin of the matériel.

- 10.3 It is the responsibility of the bidder to, when applicable, register with the Directorate Conventional Arms Control (DCAC), Defence Secretariat, in terms of section 13 of the National Conventional Arms Control Act and with the South African Council for the Non-Proliferation of Weapons of Mass Destruction Act.
- 10.4 If a contract with Armscor is being entered into, the Contractor shall comply with arms control and non-proliferation requirements as prescribed by the contract-

11. **Submission of a NCACC Permit**

- 11.1 In terms of the National Conventional Arms Control Act (Act No 41 of 2002, Chapter II, section 13), no person may trade in conventional arms, unless that person is:
- a) Registered with the National Conventional Arms Control Committee (NCACC)
 - b) Is in possession of a permit authorised by the NCACC and issued by the Directorate Conventional Arms control (DCAC).

NOTE: Local bidders who trade in Conventional Arms as set out above are required to submit a certified copy of a valid NCACC permit when submitting a bid.

12. **Tax Compliance**

The conditions detailed in the Instruction for Application for Tax Compliance (KD 25) must be adhered to. Armscor Suppliers /Bidders must remain tax compliant for the duration of their contracts.

13. **Defence Industrial Participation and National Industrial Participation**

- 13.1 The DIP value threshold of foreign content is based on:

Any single agreement of which the foreign content exceeds USD 2 million; Multiple main agreements concluded within two years of each other, within the framework of a specific project or across different projects, for same and/or similar products or services, awarded to the same Seller of which the aggregate value of the foreign content exceeds USD 2 million; Extensions or amendments to the main agreement within the active life of the agreement, which result in the aggregate foreign content value of the project exceeding USD 2 million; Where multiple suppliers are used to address a single Defence Acquisition for the same products or services and the value of the foreign content, in total, exceeds USD 2 million, each supplier shall incur pro rata 50% of the total DIP obligation.

- 13.2 Where a contract to the value of the equivalent of USD10 000 000 or more, is placed on a foreign company, a minimum of 30 % National Industrial Participation (NIP) shall be part of the foreign company's contractual obligations, in addition to the 50 % DIP. This condition is also applicable to all contracts placed on a local company, subcontracting a single foreign company to the aforesaid value or more.

14. **Mandatory local production and content for designated sectors**

- 14.1 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 14.2 If there is no designated sector, Armscor will include as a specific condition of the bid, that only locally produced services or goods or locally manufactured goods with a stipulated minimum threshold for local production and content, will be considered.

15. **Awarding of Bids**

The awarding of bids will be in terms of the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022 and Armscor Preference Point System of the Preferential Procurement Regulations, 2022.

The applicable points are:

Price: (Pp)	90 Points
Broad-Based Black Economic Empowerment:	10 Points
	Total:
	100 Points

The following formula must be used to calculate the points in respect of a bid to a rand value that exceeds R 50 000 000, 00 (all applicable taxes included), (Armscor may also apply this formula to price quotations with a value of less than R30 000, if and when appropriate):

A maximum of 90 points is allocated for price on the following basis:

90/10

$$Ps = 90 \left(1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where

Ps =	Points scored for price of bid under consideration
Pt =	Price of bid under consideration
Pmin=	Price of lowest acceptable bid

ITEM NO	DESCRIPTION	QTY	UNIT PRICE IN FOREIGN CURRENCY	UNIT PRICE IN S.A. CURRENCY	SUBTOTAL
1	TECHNICAL, MAINTENANCE AND REPAIR SERVICES FOR THE SUBMARINE PLATFORMS FOR FINANCIAL YEAR 2023/24 Note 1: Refer to Annexure A Statement of Work.	1			
2	TECHNICAL, MAINTENANCE AND REPAIR SERVICES FOR THE SUBMARINE PLATFORMS FOR FINANCIAL YEAR 2024/25 Note 2: Refer to Annexure A Statement of Work.	1			
	Note 3: Complete Appendix A Clause 1.1 and Annexure B Pricing per Build Group				
TOTAL (excluding VAT)					
VAT					
TOTAL (including VAT)					

1. Delivery address: Armscor Dockyard
 2. * Period required for commencement of delivery, after receipt of order:
 3. * Rate of delivery:
 4. * Period required for completion of order, after receipt thereof:
- * Must be completed by Bidder if not completed by Armscor.

**ARMAMENTS CORPORATION OF SOUTH AFRICA LTD
(ARMSCOR)**

QUESTIONNAIRE

REPLIES

1. What is the request for bids number?
2. Price basis of bids (if deviating from **Delivered into store**):
3. Indicate which of the following applies:

3.1 The prices are fixed.

3.2 The prices are not fixed
4. The delivery period fixed
5. Are you the accredited agent in the RSA for the manufacturer of the supplies quoted by you?

WHERE SUPPLIES OFFERED ARE TO BE IMPORTED OR ARE OFFERED EX BONDED WAREHOUSE, THE ATTACHED SECURITY QUESTIONNAIRE (KD 22) MUST BE COMPLETED AND THE FOLLOWING QUESTIONS ANSWERED:

6. Is a special import permit required?
- If not, state your imports permit number
7. What are the names and addresses of your overseas suppliers? (Give particulars in KD 22)
8. Foreign content:

8.1 What amount in foreign currency must be remitted? overseas?

8.2 What is the rate of exchange used in converting the ZAR1, 00 =
 amount into SA Rand and the date on which this is based? DATE:
9. Statutory costs:

9.1 Are the goods quoted on subject to customs duty, ad valorem customs or surcharge?

.../2

-2-

9.2 If so, what is the amount payable in respect of

- a) Customs duty
- b) Ad valorem customs duty?

PRICE BREAKDOWN

10. The following particulars must be furnished, failure of which may invalidate the bids.

- 10.1 FOB/FCA cost of item
- 10.2 Sea/Air freight
- 10.3 Insurance charges
- 10.4 Clearance charges
- 10.5 Customs duties
- 10.6 Ad valorem customs duties
- 10.7 Delivery costs from port/airport to your premises
- 10.8 Local content (excluding (10.10))
- 10.9 Delivery costs from your premises into store
- 10.10 Balance (detail to be submitted)

AMOUNT	% OF TOTAL PRICE

TOTAL

.....
DATE

.....
BIDDER'S SIGNATURE

-1-

**ARMAMENTS CORPORATION OF S.A. LIMITED
(ARMSCOR)**

PREVIOUS PURCHASES

LAST TWO BIDS

If any similar or identical equipment has been supplied to ARMSCOR,
or to any of ARMSCOR'S subsidiaries or the South African National Defence
Force, the completion of this form by bidders is compulsory.

DATE OF BIDS	ORGANIZATION	ORDER NO.	ITEMS PURCHASED	UNIT PRICE	MOTIVATION FOR PRICE DIFFERENCES

BIDDER:	
SURNAME AND INITIALS:	
DATE:	
SIGNATURE:	

**ARMAMENTS CORPORATION OF SOUTH AFRICA LIMITED
(ARMSCOR)**

SECURITY QUESTIONNAIRE ON THE IMPORTED CONTENT OF BIDS

1. In all cases where the supplies quoted are imported (either in full or in part), bidders shall furnish the following particulars (if space is insufficient, use additional pages):

1.1 COUNTRY OF ORIGIN:

Item No(s).	Country
.....	
.....	
.....	
.....	

1.2 NAME OF MANUFACTURER(S)/SUPPLIER(S)/STOCKIST(S):

Item No(s).	Name
.....	
.....	
.....	
.....	

1.3 NAME OF INTERMEDIARY (IES) (WHEN THERE IS NO DIRECT CONTACT WITH THE FIRMS LISTED IN 1.2):

Item No(s).	Name
.....	
.....	
.....	
.....	

1.4 NAME OF AGENTS RESPONSIBLE FOR SHIPPING AND CLEARANCE:

Item No(s)	Name
.....	
.....	
.....	
.....	

1.5 NAME OF BANK ARRANGING TRANSFER OF FUNDS OVERSEAS:

Item No(s).	Name
.....	
.....	
.....	
.....	

.../2

1.6 IS AN END-USER CERTIFICATE REQUIRED? YES/NO

If yes:-

Item No. (s).

.....

1.7 ARE THE ITEMS SUBJECT TO ANY SPECIAL EXPORT REQUIREMENTS? YES/NO

If Yes:-

Item No. (s).

Requirements

.....	
.....	
.....	
.....	

2. Failure to furnish the information requested may render the bid invalid.

.....
 NAME

.....
 DATE

.....
 BIDDER'S SIGNATURE

BROAD-BASED BLACK ECONOMIC EMPOWERMENT

ACRONYMS AND ABBREVIATIONS

B-BBEE	Broad-Based Black Economic Empowerment
CIPC	Companies and Intellectual Property Commission
COTS	Commercial Off The Shelf
EME	Exempted Micro Enterprises
MOTS	Military Off The Shelf
QSE	Qualifying Small Enterprises
SANAS	South African National Accreditations Systems

1. MANDATORY REQUIREMENTS IN TERMS OF THE 2019 DEFENCE SECTOR CODE

- 1.1 Bidders, excluding exempted entities, must comply with a minimum black equity ownership target of 35% in line with the Defence Sector Code, where applicable.
- 1.2 Mandatory requirements in terms of the defence sector code are applicable to all Department of Defence/Armscor requirements and all entities as envisaged in the Defence Sector Code.

NB: Failure by the bidder to comply with the B-BBEE Mandatory Requirements as stated herein above will lead to disqualification.

2. PREFERENCE POINTS FOR BROAD-BASED BLACK ECONOMIC EMPOWERMENT

2.1 The B-BBEE preference points will be awarded in terms of the Preferential Procurement Policy Framework Act, 2000; Preferential Procurement Regulations, 2022; Armscor Preference Point System of the Preferential Procurement Regulations, 2022.

2.2 The 90/10 preference point system is applicable to all bids with a Rand value above R50 000 000,00 (all applicable taxes included)

2.3 Preference points for this bid shall be awarded for:

PRICE 90

B-BBEE STATUS 10

Total points for Price and B-BBEE must not exceed 100

2.4 Bidders who do not submit a valid proof of B-BBEE status will score zero (0) for preference points.

3. ALLOCATION OF PREFERENCE POINTS FOR SPECIFIC GOALS

3.1 The preference points for specific are to be claimed and allocated according to the table below for acquisition of services, works or goods with a value above R50 000 000, 00 and must be substantiated by means of a valid proof of B-BBEE.

(Specific Goals) B-BBEE status level	Points Allocated
Level 1	10
Level 2	9
Level 3	6
Level 4	5
Level 5	4
Level 6	3
Level 7	2
Level 8	1
Non compliant	0

3.2 The Armscor BBE Division reserves the right to require a bidder and/or its sub-contractor(s) to substantiate any claim at any stage in the bidding process to verify and confirm the B-BBEE status of the bidder and/or its sub-contractor(s).

4. PRINCIPLES**4.1 Valid proof of B-BBEE status is either of the following:****4.1.1 A B-BBEE Sworn Affidavit fully completed and:**

- 4.1.1.1** Deposed and signed in the presence of the Commissioner of Oaths
- 4.1.1.2** Does not contradict itself (% black ownership matches compliance level)
- 4.1.1.3** Commissioner of Oaths credentials and signature are reflected.

4.1.2 A B-BBEE Certificate issued by either the CIPC or a SANAS Accredited Verification Agency**4.1.3 An unincorporated Joint Venture / Consortium must submit a Consolidated B-BBEE Certificate in the name of the Joint Venture / Consortium issued by a SANAS accredited Verification Agency.****4.1.4 B-BBEE status must be based on the latest financial year-end information, otherwise it is invalid and unacceptable.****4.2 Sub-Contracting****4.2.1 A bidder awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the bidder concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.****4.2.2 A bidder awarded a contract must obtain the approval of Armscor prior to any changes in the subcontracting arrangement.**

B-BBEE DECLARATION

1. Confirmation of the Bidder's Turnover

Name of the Bidder			
Registration Number			
Financial Year End			
Turnover (As at the latest financial year end)	R	Period Starting (Day, Month, Year)	
		Period Ending (Day, Month, Year)	

2. Confirmation of Subcontractors to be involved in the execution of the order:

Bidder	% Black Ownership	B-BBEE Status	% Value to be Contracted
1.			
Subcontractors	% Black Ownership	B-BBEE Status	% Value to be Contracted
1.			
2.			
3.			

*Percentages of the bid value which will be subcontracted including main contractor must add up to 100%.

3. Confirmation of Suppliers to be involved in the execution of the order:

Supplier's name	% Black Ownership	B-BBEE status	% Value to be Supplied
1.			
2.			
3.			
4.			
5.			

I, the undersigned, am duly authorised to certify on behalf of the abovementioned entity that the information contained herein above is true and correct.

AUTHORISED SIGNATURE : Date:

Name in block letters :

Capacity :

It is a condition of bids that the successful bidder MUST be tax compliant, or that satisfactory arrangements have been made with the South African Revenue Service (SARS) to meet the bidder's tax obligations. FOREIGN COMPANIES ARE REQUIRED TO COMPLETE QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS OF ANNEXURE 1 TO KD 25

1. In order to meet this requirement the bidder is required to access SARS e-filing and complete the SARS ONLINE "SARS tax compliance status" under tax status. Tax compliance requirements are also applicable to individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax compliance PIN code that will be valid for a period of 1 (one) year from the date of approval.
3. The Tax compliance PIN letter shall be submitted with the bids, with an authorisation letter for Armscor to use the PIN code for verification of tax compliance status of the bidder.
4. In bids where Consortia /Joint Ventures / are involved, each party must submit a separate tax compliance PIN with authorisation letter.
5. In the event of subcontracting, tax compliance PIN letter and authorisation letter for the subcontractor must also be submitted with the bids.
6. Tax compliance is done via e-filing on the SARS website www.sars.gov.za.

NOTE: Armscor Suppliers/ Bidders and Subcontractors must remain tax compliant for the duration of their contracts.

-1-
BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of institution	State

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....
.....

¹ the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

3 DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

KD27

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

**ARMAMENTS CORPORATION OF SOUTH AFRICA LIMITED
(ARMSCOR)**

INTELLECTUAL PROPERTY REQUIREMENTS

1 INTRODUCTION

1.1 What is Intellectual Property?

Intellectual Property (or "IP") means the result or outcome of human creative effort as typically, but not exclusively, manifested and embodied in or taking the form of data items or documents.

IP typically includes design and mental activities, e.g.:

- Bills of Material (BOM's)
- Instructions,
- Reports,
- Specifications,
- Interface designs,
- Manufacturing processes,
- Material Specifications,
- Processes,
- Product designs,
- Re-engineering (maintenance/obsolescence),
- Software,
- Algorithms,
- Source Codes,
- System/integration designs,
- Test and Evaluation Methods, etc.

IP typically excludes Project Management activities and Hardware created/built according to a design or following a "recipe".

1.2 How is IP manifested?

IP is typically manifested and embodied in Data Items or Documents.

"Data items or Documents" means any recorded information, however recorded, including but not limited to books, manuscripts, reports, studies, algorithms, computer software, invention descriptions, registered patents, drawings, designs, plans, analyses, calculations, standards, data packs, process documents, instructions, specifications, mathematical or simulation models, compositions, photographs, video recordings, audio recordings, reports, holographic recordings, trademarks, graphical images, etc.

NOTE:

- The document itself is not IP
- The contents of a document represent IP
- The document becomes the tangible and recordable carrier of IP

1.3 What is Background IP?

For definition, refer to A-STD-0020 "Armcor General Conditions of Contract".

"Background IP" belongs to a contractor because he fully paid for the generation thereof or had bought it at his own cost, which may be used or serve as a basis from which to develop new Foreground IP.

1.4 What is Historic IP?

"Historic IP" is existing IP which was created previously, and which may serve as a basis from which to develop new Foreground IP.

1.5 What is Foreground IP?

For definition, refer to A-STD-0020 "Armscor General Conditions of Contract".

"Foreground IP" is new intellectual property that is created during the execution of the order.

1.6 When is IP Shared or Jointly Owned or Co-owned?

For the definition, refer to A-STD-0020 "Armscor General Conditions of Contract".

"Shared" or "Jointly Owned" or "Co-owned" IP is IP which belongs to both the DOD and a contractor, because both contributed to the cost of generation thereof. Ownership is typically (and preferably) proportional to contribution.

Historic and Foreground IP may be either

1. Wholly owned by the DOD; or
2. Shared or Jointly Owned or Co-owned between DOD or the contractor

2. IP RECORDAL REQUIREMENTS

It is a requirement that prospective suppliers provide all information about applicable Intellectual Property (IP) to the bid. Armscor will record the information on their IP System that will generate a Statement of IP which will be appended to the order. The Statement of IP will serve as a contractual agreement between Armscor and the contractor in so far as IP related matters are concerned.

The recordal requirements are further described herein and broken down to an appropriate level, as follows:

2.1 Background IP Utilised

For each Background IP Item that will be modified or utilised to generate Foreground IP in the execution of the quoted scope of work, provide the following details:

- Short IP description
- Original Supplier
- Cost of Establishment (If available)

2.2 Historic IP Utilised

For each Historical IP item that will be modified or is required as a prerequisite in the execution of the quoted scope of work, provide the following details:

- Armscor IP Number (if available)
- Short IP description
- The next information is to be provided **per order**, on which Historic IP was established:
 - Order Number on which Historic IP was generated
 - Master record index (MRI) reference
 - Original Supplier
 - Cost of Establishment
 - Percentage Ownership (DOD)
 - Associated Milestone / Line item on the order under which the IP was established

2.3 Foreground IP to be generated

For each new Foreground IP item that will be generated in the execution of the quoted scope of work, provide the following details:

- IP number of Historic IP, if IP is enhanced (modified/improved/updated).
- Short IP description
- Master record index (MRI) reference with version and date
- Original Supplier
- Cost of Establishment
- Percentage Ownership (DOD)
- Associated Milestone / Line item on the order under which the IP will be established.

Note 1: The cost of establishment has always been included in item/milestone prices of order, and will continue to be so included, but will in future become visible by being shown separately in the Statement of IP appended to orders in order to properly manage such IP;

Note 2: To facilitate the easy and correct recording of IP, bidders and contractors will be required to utilise the specially constructed spread sheet from Armscor's web site.

After completion, the spreadsheet must be printed and attached to the bid, which will thus form an integral part of the bid.

3. SAFEGUARDING OF IP

3.1 IP Agreement

The IP agreement which will be embodied in the Statement of IP will be concluded with the main contractor in the name of the main contractor and will apply to the creating sub-contractor(s), who will remain the design authority for his particular IP.

3.2 Management and Safeguarding of IP

The main contractor will be responsible for the management of IP he generated during the execution of the order, as well as the management of IP generated by his sub-contractors. Upon completion of the project or order, the relevant IP will be formally transferred to the main contractor, who will then be responsible for the continued management of such IP.

The main contractor will be responsible for proper safeguarding and configuration control of IP, including off-site back-ups, as further described in various other Armscor documents, e.g. A-STD-0020 "Armscor General Conditions of Contract, K-STD-61 "Armscor Standard for Technical Contract Conditions", A-WI-014 "Armscor Security Instruction" and other documents that may be applicable.

3.3 IP Delivery

Notwithstanding 3.2 above, upon completion of the order, the main contractor will deliver all data items or documents relating to the IP generated during the execution of the order to Armscor ADAC Department.

3.4 IP Audits

Armscor is by law required to conduct an IP or intangible asset audit of all existing DOD IP every financial year. The main contractor will cooperate with Armscor's Intellectual Property Management Division and the Auditor General during the audit period and will make available all relevant information required to conduct the audit.

4. COMPLETION OF THE IP INFORMATION BY MEANS OF THE ELECTRONIC FORM

4.1 Background

The electronic form of the KD27 IP Information.xlsx is available as a Microsoft Excel workbook on the Armscor website (www.armscor.co.za/Downloads/Download.asp) and must be used as template to provide the relevant IP information.

The workbook consists of the following three spreadsheets:

- “Background IP” provides a form to capture all background IP information
- “Historic IP” provides a form to capture all historic IP information.
- “Foreground IP” provides a form to capture all foreground IP information.

4.2 Electronic Form Definitions

The column definitions as provided in the forms are as follows:

IP Name	A short descriptive name to identify the IP item.
IP Number	Armscor Number provided to Historic IP.
IP Description	An abridged description of the IP Item.
Original Supplier	The name of the supplier at which the IP item exists or was established.
Establishment Cost	The amount paid by Armscor to establish the IP Item (including VAT).
MRI Reference	The Master Record Index (MRI) or other document reference that uniquely describe the IP.
DOD Shareholding	The percentage of the IP that belongs to the DOD through Armscor
Associated Milestone/Item	The contractual milestone or item, which when completed, will define the point in time at which the IP will be established.

5. INTELLECTUAL PROPERTY QUESTIONNAIRE

I/We, the undersigned, who warrant that I/we am/are duly authorised to do so on behalf of the firm certify that the following information is correct and complete in terms of Intellectual Property relevant to the offered scope of work. (Please circle the relevant answer)

Will Background IP be applicable during the execution of the quoted scope of work? Yes No

If yes, state particulars by completing the 'Background IP' worksheet. Indicate each IP item as a separate line.

Will Historic IP be utilised and/or is it required as a prerequisite to execute the quoted scope of work? Yes No

If yes, state particulars by completing the 'Historic IP' worksheet for each IP item. Indicate each IP item as a separate line;

Will any of these Historic IP items be enhanced during the execution of the quoted scope of work? Yes No

If yes, also complete the 'Foreground IP' worksheet for those IP items

Will new Foreground IP be generated during the execution of the quoted scope of work? Yes No

If yes, state particulars by completing the 'Foreground IP' worksheet for each IP item. Indicate each IP item as a separate line.

This completed form, along with all additional information, as requested above where relevant, populated on the KD27 Spreadsheet, have to be attached to the bid.

WITNESSES:

1 _____

2 _____

SIGNATURES OF BIDDER(S)

DATE: _____

ADDRESS: _____

DEFENCE SECTOR BBBEE SWORN AFFIDAVIT – EXEMPTED MICRO ENTERPRISE

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) who are citizens of the Republic of South Africa by birth or descent; or (b) who became citizens of the Republic of South Africa by naturalisation- i. before 27 April 1994; or ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"
Definition of "Black Designated Groups"	"Black Designated Groups means: (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"

3. I hereby declare under Oath that:

- The Enterprise has _____% Black Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise has _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise has _____% Black Designated Group Beneficiaries as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
 - Black Youth % = _____%
 - Black people living with disabilities % = _____%
 - Black Unemployed % = _____%
 - Black People living in Rural areas % = _____%
 - Black Military Veterans % = _____%
- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____, the annual Total Revenue was R5,000,000.00 (Five Million Rands) or less
- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition)	
At Least 51% Black Owned	Level Two (125% B-BBEE procurement recognition)	
Less than 51% Black Owned	Level Four (100% B-BBEE procurement recognition)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Commissioner of Oaths	Deponent
Credentials and Signature	
	Signature _____
Date _____	Date _____

ANNEXURE 2 TO KD24

DEFENCE SECTOR BBBEE SWORN AFFIDAVIT – QUALIFYING SMALL ENTERPRISE

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) who are citizens of the Republic of South Africa by birth or descent; or (b) who became citizens of the Republic of South Africa by naturalisation- i. before 27 April 1994; or ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"
Definition of "Black Designated Groups"	"Black Designated Groups means: (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"

3. I hereby declare under Oath that:

- The Enterprise has _____% Black Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise has _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise has _____% Black Designated Group Beneficiaries as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
 - Black Youth % = _____%
 - Black people living with disabilities % = _____%
 - Black Unemployed % = _____%
 - Black People living in Rural areas % = _____%
 - Black Military Veterans % = _____%
- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____, the annual Total Revenue was between R5,000,000.00 (Five Million Rands) to R50,000,000.00 (Fifty Million Rands)
- Please confirm on the table below the B-BBEE level contributor, by ticking the applicable box.

100% Black Owned	Level One (135% B-BBEE procurement recognition)	
At Least 51% Black Owned	Level Two (125% B-BBEE procurement recognition)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Commissioner of Oaths	Deponent
Credentials and Signature	
	Signature
Date	Date

ANNEXURE 1 TO KD25

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF ARMSCOR					
BID NUMBER:		CLOSING DATE:		CLOSING TIME:	
DESCRIPTION					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT :					
ARMSCOR BID BOX VISITORS ENTRANCE (BLOCK 8), 370 NOSSOB STREET,					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Mr. A.L Mmbengwa		CONTACT PERSON	Mr. A.L Mmbengwa	
TELEPHONE NUMBER	012 428 3610		TELEPHONE NUMBER	012 428 3610	
FACSIMILE NUMBER	N/A		FACSIMILE NUMBER	N/A	
E-MAIL ADDRESS	scmbids@armscor.co.za		E-MAIL ADDRESS	scmbids@armscor.co.za	
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] ☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		TICK APPLICABLE BOX] ☐ Yes ☐ No
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?		☐ Yes ☐ No
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS					
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?				☐ YES ☐ NO	
DOES THE ENTITY HAVE A BRANCH IN THE RSA?				☐ YES ☐ NO	
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?				☐ YES ☐ NO	
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?				☐ YES ☐ NO	
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?				☐ YES ☐ NO	
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.					

ANNEXURE 1 TO KD25

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

- 2.1. BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2. BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3. APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 2.4. BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.5. IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.6. WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
- 2.7. NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:

(Proof of authority must be submitted e.g. company resolution)

.....

DATE:

.....



RFB NUMBER: ARMD/2023/07

TECHNICAL, MAINTENANCE AND REPAIR SERVICES FOR THE SUBMARINE PLATFORMS AT ARMSCOR DOCKYARD IN SIMONS TOWN

SUMMARY: THIS DOCUMENT CONTAINS THE REQUIREMENT FOR TECHNICAL, MAINTENANCE AND REPAIR SERVICES FOR THE SUBMARINE PLATFORMS AT ARMSCOR DOCKYARD IN SIMONS TOWN

APPROVAL PAGE

COMPILED BY:

.....
J. RELIHAN
CONTRACTS MANAGER
ARMSCOR DOCKYARD

.....
DATE

.....
M. SECONDS
PROJECT MANAGER
ARMSCOR

.....
DATE

SUPPORTED BY:

.....
MR. M. RAATH
PROJECT MANAGER
ARMSCOR DOCKYARD

.....
DATE

APPROVED BY:

.....
MR. S. MANOTO
DIVISIONAL MANAGER:
PROJECTS DIVISION
ARMSCOR DOCKYARD

.....
DATE

RESTRICTED

AMENDMENT HISTORY

DOCUMENT ISSUE	DATE	CHECKED BY
01	MAY 2023	MR S. MANOTO

RESTRICTED

DISTRIBUTION PAGE

COPY NUMBER	DISTRIBUTION
01 (Master Copy)	Mr J Relihan Armscor Dockyard Procurement Division

DEFINITIONS

The following non-standard terms have been used in this document, which are explained as follows:

Client	ARMSCOR Dockyard
Contractor	The company contracted by ARMSCOR to supply as per Specification
RFB	Request For Bid

Contents

1. INTRODUCTION.....	8
2. DOCUMENTS	9
3. BID REQUIREMENTS.....	8
3.1 General	9
3.2 Minimum requirements.....	10
3.3 Registration of E-portal bids.....	10
3.4 Bidders conference.....	10
4. BID EVALUATION.....	11
5. Requirement Statement	13
Section 2: Additional Conditions	18
1. Emergencies.....	18
2. Access to the Premises.....	18
3. Security	18
4. Safety	18
5. Identification.....	19
6. Contractor's Status and Responsibilities	19
Section 3: Maintenance Conditions.....	21
1. Materials/ Equipment and Consumable Stores.....	21
2. Working Hours	21
3. Dockyard Facilities.....	22
4. Contractor Liability.....	22
5. Adverse Conditions and Defects	23
6. Damage Reporting.....	23
Section 4: Safety, Health and Environmental (SHE) Legislation	24
1. Compliance.....	24
2. Remediation and Termination for Breach of SHE Conditions E	25
3. SHE Indemnity	25
4. Audit, Inspection & Reporting	26
5. SHE Training.....	27
6. Personal Protective Equipment (PPE)	27
7. ANNEXURE A: TECHNICAL AND SUPPORT SERVICES STATEMENT OF WORK	
8. ANNEXURE B: PRICING PER BUILD GROUP	

RESTRICTED

- 9. ANNEXURE C: WORK AUTHORIZATION (WA) FOR STAFF SUPPORT TASKS
- 10 ANNEXURE D: CODIFICATION
- 11. ANNEXURE E: OHASA ACT AGREEMENT

- 12. APPEDICES:
 - A: THE RFB –NON STANDARD TASK
 - B: MANPOWER CAPABILITY MATRIX
 - C: SUPPORT CAPABILITY MATRIX

1. INTRODUCTION

1.1 Instruction to Bidder

The Bidder must strictly adhere to the requirements stipulated in this Request for Bid (RFB). The onus rests on the Bidder to submit an unambiguous bid in order to enable Armscor to carry out a transparent and fair bid evaluation.

1.2 Scope

The scope of this RFB covers the requirement for a support contract for 2 financial years for TECHNICAL, MAINTENANCE AND REPAIR SERVICES FOR THE SUBMARINE PLATFORMS of the South African Navy.

2. DOCUMENTS

Armscor documents are available on the Armscor Website <http://www.armscor.co.za>. The following documents are applicable to this RFB to the extent specified herein:

2.1 APPLICABLE DOCUMENTS

No	Document No	Title
1	A-PROC-9053	Supplier Sourcing Procedure
2	A-DOC-9046	Terms of Reference for the Bid Specification Committee
3	A-DOC-9045	Terms of Reference for the Bid Evaluation Committee
4	A-PRAC-4011	B-BBEE Practice, Issue 007
5	A-STD-0010	Rules Applicable to prospective Contractors, Issue 2, 21 April 2014.
6	A-STD-0020	Armscor's General Conditions of Contract, Issue: 005, 22 June 2022.
7	A-STD-61 Part 6	Contract Conditions, Technical, Standard for Maintenance Programmes Applicable to clause 2 of A-STD-0020.

2.2 REFERENCE DOCUMENTS

No	Document No	Title
1	AA-GUID-1014	Critical Criteria Guideline
2	Act 5 of 2000	Preferential Procurement Policy Framework Act (PPPFA) No.5
3	Act 52 of 2003	Broad-Based Black Economic Empowerment Act, as amended
4	Defence Sector Code	Codes of Good Practice on Broad based Black Economic Empowerment as Gazetted
5	PPPFA Regulations of 2017	Preferential Procurement Regulations, 2017
6	Armscor Practice Note 1 of 2017	Preferential Procurement Regulations Practice Note 1 of 2017

3. BID REQUIREMENTS

3.1 General

The bid shall address each and every requirement of the RFB in a comprehensive and logical way. The following information and communication is to be observed:

3.1.1 Armscor Registration

In order to qualify as a potential supplier, prospective Bidders must be registered with Armscor as a supplier. Bidders that are not registered shall undertake to register before the bid submission closing date. Registration must take place prior to any contract placement.

3.1.2 Communication

3.1.2.1 All communication with Armscor shall be made to: The Procurement Division, E-mail address: Jacobusr@armscor.co.za Tel: +27 (021) 787 3277.

3.1.2.2 The Bidder shall appoint a single person for communication with Armscor. Communication shall not take place via an agent or representative other than a fulltime employee of the Bidder.

3.1.2.3 All enquiries regarding the RFB shall be directed to the Procurement Division and the RFB reference number shall be used in all correspondence.

3.1.2.4 No direct contact or communication with Armscor or the Department of Defence personnel shall be allowed, unless through formally arranged meetings or briefing sessions if and when required by the prospective Bidders.

3.1.3 Submission of Bids

Partial Bids: Note: Armscor shall only consider a bid for the total requirement. Partial bids shall not be considered.

3.1.4 Validity of Bids

The validity of the bid shall be one hundred and twenty (120) days after the tender closing date.

3.1.5 Confidentiality of information

The information contained in this RFB, as well as the response received shall be treated as "Company Confidential" between Armscor and the Bidder submitting the response. The receiver of this RFB may not disclose any information in connection with this RFB to the media or any third party, or allow information to be disclosed without prior written approval of Armscor. The potential Bidder shall ensure that any confidentiality arrangements between themselves and Armscor apply *mutatis mutandis* to partners and/or subcontractors or agents of the Bidder.

3.1.6. Submission of Bid documentation

The original bid and two (2) copies thereof together with any supporting documentation such as brochures, handbooks and drawings shall be submitted to Armscor. The original

Must be marked as the original and each copy must be marked with a copy number. The original shall take precedence over any copy in the event of discrepancies.

3.2 Minimum requirements

The following is the minimum prescribed requirements of the bid:

3.2.1 Covering letter

The covering letter shall give a brief introduction to the bid and briefly summarize the implementation methodology, time-scale and the total cost. The letter shall also state any other aspects the Bidder deems necessary and important. The Bidder shall use the company's official letterhead when providing the covering letter.

3.2.2 Forms to be completed

The following forms shall be completed by the Bidder and submitted as part of the bid:

- Commercial Bid: all Armscor KD forms as per Armscor Procurement Secretariat requirements.

3.2.3

The Bidder shall **demonstrate**, as part of their bid and with the necessary **evidence**, that they have the necessary resources and appropriate expertise to offer the service should they be awarded the contract.

***Note:** The ARMSCOR Dockyard retains the right to perform an audit to confirm the integrity of the content of the bids received.*

3.3 Registration of E-portal bids

In the case where potential bidders have downloaded the bid documents or obtained it from a party that downloaded it from the E-portal or from any other tender notification service provider, they are requested to inform the following person

Mr. J. Relihan, E-mail address: JacobusR@armscordy.co.za Tel: +27 (021) 787 3665.

By doing so, they will ensure that they are captured on the list of potential bidders and receive tender related correspondence such as bidders briefing minutes etc. Failure to register as such may invalid the bidders bid as their bid may exclude updated information issued by means of Bidders briefing minutes or updates.

3.4 Bidders conference

A **COMPULSORY** bidder's conference shall be held at Armscor Dockyard, Simon's Town on 30 May 2023 at 11am. Potential bidders are required to RSVP with Ms B. Tiso at telephone number (021) 787 3177 / E-mail address: BambananiT@armscordy.co.za no later than 29 May 2023.

4. BID EVALUATION

4.1 Bids received

Bids received will be evaluated in accordance with an approved value model that was developed in accordance with A-PROC-9053, and such value model consists of pre-qualification and critical criteria that are reflected in this RFB. Failure by a Bidder to comply with a pre-qualifying or a single critical criterion will result in immediate elimination from the adjudication process.

4.2 AWARDING OF BIDS

The awarding of bids will be in terms Preference Point System (PPS). All bids conforming to the Black Equity Ownership of at least 35%, Pre-qualification Criteria (Regulation 4) and subsequently meeting the stated critical criteria will be evaluated in terms of the following PPS:

The applicable PPS points are:

Price:	90 points
BBBEE:	10 points

4.3 MANDATORY CRITERIA

4.3.1 TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the successful bidder must be tax compliant, or that satisfactory arrangements have been made with the South African Revenue Service (SARS) to meet the bidder's tax obligations. (Not applicable to foreign companies).

4.3.1.1 In order to meet this requirement the bidder is required to access SARS e-filing and complete the SARS ONLINE "SARS tax compliance status" under tax status. Tax compliance requirements are also applicable to individuals who wish to submit bids.

4.3.1.2. SARS will then furnish the bidder with a Tax compliance PIN code that will be valid for a period of 1 (one) year from the date of approval.

4.3.1.3. The Tax compliance PIN letter shall be submitted with the bid, with an authorisation letter for Armscor to use the PIN code for verification of tax compliance status of the supplier.

4.3.1.4. In bids where Consortia /Joint Ventures / are involved, each party must submit a separate tax compliance PIN with authorisation letter.

4.3.1.5. In the event of subcontracting, tax compliance PIN letter and authorisation letter for the subcontractor must also be submitted with the bid.

4.3.1.6. Tax compliance is done via e-filing on the SARS website www.sars.gov.za.

4.3.1.7 Original valid tax clearance certificates issued before 18 April 2016 are still valid until the expiry date or on replacement with SARS tax compliance PIN.

NOTE: Armscor Suppliers/ Bidders and Subcontractors must remain tax compliant for the duration of their contracts.

4.4 SPECIFIC GOALS

be Mandatory Black Equity Ownership of at least 35% is not applicable, however specific goals will be used to allocate preference points.

Evidence Required:

The Bidder shall submit a valid BBBEE or CIPC BBBEE certificate or sworn affidavit with the bid.

4.5 PRE-QUALIFYING CRITERIA

Not Applicable

4.6 Critical Criteria

Armcor will use the following criteria when evaluating Bid received from the Bidder for awarding of the bid.

	CRITICAL CRITERIA
4.6.1	<u>Bidders Briefing:</u> Requirement: The bidder shall attend the compulsory bidders briefing at a venue, date and time specified by Armcor procurement. This will be scheduled 1 week after advertising the bid. Evidence: The bidder shall complete and sign the attendance register as a confirmation of attendance. Note: If the bidders briefing date has changed only the bidders who have initially indicated their intention to attend will be notified.
4.6.2	<u>Technical and Support Services</u> Requirement: The bidder shall fully (100%) comply with the Statement of Work in Annexure A of the RFB. Evidence required The bidder shall submit the following documents to confirm that the bidder shall fully (100%) comply with the Statement of Work in Annexure A of the RFB: - i The completed support capability matrix as specified in Appendix C of the RFB. - ii Completed and signed declaration on page 7 of KD17. Note 1: The bidder shall adhere to the format in accordance requirements in Appendix C. Note 2: Any partial or non-compliance to the required evidence above shall result in the bid being disqualified from further evaluation. Refer to example in Appendix C
4.6.3	<u>Proof of previous experience</u> Requirement: The bidder shall have the relevant experience to conduct surveys, maintenance and repair activities on a Type 209 Mod 1400 Submarine or other submarine product systems.

	Evidence: The bidder shall submit, with the bid, a reference letter from their current or previous client confirming completion of their work or a Completion Certificate or a closeout report or a contract of a previous project on a Type 209 Mod1400 Submarine or other submarine product systems
4.6.4	<u>Proof of previous experience</u> Requirement: The bidder shall have access to a qualified and experienced Marine/Naval Architect to support the maintenance and repair activities for the duration of the contract. Evidence: The bidder shall submit, with the bid, a copy of the CV and qualification of the Marine/Naval Architect. A minimum NQF level 7 and 2 years' experience is required.

4.7 SPECIAL REQUIREMENTS

1. The bidder shall ensure that personnel utilised during execution of the work has the necessary skills and qualifications to perform the work as required in accordance with Appendix B of the RFB. Personnel will be vetted in accordance with Appendix B of the RFB prior approval of a Work Authorization
2. On the job Training of the Dockyard Personnel.
3. Review and acceptance of the contracting structure.
4. The bidder shall be subject to hold points for quality assurance inspection points, which may include but not limited to Det Norske Veritas (DNV).
5. The bidder shall perform the technical and support services to insure that the submarine is brought up to class certification.
6. The bidder may be required to subcontract 30% of the requirement to one of the following entities:
 - 6.1. EMEs or QSEs entities which are at least 51% owned by black military.
 - 6.2. EMEs or QSEs entities which are at least 51% owned by black women.
 - 6.3. EMEs or QSEs entities which are at least 51% owned by black people.
 - 6.4. EMEs or QSEs entities which are at least 51% owned by black people living with disabilities.
 - 6.5. EMEs or QSEs entities which are at least 51% owned by black youth.

5. Requirement Statement

5.1 Introduction

This section provides the necessary information on the Statement of Work (SOW) for this contract. The successful Bidder will be required to use the Build Group Structure according to the SOW, in Annexure A, as a basis for the Contract Work required.

5.2 Purpose

The Purpose of this Request For Bid (RFB) is to engage the Local industry for Technical,

Maintenance and repair services for the Submarine platforms of the SA Navy, so that the vessels can be operationally ready for deployment. Part of the requirement is to ensure the vessel is DNV compliant.

5.3 Background

The South African Navy (SAN) has a requirement to effect the Technical, Maintenance and repair services for the Submarine platforms of the SA Navy as part of a REFIT PROGRAMME, in order to ensure that the Submarine is in serviceable conditions for training, force employment and to further ensure the platform readiness for any other requirements as directed by the SAN

5.4 Statement of Work

5.4.1 Requirements

The submarine must be repaired at the Simon's Town Dockyard facility. The requirement is for the main contractor to complete all tasks as listed in Annexure A. All tasks will be managed through a works authorizations process (WA) after the order is awarded.

The bidder is to ensure that the tasks are in line with DNV requirements where applicable. This will ensure that the vessel is DNV certified in its operational state.

The other intention is for the contractor to transfer skills to the Dockyard personnel. Transfer of skills will be done on tasks as defined by the project team and managed through the WA process.

5.4.2 Work Break Down Structure

The build group numbering system to be employed by the contractor when repairing the systems on-board the Submarine are detailed in annexure A (SOW) of the document.

5.4.3 Work Authorisation

5.4.3.1 The available budget shall be applied to the Scope of Work to derive maximum benefit for the SA Navy. The mechanism to be used for this will be the WA process.

5.4.3.2 Work execution shall proceed on Works Authorisation (WA) basis. A formal and logical work methodology shall be employed to accurately quantify costs of a WA.

5.4.3.3 An approved WA will be treated as a fixed cost deliverable.

5.4.3.4 A budget plan shall be prepared to track and monitor performance against cash flow.

5.4.3.5 Budget planning shall be designed to finalise year-end deliverables by not later than February of the respective Armscor Financial year.

5.4.4. Output

Based on the SoW provided in Annexure A. The contractor will provide a detailed work package with resource, hardware and cost requirements per build group. Each task and/ or build group work will be activated on signing of a WA. Hence, this will serve to ensure the entire scope of work is managed and completed.

A key output will be to ensure that all work is done to ensure that the vessel is DNV certified on completion of the entire scope of work.

A list of all special tools, jigs and test equipment used in the repair of the vessel will be handed over to Armscor Dockyard on completion of the project.

5.5 Conditions of Acceptance

5.5.1 Work on all systems will be presented for a Harbour Acceptance Test (HAT). Work on a system will be considered completed at the point when the HAT has been signed off as completed.

5.5.2 Inspection/ Release/ Acceptance certificate (Form AK-FORM-0047) issued, signed and stamped by a representative of Armscor Dockyard Quality Department.

5.5.3 Payment will only be made once an Inspection/ Release/ Acceptance certificate (Form AK-FORM-0047) is signed and stamped by the Armscor QA representative.

5.5.4 Place of release: The Armscor Dockyard's premises.

5.5.5 Time of release: After delivery.

5.5.6 A representative of ARMSCOR Dockyard/SA Navy will monitor the acceptance of the products and documentation at the Armscor Dockyard's premises.

5.5.7 The Contractor shall Issue a Certificate of Conformance to certify that the product adhere to their requirement with respect to SA Navy system functionality.

5.6 Quality Assurance

ARMSCOR Technical Conditions of Contract; A-STD-61 (Part-6).

Armscor Dockyard is ISO 9001: 2015 certified, the contractor shall be obliged to follow the processes of ISO 9001 in addition to their own internal quality processes.

The bidder shall be subject to hold points for quality assurance inspection points, which may include but not limited to Det Norske Veritas (DNV).

5.7 Import/Export, Customs and Excise Duties:

The delivery basis shall be FOB. The Contractor shall at its own expense, be responsible for obtaining an export license and/or any other approvals from the German authorities that may be required for the export to South Africa. Armscor will arrange for the necessary End User Certificate as well as the clearing of the goods and delivery thereof to the final delivery destination in South Africa. Customs duties, insurance and ad valorem costs will be covered by Armscor.

5.8 Duration

All work, as specified within this document, shall be completed within eighteen (18) months from date of receipt of order.

5.9 Customer Furnished Equipment/Customer Furnished Services & Customer Furnished Items

The bidder is to include all CFE/CFI and CFS that will be required to assist them in completion of the tasks.

5.10 Supplementary Information

5.10.1 A breakdown of costs for flights, subsistence allowances and accommodation shall be included in the bid where applicable.

5.10.2 Costs to establish a site office and any other requirements considered essential during the technical and support services to be included in the bid where applicable.

5.10.3 Armscor Dockyard personnel will work alongside the bidder for OJT and technology transfer on certain tasks as will be defined on each WA.

5.10.4 The contractor shall attend monthly progress meetings to report on progress and milestones against plan. The progress meetings will be chaired by the Dockyard Project Manager and minutes will be recorded.

5.11 National Industrial Participation & Defence Industrial Participation

Refer to the attached document with reference, 06200-0200-001 Industrial Participation, for NIP and DIP requirements. All attached forms must be completed and the NIP/DIP plan included in the RFB to be submitted

Section 2: Additional Conditions

1. Emergencies

The client reserves the right to stop work should this in his opinion be necessary to ensure the safety of property or personnel.

2. Access to the Premises

The client shall grant the contractor and/or his employees the necessary access at all reasonable times, in order to meet the obligations in terms of this agreement, subject, however, to the client's security arrangements. Access to the client's premises may be refused under appropriate circumstances.

3. Security

The contractor shall be subject to the security rules and regulations as in place on any client property he enters. These regulations shall be in line with Department of Defence unit security regulations. This includes controlled access through a security gate and prohibition of carrying photographic equipment (including cell phones with cameras), firearms, explosives, unlawful narcotics, etc. onto client property.

While on any client property, the contractor employees and vehicles may at all times be subjected to security searches by the security forces.

Transgression of any security rules and regulations can lead to detention by security and subsequent prosecution.

4. Safety

While on client property related to this contract, the contractor shall be responsible for the safety of his employees.

Should any of the contractor's employees sustain an injury, while on client property, through the contractor's action, the contractor shall be responsible for rendering medical attention.

The contractor enters client property at own risk. Treatment for any injury sustained by contractor's employee, caused by client action, but not due to negligence or malicious intent on the part of the client, shall be the responsibility of the contractor.

In any case, the client can, according to its discretion, render limited medical attention to the contractor, but the client will not accept any liability for the outcome of such medical assistance rendered. Furthermore, the client can, according to its discretion, charge the contractor for such service rendered.

The signed, ***OHASA ACT AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO 85 OF 1993 (AS AMENDED)***, as submitted by the contractor as part of his tender, shall become a binding agreement between the contractor and the client on award of the contract.

All work carried out on board a vessel will be under the auspices of the Commanding Officer of the vessel. All safety instructions issued by him or his delegated authority shall be adhered to at all times.

5. Identification

The contractor shall at all times, on site, positively identify all his employees and subcontractors by visually standardized dress/overalls and conspicuously attaching workers' respective name tags thereto.

6. Contractor's Status and Responsibilities

- 6.1 The contractor shall not permit any worker to perform any task for which such worker has not been trained.
- 6.2 Under no circumstances may the contractor's employees litter, roam, sleep or prepare food on site, unless otherwise arranged and agreed to by the client.
- 6.3 Under no circumstances may the contractor's employees accept tasks (with or without payment) from the client's personnel or any other instruction/request that is not part of this contract.
- 6.4 The contractor shall see to it that his employees do not interfere in any way with the client's employees or with occupants of the premises.

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- 6.5 The contractor shall comply with the client's security requirements.
- 6.6 The contractor shall not damage the property of the client or his employees.
- 6.7 The contractor shall leave all areas where work has been executed in a clean and neat condition.
- 6.8 The contractor shall not erect any signs or advertisements on site.
- 6.9 The contractor shall not unreasonably encumber the site with his materials and equipment, and shall make such provisions and carry out his operations in such a manner that will permit continuous, safe traffic and pedestrian circulation, and he shall provide and maintain safe access to all buildings within the work boundaries.
- 6.10 The contractor shall confine his equipment, tools, and the operations of his employees as indicated by the client and within the limits of statutory requirements.

Section 3: Maintenance Conditions

1. Materials/ Equipment and Consumable Stores

Where equipment, parts and material required to execute the scope of the work is not supplied as CFE, the contractor shall supply all such equipment, parts and material. All equipment, parts and material provided in this manner by the contractor shall meet the original manufacturer's specifications or shall be approved in writing by the client. The client reserves the right to refuse any part not meeting these requirements.

The contractor shall be responsible for the supply of all consumable items such as nuts, bolts, studs, washers, split pins, jointing compounds, gasket materials, greases, etc., the quality of which shall be appropriate for the intended purpose, meet the OEM's laid down specification, and be approved by the client.

The contractor shall provide all cleaning materials and paints, all of which shall meet the approval of the client.

2. Working Hours

When working on the client's site, all work is to be carried out during normal working hours, except when instructed by the project manager to perform work outside of normal working hours.

Normal working hours are:

Monday – Thursday	: 07:15 - 16:30
Friday	: 07:15 - 12:15

Should there be a requirement to work outside of the Dockyard's normal working hours, sufficient notification and approval is required from the project manager

3. Dockyard Facilities

- 3.1 The contractor may obtain compressed air (during normal dockyard working hours only), fresh water and electricity from the take-off and supply points fitted in the dockyard reticulation.
- 3.2 Cranage and crane drivers may be supplied to the contractor, depending on availability. Application for these services must be made to the project manager at least 24 hours in advance.
- 3.3 The contractor is to ascertain that the pressures, flow rates and electrical supply are suitable for the satisfactory functioning of his equipment.
- 3.4 The contractor shall supply all the necessary connections, cables, hoses, fittings and sub distribution boards that conform to SABS 0142 (Electrical Regulations) for the transmission of the services from the ring main to his equipment.
- 3.5 Any interruption to the supply caused by the use of faulty appliances or equipment by the contractor and necessitating restoration by client personnel will be for the contractor's account.
- 3.6 The client shall not supply equipment, material and/or services for which the client is responsible, outside the normal dockyard working hours, unless it is considered, in the client's sole discretion, to be in the client's interest to do so and provided that twenty-four (24) hours written notice of his requirements is given to the project manager by the contractor.
- 3.7 The client shall not be held responsible for any damage due to the loss of time occasioned by the breakdown or failure of the specified services for which the client is responsible, but extra time may be granted to the contractor in an appropriate case.

4. Contractor Liability

The contractor may be required to work in conjunction with other contractors, Naval and Dockyard personnel as well as sub-contractors and reasonable adjustments to the work schedule may have to be made as co-ordinated by the project manager. No liability for such deviation will be accepted by the client.

Where minor areas of damage require touching up, they shall be coated with the full paint scheme specified for the area.

5. Adverse Conditions and Defects

The contractor shall report in writing to the client any adverse conditions or defects encountered on site prior, during or after the execution of work, upon which the execution of work depends and which may adversely affect its performance.

The contractor shall not commence or continue with work until such adverse conditions or defects have been investigated and corrected, unless otherwise instructed in writing by the client.

6. Damage Reporting

During the execution of the work, the contractor shall immediately report to the client representative any damage detected with regard to all items/property related to this contract and limited to the areas which are included in this agreement.

Section 4: Safety, Health and Environmental (SHE) Legislation

1. Compliance

- 1.1 The contractor shall comply with all statutory requirements and in particular with the provisions of the Occupational Health and Safety Act, Act No 85 of 1993, as amended from time to time, where applicable, as well as with the under-mentioned conditions:
- 1.2 The contractor shall identify, document and comply with all Safety, Health and Environmental ("SHE") laws and regulations, approvals, licences and permits which are applicable to the work ("SHE Laws").
- 1.3 The contractor must keep accurate, current and legible evidence to prove compliance with the SHE conditions of this contract ("SHE conditions"). The contractor must at the request of the client produce documentary and other evidence to prove compliance with these SHE conditions.
- 1.4 The contractor will, immediately upon receipt of any notice (including approvals) from any government or statutory authority or body that relates to any SHE aspect of the work, provide the client with a copy of such notice.
- 1.5 The contractor shall hand in, along with his tender, a signed copy of, ***OHASA ACT AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO 85 OF 1993 (AS AMENDED)***. This shall form a binding agreement between the State and the successful bidder, once he has been appointed as Contractor.

2. Remediation and Termination for Breach of SHE Conditions E

- 2.1 The contractor agrees that in the event that the contractor or any of the contractor's personnel breach any SHE condition, the client will be notified immediately. Any breach or breaches will be remedied promptly and, as agreed with the client, steps taken to avoid recurrence. Nothing in this clause (2) will limit any other right or remedy available to the client.
- 2.2 The client and the contractor agree that the SHE conditions are of the utmost importance. Any significant or repeated breach or violation thereof will be deemed to be a material breach ("Material Breach") of this contract.
- 2.3 Should the client observe an act or become aware of an omission which in its opinion violates any of the SHE conditions (including but not limited to any unsafe act), or becomes aware of a planned act, or any other act that in its opinion might violate any of the SHE conditions, the client may direct the contractor or the contractor's personnel to cease, or not to proceed with such act and the contractor will, at the contractor's own cost and risk, promptly modify the contractor's and/or the contractor's personnel's method of work so that the work is carried out in accordance with these SHE conditions.
- 2.4 Where such an act or omission may in the opinion of the client cause fatality or serious injury, the client may direct the contractor to immediately cease all work and not recommence any work until an improvement plan has been submitted to and approved by the client and the method of work has been modified and the contractor's personnel retrained to remove the risk of fatality or serious injury.

3 SHE Indemnity

- 3.1 The contractor will indemnify and keep indemnified the client, its affiliates and their directors, officers, employees and agents from and against any loss or damage of any kind whatsoever, arising from:
- a. Any breach of these SHE conditions by the contractor or the contractor's personnel;
 - b. Any personal injury, illness or death to any person or damage to any property or any other loss or damage caused by or contributed to by:

- c. The performance by the contractor or the contractor's personnel of the contractor's obligations under this contract and/or
- d. The entry onto, or the activities undertaken on, under or around the site and other premises of the client and/or ARMSCOR by the contractor or the contractor's personnel;
- e. Any negligence or misconduct by the contractor or the contractor's personnel arising out of or in connection with this contract; or

3.2 Any penalty imposed for breach of an applicable law in connection with the performance of the work by the contractor or the contractor's personnel, except to the extent that any liability, loss or damage is directly caused by the client's wilful misconduct.

4. Audit, Inspection & Reporting

4.1 The client has the right, at any time, without giving prior notice to the contractor, to conduct audits or inspections of the work to determine the contractor's compliance or otherwise with these SHE Conditions. The contractor is expected to cooperate fully with the client during such audits or inspections, but the client's rights under this section will not relieve the contractor of his own obligations to conduct audits and reviews of his own SHE performance or expose the client to any liabilities which may arise from the contractor's failure to satisfy the SHE conditions.

4.2 The contractor shall render reasonable assistance to the client and give the client access to the contractor's records, the contractor's personnel, the site and the work to enable the client to conduct a SHE audit or inspection.

4.3 Where such audits or inspections reveal non-compliances with these SHE conditions and the plan and/or deficiencies in the plan, the contractor shall, at the contractor's own cost, rectify such non-compliances and/or deficiencies as soon as practicable and advise the client of all actions taken to remedy non-compliances and/or deficiencies.

4.4 The contractor shall have a system for regularly auditing own SHE performance and the contractor's personnel's performance, which must be submitted to the client's SHE manager for approval.

4.5 The contractor shall maintain a SHE audit action status register, which, upon the request of the client, must be made available for inspection. The contractor must share lessons learned (positive and negative) with the client and the contractor's personnel.

4.6 The client may conduct follow-up audits to ensure that the contractor has rectified non-compliances with the SHE conditions and the plan and/or deficiencies in the plan.

5. SHE Training

- 5.1 Before commencement of any work, the contractor shall, at the contractor's own expense, ensure that the contractor's personnel have been given the necessary SHE training.
- 5.2 The contractor shall ensure that the contractor's personnel attend refresher courses to maintain familiarity with current procedures. In addition, the contractor will, if requested by the client, provide the client with details of on-going training programmes and all revisions to such programmes during the term. The contractor will provide evidence of completion of all training and competency assessments on request of the client.
- 5.3 The contractor acknowledges that the cost of providing all training and instruction required to perform the work under this contract shall be borne by the contractor.

6. Personal Protective Equipment (PPE)

- 6.1 The contractor shall provide PPE for his employees, including the necessary training for the utilisation of the PPE.
- 6.2 The contractor shall provide the following PPE to his employees:
 - Overalls
 - Safety boots
 - Safety helmets
 - Ear protection
 - Eye/ear protection
 - Foul weather gear
 - Safety Harnesses

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- 6.3 The contractor shall provide his personnel with all required special PPE e.g. for hazardous environments, when required, in accordance with the Occupational Health and Safety Act, Act 85 of 1993 and the client's safety regulations.
- 6.4 Contractor's personnel without the proper PPE shall not be allowed on site.
- 6.5 Where necessary, the client shall provide training to the contractor's personnel, in the use of the special PPE.

ANNEXURE A: TECHNICAL AND SUPPORT SERVICES STATEMENT OF WORK

NOTE: All pressure testing is to be carried out in accordance with (iaw) the approved & latest revision of the "MAINTENANCE PRESSURE TEST PLAN" 70300-1067-360001

All painting is to be iaw the approved and latest revision of the "SUBMARINE COATING PLAN" 70300-1944-01-00-00

Pre - Harbour Acceptance Trials (HATS) are to be carried out to all equipment and systems.

Harbour Acceptance Trials are to be carried out to all equipment and systems iaw SABR 319(12) (HATS 209)

The Armscor Dockyard reserves the right to utilize their internal resources for some of the Scope of Work (SoW).

The Armscor Dockyard reserves the right to remove or add some tasks from the SoW.

For all build groups, additional work may arise based on the condition of the equipment and the resultant reports.

Additional work will be managed & authorized by means of "Works Authorizations (WA's)

The supplier shall offer a warranty period of 12 months for all work completed by the service provider and their subcontractors. Warranty shall commence when HATs have been accepted by the client.

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BUILD GROUP: 1171

DESCRIPTION: Pressure Hull Glands (PH)

TASK: 001 PH-glands to be cleaned & inspected to determine the repair scope of work.

Inspection report to be submitted.

The damaged paint areas shall be repaired in accordance with the coating plan.

Sect. 10: 15 penetrations

Sect. 20: 7 penetrations

Sect. 20 9 exhaust gas penetrations

Sect. 31: 33 penetrations

Sect. 32: 32 penetrations

Sect. 41: 32 penetrations

Sect. 42: 26 penetrations (excludes the torpedo tubes)

Corroded areas to be sponge blasted & coated in accordance with the coating plan.

BUILD GROUP: 1172

DESCRIPTION: Assembly Hatch

TASK: 001 Assembly hatch to be inspected.

An Inspection report to be submitted on the findings and condition.

Assembly hatch to be replaced on completion of work.

All securing items are to be replaced with new items:
240pcs. Spherical washers,
240 pcs. Hexagonal protection caps (GPN1000)
120 bolts M 30x150
120 nuts M30

All sleeves & seals to be replaced with new items:
100 pcs.clamp sleeves and seals to be renewed.

Assembly hatch flanges (5.8 m²) to be cleaned.

Lining groove 10x10x7300 mm to be sand blasted.

All Painting to be inaw the coating plan.

BUILD GROUP: 1175

DESCRIPTION: Cells & Tanks inside & outside of the Pressure Hull

- TASK: 001** Main ballast tanks No 1-4 (370 m²)
Fuel oil bunker No 5 (160 m²)
Trim tank 1-4 (190 m²)
Fresh water tank 1+2 (97 m²)
Lube oil tank (engines 30 m²)
Compensating fuel oil tank no. 1+ 2 (92m²)
Compensating tank no. 1+ 2 (80 m²)
Sewage water tank (20 m²)
Contaminated Lubrication oil tank (16 m²) Fuel oil tank 1-7 (333 m²)
External fuel oil tank No 13
Fuel oil collecting tank (7.5 m²)
Weapon compensating tank 1+2 (70 m²)
Pressure proof compensating tank PS+SB (36 m²) Distillate water tank (30 m²)
Flush water tank (16 m²) Flooding water tank. (30 m²) Fresh water emulsion tank 1+2
Chain Locker
Snorkel tank
- TASK: 002** All tanks float switches to be inspected.
Inspection report to be submitted.
- TASK: 003** Seals/gaskets of manhole covers to be renewed.
- TASK: 004** All tanks to have a full coat applied i.a.w the coating plan prior to closing.
Close tanks
- TASK: 005** 21 pcs. Dipsticks to be renewed
Trim tanks 3+4
Fresh water tanks 1+2
Lube oil tank (engines)
Compensating fuel oil tank no. 1+ 2
Compensating tank no. 1+ 2

RESTRICTED

Sewage water tank
Contaminated Lubrication oil tank
Fuel oil collecting tank
Compensating tank 1+2
Pressure proof compensating tank Port & Stbd
Distillate water tank
Flush water tank
Flooding water tank
Fresh water emulsion tank 1 & 2

BUILD GROUP: 1276

DESCRIPTION: Pressure Proof Storage Containers (PPSC)

- TASK: 001** Containers to be inspected.
Report to be submitted.
Cover seals to be renewed.

The PPSC corroded areas are to be sponge blasted.

Damaged coating areas to be prepared and repainted iaw the provided paint specification.

A complete coat is to be applied on completion of repairs and touch up.
- TASK: 002** Pressure Proof Storage containers are to be reinstalled after completion of work.

BUILD GROUP: 1280/1282

DESCRIPTION: Outside Structure of the Submarine

- TASK: 001** All GRP covering plates and doors of conning tower, upper GRP deck fore and aft, as well as stern tube boss and 4 pcs each GRP covers for the flank array Port & Stbd are to be installed on completion of all work.
- TASK: 002** All GRP screws to be renewed.
The screw front surfaces to be grit blasted and painted in accordance with the coating plan.
- TASK: 003** GRP plates and foundations to be inspected.
Report to be submitted.

- TASK: 004** Damaged paint areas on GRP the external surfaces to be prepared and repaired in accordance with the coating plan.
One full coat to be applied on the GRP external surfaces on completion of all repairs & touch ups.
- TASK: 005** All screwed steel plates to be removed, inspected, cleaned, painted, stored and reinstalled.
- Corrosion areas on the screwed plates to be swept (grit blasted) or stripped/ground down to the clean material. These areas are to be prepared and coated in accordance with the coating plan.
- TASK: 006** Pressure Hull and Shell Fore and Aft:
- The pressure hull including the area behind the covering plates fore and aft, and the area behind the covering plates of the stern tube to be cleaned by UHP-water cleaning (1000 bar) on the outside.
- Two layers of the existing coating system to be removed
- Damage to the existing coating system to be blasted to sound material
- Inspection of the pressure hull to be carried out.
- Inspection report to be submitted.
- Above areas to be fully coated on completion of all work jaw the coating plan.
- TASK: 007** Removed ballast weights to be restored and re-shored on completion of work.
- The areas shall be inspected & a report is to be submitted.
- Storage places to be cleaned, loose paint areas to be repaired in accordance with coating plan.
- Damaged paint areas of the ballast weights to be repaired in accordance with coating plan.

TASK: 008

Fin, Conning Tower & Superstructure:

Corroded areas to be sponge blasted down to the clean material.

The areas shall be inspected & a report is to be submitted.

The balance of the areas to have 2 layers of the existing coating system removed.

The damaged paint areas shall be repaired in accordance with the coating plan.

The areas to be fully over coated iaw the coating plan.

Task: 009

PH-Penetrations Hoistable Masts:

The pressure hull penetrations shall be cleaned & inspected.

A report is to be submitted.

Penetrations flange surfaces to be protected by mean of steel blanks.

All penetrations and the immediate surrounding pressure hull to be cleaned, sponge blasted and preserved in accordance with the coating plan.

Task: 010

Ballast Keel:

Keel bays to be closed over the entire length on completion of all work.

Removed ballast weights to be restored and wedged. Spare wedges to be supplied.

Corrosion areas at the Ballast Keel to be sponge blasted or mechanically ground down to the clean material.

The areas shall be inspected & a report is to be submitted.

The damaged paint areas shall be repaired in accordance with the coating plan.

The Ballast Keel weights shall all be coated in accordance with the coating plan.

Task: 011

Upper bow room (Torpedo running up area between the muzzle shutters and the shell flaps).

Area to be HP washed & cleaned.

RESTRICTED

The areas shall be inspected & a report is to be submitted.

Corrosion areas to be cleaned/ground mechanically to clean material.

The damaged paint areas shall be repaired in accordance with the coating plan.

The upper bow room to be coated in accordance with the coating plan.

Task: 012

Chain locker

Area to be HP washed & cleaned

Corrosion areas to be cleaned/ground mechanically to clean material.

The areas shall be inspected & a report is to be submitted.

The damaged paint areas shall be repaired in accordance with the coating plan.

The Chain locker is to be coated in accordance with the coating plan.

Task: 013

Main ballast tank 1-4, fuel oil bunker No 5:

Areas to be HP washed & cleaned.

The areas shall be inspected & a report is to be submitted.

Corrosion areas to be cleaned/ground mechanically to the clean material.

The damaged paint areas shall be repaired in accordance with the coating plan.

One full coat shall be applied to Ballast Tanks 1 – 4 & Oil bunker No 5 on completion of all work.

Task: 014

Ballast weights (Main ballast tanks 1-4, fuel oil bunker No 5)
(1777 pcs 45,369 Kg) shall be removed.

Areas to be HP washed & cleaned.

The areas shall be inspected & a report is to be submitted.

The damaged paint areas shall be repaired in accordance with the coating plan.

Ballast weights to be cleaned & coated in accordance with the coating plan.

RESTRICTED

Removed ballast weights to be restored and wedged.

- TASK: 015** Remove the FWD port and Starboard cones of the Flank Array system.
Inspect the cones & submit a report.
Paint the cones iaw the coating plan.
Replace the cones when required.
- TASK: 016** Additional work, repair the damage section of the keel FWD of section 42 by removing the damaged section and replacing with a new section.
Material details, drawings & welding specifications will be provided.
All painting to be in accordance with the coating plan.
- TASK: 017** Additional work, carry out repairs to casing securing beams as per survey report:
Visual inspection of casing securing beam's recommendations.
File reference 7103-13-02-01.
- BUILD GROUP: 1613**
- DESCRIPTION: Pressure Tight Hatch Covers**
- TASK: 001** Hatch covers for the aft upper and lower battery hatch, Upper and lower access trunk hatch, Divers hatch port side and Fwd upper and lower battery hatch to be disassembled.
Components to be cleaned and checked.
Report to be submitted.
Seals, springs and venting cocks to be renewed.
After completion of work all hatch covers to be reinstalled.
- TASK: 002** Corrosion areas to be cleaned/ground mechanically to the clean material.
The areas shall be repaired and painted in accordance with the coating plan.
- TASK: 003** 2 in No Air traps to be removed, cleaned and inspected.
Inspection report to be submitted.

RESTRICTED

Air traps to be reinstalled,
Functional test to be carried out.

BUILD GROUP: 1636

DESCRIPTION: Stairs, Floorboards and Gratings

TASK: 001 Floor plates and floor frames of the ECR, galley, sanitary rooms, CIC and engine room, passage way and the forward accommodation to be checked.
Inspection report to be submitted.
Renewal of hinges and push button catches where required.
Floor plates to be reinstalled after completion of work.

BUILD GROUP: 1780

DESCRIPTION: Safety & Lifesaving Installation

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 1910

DESCRIPTION: Cathelco System

TASK: 001 Control cabinet to be checked.

Report to be submitted.

Cathelco anodes and cables to be removed and renewed to a modified type. (7 in No)

BUILD GROUP: 1916

DESCRIPTION: Corrosion Protection through Sacrificial Anodes

TASK: 001 Sacrificial Anodes

Anode protection rings of the sea water inlet valves to be renewed
Inspection report to be submitted.

RESTRICTED

TASK: 002 Anode protection units outside the pressure hull under consideration of the anode protection drawings 365/1912-01-00-00 to be renewed

Pos No 1: 244 pcs.
Pos No 2: 85 pcs.
Pos No 3: 233 pcs.
Pos No.4: 18 pcs.

Inspection report to be submitted.

TASK: 003 Anode protection units of cells and tanks inside the pressure hull under consideration of the anode protection drawings: 365/1912-02-00-00 to be inspected.

Pos No 1: 90 pcs.
Pos No 2: 4 pcs.
Pos No 3: 190 pcs.
Pos No 4: 124 pcs.

Inspection report to be submitted.

TASK: 004 Anode protections of the exhaust silencers of the diesel engines to be inspected. (40 in No)

Inspection report to be submitted.

Seals to be renewed.

TASK: 005 Anode protection of the sea water filters to be inspected.

Inspection report to be submitted (4 in No)

TASK: 006 Carry out repairs to Torpedo tube zinc anodes as per Survey report .

BUILD GROUP: 1947

DESCRIPTION: Paint Protection for Inner Ship

TASK: 001 Paint Inner Ship

Following compartments, bilges and between deck spaces:

RESTRICTED

Control Room (CR)
Command Information Centre (CIC)
Engine room
Aux. engine room
Stowage room
Sanitary rooms
Accommodations
Torpedo stowage space

cleaned/ground Loose paint to be removed, corrosion areas to be mechanically down to the clean material.

Damaged paint areas to be sanded and repaired in accordance with coating plan.

Report to be submitted.

To be cleaned prior to painting.

TASK: 002 On completion of all work, all internal compartments are to given 1 full final coat of paint as per coating plan.

BUILD GROUP: 2110

DESCRIPTION: Diesel Engines

TASK: 001 Maintenance W 5 of the diesel engines No 1-4 after an operating time of 3000 hours to be carried out.

Decompression cocks to be renewed.

TASK: 002 4 back-up batteries in the control board (engine room) to be replaced.

TASK: 003 Thermal pipe insulating of the diesel engines to be checked. Report to be submitted.

TASK: 004 80 in No Anti- vibration and shock absorbers and mounting screws for diesel engine No 1-4 to be renewed.

TASK: 005 Corroded areas on the foundations to be sanded/ground down to clean material.
The areas shall be repaired in accordance with the Coating Plan.

RESTRICTED

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the Coating Plan.

Rubber elements to be coated with 1 coat of Pliobond.

TASK: 006 Remove, inspect, repair if required, test and replace DG 1 to DG 4 fuel injection pumps. As per CMRS Cards: 2110-06-0045, 2110-08-U245 and 2115-08-U001.

TASK: 007 Repair by replacement 1 in number defective UPS relay for DG 2 and 4 as per SABR 3786, PART 5, ITEM 007, FIG NO 10-0010, and NSN 12-372-1833.

TASK: 008 Repair by replacement 1 in number cover (Filler Cap) on Diesel No 3 as per SABR 3784, PART 5, Page 44, ITEM 08, FIG NO 01-0070, NSN 2930-12-343-6080 and Part Number: 0000181802.

TASK: 009 Repair by replacement 2 in number diesel generator fuel coolers as per SABR 3784 PART 5, ITEM 1, FIG NO 12-0150, and PART NUMBER: 004701960.

TASK: 010 Repair by replacement IC EEPROM SER8KX (Micro circuit memory) as per SABR 3788 PART 5, ITEM 011, FIG NO 04-0010, and NSN 18-195-0405. Item to be programmed before installation.

TASK: 011 Repair by replacement 1 in number Current regulation potentiometer on MCS 5 as per SABR 3788 PART 5, ITEM 041, FIG NO 03-0010, and Part Number 599039-772648/98.

BUILD GROUP: 2124

DESCRIPTION: Hydraulic System Exhaust Gas Valves

TASK: 001 4 pcs. Hydraulic block X620 and valves.

Fitting no's X141, X143, X151, X153,

To be transported to the workshop.

Equipment to be cleaned, inspected, overhauled & tested.

Inspection report to be submitted.

Seals to be renewed.

Hydraulic block and valves to be painted in accordance with the coating plan.

RESTRICTED

- TASK: 002** Hydraulic block X734 with 8pcs. Manual control valves.
Fitting no's X160, X161, X162, X163, X170, X171, X172, X173,
To be transported to the workshop.
Equipment to be cleaned, inspected, overhauled & tested.
Inspection report to be submitted.
Seals to be renewed.
Hydraulic block and valves to be painted in accordance with the coating plan.
- TASK: 003** 4 pcs Oscillating hydraulic motors for the inner exhaust gas Valves
Fitting No's X 622, X623, X626, X627
To be transported to the workshop.
Equipment to be cleaned, inspected, overhauled & tested.
Inspection report to be submitted.
Seals to be renewed.
Oscillating Hydraulic motors to be painted in accordance with the coating plan.
- TASK: 004** 4 pcs. Grinding hydraulic motors for the outer exhaust gas valves
Fitting no's: X 632, X633, X720, X721,
To be transported to the workshop.
Equipment to be cleaned, inspected, overhauled & tested.
Inspection report to be submitted.
Seals to be renewed.
Grinding Hydraulic motors to be painted in accordance with the coating plan
- TASK: 005** 4 pcs. Operating hydraulic cylinders outer exhaust gas valves
Fitting no's: 21241510, 21241511, 21241528, 21241529
To be transported to the workshop.

RESTRICTED

Equipment to be cleaned, inspected, overhauled & tested.

Inspection report to be submitted.

Seals to be renewed.

Operating hydraulic cylinders to be painted in accordance with the coating plan.

TASK: 006

4 pcs. Operating hydraulic cylinder inner exhaust gas valves

Fitting no's: 21241518, 21241519, 21241530, 21241531

To be transported to the workshop.

Equipment to be cleaned, inspected, overhauled & tested.

Inspection report to be submitted.

Seals to be renewed.

Operating hydraulic cylinders to be painted in accordance with the coating plan.

TASK: 007

1 pc. Hydraulic cylinder for exhaust gas change-over flap

Fitting no: 21241512

To be transported to the workshop.

Equipment to be cleaned, inspected, overhauled & tested.

Inspection report to be submitted.

Seals to be renewed.

Hydraulic cylinder to be painted in accordance with the coating plan.

BUILD GROUP: 2128

DESCRIPTION: Exhaust Gas Valves

TASK: 001

Inner exhaust gas valves (4 in No)

Fitting-No's 21280100, 21280200, 21280300, 21280400

To be transported to the workshop.

Valves to be disassembled. Components to be cleaned and checked.

Report to be submitted.

Valves to be overhauled and pressure tested.

RESTRICTED

Valve seats, cooling jacket Equip No. 146747 and seals to be renewed.

Inner exhaust gas valves be painted in accordance with the coating plan

Valves to be reinstalled and pressure tested.

TASK: 002

Outer exhaust gas valves (4 in No)

Fitting-No's 21280500, 21280600, 21280700, 21280800

To be transported to the workshop.

Valves to be disassembled. Components to be cleaned and checked.

Report to be submitted.

Necked studs and gaskets to be renewed.

Valve to be overhauled and pressure tested.

Valve seats and seals to be renewed.

Outer exhaust gas valves to be painted in accordance with the coating plan.

Valves to be reinstalled and pressure tested.

TASK: 003

Actuation shaft of Change-Over Flap

To be transported to the workshop.

Actuation shaft, bearings and the hull penetration to be cleaned and checked.

Report to be submitted.

Actuation shaft of Change-Over Flap to be reinstalled.

Gaskets to be renewed.

TASK: 004

Actuating rods of the Change- over Flap

To be transported to the workshop.

Actuating rods to be cleaned and checked.

Report to be submitted.

Corroded areas to be cleaned and paint damage to be repaired iaw the coating plan

RESTRICTED

Actuating rods to be painted in accordance with the coating plan.

Actuating rods of the Change- over Flap to be reinstalled.

BUILD GROUP: 2129

DESCRIPTION: Exhaust Gas Change- Over Flap

TASK: 001 Exhaust gas change-over flaps

Change-over flap fitting No's 2129A034, A035, A036, A037

To be transported to the workshop.

Change over flap to be disassembled, cleaned & checked.

Inspection report to be submitted.

Corroded areas to be cleaned to remove all corrosion

Change over flap to be overhauled. Seals and bushes to be renewed.

Damaged paint to be repaired in accordance with the coating plan.

Change over flap to be painted in accordance with the coating plan.

Change over flap to be reinstalled.

TASK: 002 Compensator Fitting No's 2129A152, A145, A153, A144, A150, A154, A151.

Compensators to be cleaned & checked.

Inspection report to be submitted.

TASK: 003 Combination hull valves (2 in No)

Fitting no's 2129A005, 2129A023,

To be transported to the workshop.

To be disassembled, components to be cleaned and checked.

Inspection report to be submitted.

Seals to be renewed.

Valves to be reassembled and pressure tested.

Reinstallation of the valves including pressure test on board to be performed.

Valve sealing surfaces on the PH gland to be clean & undamaged.

- TASK: 004** Exhaust gas silencer drains
Silencer drain tubes to be renewed. Material 1.4539
Diesel 1 tube No: 417, 418, 441/25/2.5
Diesel 2 tube No.: 419, 420, 440/25/2.5
Diesel 3 tube No.: 422, 421, 439/25/2.5
Diesel 4 tube No.: 423, 424, 444/25/2.5
- TASK: 005** Pneumatic drain valves (4 in No)
Fitting-No's 2129A001, A002, A003, A004
To be renewed
- Task: 006** Pneumatic exhaust gas venting valves (4 in No)
Fitting No.: 2129A007, A008, A009, A010.
To be transported to the workshop.
To be disassembled, components to be cleaned and checked.
Inspection report to be submitted.
Valves to be overhauled, seals and diaphragm bellows to be renewed.
Valves to be reassembled and pressure tested.
Reinstallation of the valves including pressure test on board to be performed.
- BUILD GROUP: 2136**
- DESCRIPTION: Pressure Water/Fuel Oil System**
- TASK: 001** Hull valves and valves of the second shut-off to be
disassembled in workshop.
Components to be cleaned and to be checked.
Inspection reports to be submitted.
Seals to be renewed.
Valves to be reassembled pressure tested (according to the appropriate specification).
Valve sealing surfaces on the PH gland to clean & undamaged

RESTRICTED

Reinstallation of the valves including pressure test on board to be performed.

Valves of the fuel oil transfer and pressure water system (10 in No)
Fitting No. 2136B020, B021, B056, B070, B032, B033, B039, B040, B054, B055

TASK: 002 Screwed bonnet type shut-off valve (17 in No)
Fitting-No.:2136B008,B010,B011,B018,B027,B029,
B041,B042,B043,B044,B045,B047,B048,B053,
B071,B072,B073 and

Screwed bonnet non-return valve (2 in No)
Fitting-No.: 2136B015, B064 to be replaced by Göpfert valves.

Pipe and pipe connection to the new valve type to be renewed.

TASK: 003 Fuel oil flow meter to be cleaned and checked.
Fuel oil flow meter to be reinstalled
Fitting No: 2136B101, B104.

TASK: 004 Rubber compensators to be renewed. (9 in No)
Fitting No.:2136B117, B118, B119, B120, B144, B145, B146, B152, B177.

TASK: 005 Safety valves to be overhauled. (8 in No)
Seals and springs to be renewed.
Safety valves to be pressure tested and refitted.
Fitting No's 2136B122, B123, B124, B125, B126, B127, B142, and B143.

Safety valve Fitting No. 2136B133 to be renewed. (1 in No)

TASK: 006 Shut-off flaps to be overhauled. (9 in No)
Seals to be renewed.
Safety valves to be pressure tested and refitted.
Fitting No: 2136B001, B002, B003, B004, B024, B025, B030, B181 and B182.

TASK: 007 Automatic Venting Valve to be overhauled and reinstalled. (2 in No)
Seals to be renewed.
Fitting No's: 2136B129, B130.

TASK: 008 Strainers to be removed, cleaned and replaced. (2 in No)
Seals to be renewed.
Fitting No's: 2136B114, B128.

RESTRICTED

TASK: 009 System to be checked and Pressure tested on completion of all work.
Report on all above items to be submitted.

BUILD GROUP: 2148

DESCRIPTION: Diesel Engine Lube Oil System

TASK: 001 Hull valves and valves of the second shut-off to be
disassembled in workshop.
Components to be cleaned and to be checked.
Inspection reports to be submitted.
Seals to be renewed.
Valves to be reassembled, pressure tested (according to the appropriate specification).
Valve sealing surfaces on the PH gland to be clean & undamaged.
Reinstallation of the valves including pressure test on board to be performed.

Valves of the lube Oil system. (2 in No)
Fitting No's 2148C023, C024

TASK: 002 Screwed bonnet type shut-off valve (5 in No)
Fitting-No's 2148C026, C160, C161, C162, C163
Drain cock (1 in No)
Fitting-No 2148C006
Three-way cock (4 in No)
Fitting-No's 2148C001, C002, C015, C017 to be replaced by a Göpfert valves.
Pipe and pipe connection to the new valve type to be renewed.

TASK: 003 Strainer No. 2148C102 to be removed, cleaned and replaced.
Seals to be renewed

TASK: 004 Safety valves to be overhauled. (2 in No)
Seals and springs to be renewed.
Safety valves to be pressure tested and refitted.
Fitting No: 2148C103, C104

TASK: 005 Rubber compensators to be renewed. (20 in No)
Fitting No's 2148C130, C131, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C157, and C158.

RESTRICTED

TASK: 006 2 pcs. Pneumatic driven dirty oil pumps
Fitting No's C100, C101
To be cleaned and disassembled.
Pump to be overhauled, wear parts & seals to be renewed.
Pump to be reinstalled.

TASK: 007 Type Coupling PN16 to be renewed. (4 in No)
Fitting No's 2148C164, C165, C166, C167

TASK: 008 System to be checked and Pressure tested.
Report on all above to be submitted.

BUILD GROUP: 2154

DESCRIPTION: Cooling Sea Water System (HP)

TASK: 001 Hull valves and valves of the second shut-off to be
disassembled in workshop.
Components to be cleaned and to be checked.
Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled, pressure tested (according to the
appropriate specification).
Valve sealing surfaces on the PH gland to be clean & undamaged
Reinstallation of the valves including pressure test on board to be
performed.

Valves of the HP cooling sea water system (5 in No)
Fitting No's 2154E001, E073
Fitting No's 2154E052, E054, E137

Ball valves with Hydraulic Rotary Drive (3 in No)
Fitting No.2154E053, E055, E138.
Seals and Balls to be renewed.

TASK: 002 Rubber compensators and fittings to be renewed (53 in No)
Fitting No.2154E140, E141,E201, E202,E203, E204,E205,
E206, E213, E214, E215, E216,E217, E218, E219,E220,E221, E222,
E223, E224, E225, E226, E227,E228,E229, E230, E233, E234,
E235, E236, E237, E238, E239, E240, E241, E245, E250,
E251, E252, E253, E254, E255, E291, E292, E293, E294, E295,
E296, E297, E298, E335, E336, E337

TASK: 003 Screwed bonnet type shut-off valve (27 in No)

RESTRICTED

- E101,
E318,
- Fitting-No.: 2154E002, E003, E005, E006, E009, E010, E040, E041, E048, E051, E061, E072, E092, E093, E094, E100, E106, E107, E110, E114, E133, E136, E307, E308, E315,
- to be replaced by Göpfert valves.
Pipe and pipe connection to the new valve type to be renewed.
- TASK: 004** Strainer No. 2154E247 to be cleaned.
Seals to be renewed.
- TASK: 005** Watertight shut off flaps (15 in No)
Valves to be overhauled and reinstalled.
Seals to be renewed.
Fitting No's 2154E004, E017, E018, E022, E028, E029, E030, E031, E042, E043, E082, E083, E311, E312, E319.
- TASK: 006** Non return flaps to be overhauled. (4 in No)
Seals to be renewed.
Fitting No's 2154E007, E008, E102, E103
- TASK: 007** Pneumatic driven Ball Cocks (14 in No)
Fitting No. 2154/ E014, E016, E086, E087, E088, E089, E090, E091, E0109, E111, E112, E113, E115, E119 to be removed, cleaned, disassembled overhauled, pressure tested and reinstalled.
Seals and Balls to be renewed.
Report to be submitted.
- TASK: 008** Hand operated Ball Cocks (4 in No)
Fitting No: E032, E034, E074, E076 to be cleaned, disassembled, overhauled, pressure tested and reinstalled.
Seals and Balls to be renewed.
Report to be submitted.
2 pcs. Ball Cocks Fitting No; M021, M022 to be renewed.
- TASK: 009** 4 pcs. Fluid Silencers 2154E320, E321, E322, E323
To be removed, cleaned and disassembled.
Inspection report to be submitted.
Rubber Insert and Sealing to be renewed.
Fluid Silencers to be assembled, pressure tested and reinstalled.
- TASK: 010** Dual pressure gauge unit to be renewed.
Fitting No. 2154E269.
- TASK: 011** Globe valves to be checked. (2 in No)

RESTRICTED

Fitting-No.: 2154E039, E050
Seals and stop cones to be renewed.
Pressure test on completion.
Report to be submitted.

TASK: 012 Pressure test of the system to be performed.
Report to be submitted.

BUILD GROUP: 2155

DESCRIPTION: Cooling Sea Water System (LP)

TASK: 001 Hull valves and valves of the second shut-off to be
disassembled in workshop.
Components to be cleaned and to be checked. Inspection report
to be submitted.
Seals to be renewed.
Valves to be reassembled pressure tested (according to the
appropriate specification).
Valve sealing surfaces on the PH gland to smooth and cleaned.
Damaged hull studs, bolts and nuts to be renewed.
Reinstallation of the valves including pressure test on board to
be performed.

Hull valves of the cooling sea water (LP). (4 in No)
Fitting No's 2155E057, E066, E078, E080.

Pneumatic driven Ball Cocks of the cooling sea water (LP). (4 in No)
Fitting No's 2155E058, E067, E079, E081.
Remark: Valve balls to be renewed.

TASK: 002 Safety valves to be overhauled. (6 in No)
Seals and springs to be renewed.
Valves to be reassembled, adjusted and tested.
Fitting No's 2155E075, E077, E118, E143, E144, and E147.

TASK: 003 Watertight shut off flaps (13 in No)
Flaps to be cleaned, overhauled and pressure tested in the workshop.
Seals to be renewed. Shut off flags to be reinstalled.
Fitting No's 2155E019, E020, E023, E 024, E027 E044, E045,
E046, E047, E056, E059, E062, E069

TASK: 004 4 pcs. Non return flaps (4 in No)
Flaps to be cleaned, overhauled and pressure tested in the workshop.
Seals to be renewed.

RESTRICTED

Non return flaps to be reinstalled.
Fitting No's 2155 E035, E036, E 037, E038

TASK: 005 Strainers to be cleaned (2 in No)
Seals to be renewed.
Fitting No's 2155 E120, E121.

TASK: 006 Rubber compensators to be renewed. (13 in No)
Fitting No's 2155E162, E163, E164, E165, E125, E124, E130,
E131, E126, E127, E128, E129, E132.

TASK: 007 Screwed bonnet type shut-off valves (6 in No)
Fitting No's 2155E060, E063, E070, E071, E104, & E105
To be replaced by Göpfert valves. Pipe and pipe connection to the
valve type to be renewed.

TASK: 008 Pressure test of the system.
System to be checked.
Report to be submitted.

BUILD GROUP: 2156

DESCRIPTION: Cooling Fresh Water System for Diesel Engines

TASK: 001 Compensators to be renewed (16 in No)
Fitting No's 2156 D110, D113, D114, D117, D111, D112, D115,
D116, D102, D103, D104, D101, D105, D106, D107, D108.

TASK: 002 Safety valve to be renewed. (1 in No)
Safety valve to be pressure tested and refitted.
Fitting No. 2156D122

TASK: 003 Screwed bonnet type shut-off valves (10 in No)
Valves to be replaced by Göpfert valves.
Pipe and pipe connection to the new valve type to be renewed.
Fitting No's 2156D001, D002, D003, D004, D006, D007, D008,
D009, D141, and D142.

TASK: 004 System to be checked.
Pressure test of the system.
Report to be submitted.

BUILD GROUP: 2158

DESCRIPTION: Freshwater Cooling Pump

RESTRICTED

- TASK: 001** Freshwater cooling pump (1 in No)
Fitting No: 21580200 (REW 40-260)
Pump to be cleaned, dismantled and overhauled.
Report to be submitted
Impeller as well as split rings, bearings and seals to be renewed.
- Remark: The pump has been in service for 25 000 hrs.
- TASK: 002** Damaged paint & painting to be repaired in accordance with the Coating Plan.
- TASK: 003** Anti vibration and shock absorbers for the Freshwater cooling pump (4 in No) to be renewed.
- TASK: 004** Corroded areas on the foundation in the area of the shock absorber to be ground down to the clean material.
The area shall be repaired in accordance with Coating Plan.
- After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with Coating Plan.
Rubber element to be coated with 1 coat of Pliobond.
- Task 005** E-Motor for Freshwater pump (1 in No)
Type DVX 80/4B
Motor to be dismantled, checked and overhauled.
Report to be submitted.
Armature (armature windings) and stator to be washed, dried and re impregnated. Commutator to be skimmed and undercut.
Armature to be balanced.
Carbon brushes and bearings to be renewed. Motor to be reassembled.
A 4 hrs test bench run with vibration analysis to be performed.
- E-Motor to be reinstalled on completion of work.
- Damaged paint to be repaired in accordance with the Coating Plan followed by one complete coat.
- BUILD GROUP:** 2178
- DESCRIPTION:** Snorkel
- TASK: 001** Snorkel system.
To be checked.

RESTRICTED

Report to be submitted.

Connecting cables to check by insulation measurements.

Renewal of the head valve seals.

Renewal of the compressed air hoses.

Renewal of the water contact.

TASK: 002

Snorkel mast

To be disassembled, cleaned, checked and overhauled.

Report to be submitted.

All Seals and wear parts to be renewed.

Corroded areas of the snorkel-mast to be blasted and coated in accordance with the coating plan.

Snorkel mast to be replaced on completion of all work.

TASK: 003

Snorkel panel 21790101

To be inspected.

Screw and solder joints to be checked. Panel on the inside to be cleaned.

Report to be submitted.

TASK: 004

Inner snorkel flap:

Inner snorkel flap to be opened, cleaned and checked. Report to be submitted.

Seat ring, O-ring and inspection flange gasket to be renewed.

Pressure test on area to be performed on completion of work.

Corroded areas / damaged paintwork to be cleaned and paintwork repaired.

All coating to be in accordance with the coating plan.

TASK: 005

Outer snorkel flap:

Outer snorkel flap to be transported to the workshop

To be disassembled, cleaned & checked.

RESTRICTED

Report to be submitted.

Seat ring to be removed, Seals and gaskets to be renewed.

Corroded areas / damaged paintwork to be cleaned and paintwork repaired.

All coating to be in accordance with the coating plan.

Pressure tests in workshop

Outer snorkel flap to be replaced on completion of all work.

Carry out a pressure test.

BUILD GROUP **2510**

DESCRIPTION **Shafting**

TASK 001 Thrust bearing:
Axial and radial clearances to be checked.
Mountings, thrust flange, bearing blocks, & thrust blocks to be checked.
Report to be submitted.

TASK 002 Oil cooler to be checked.
Pressure test to be performed.
Report to be submitted.

TASK 003 Propeller to be checked.
Cleaning of (rotating brushes) the propeller to be carried out.
Report to be submitted.
Propeller to be reinstalled.
Renewal of zinc protection in stern tube and on propeller.

TASK 004 Propeller shaft seal to be cleaned.
Propeller-shaft, liners, propeller-shaft bearings and propeller shaft to be checked.
Report to be submitted.
All parts to be reinstalled.

TASK 005 Shaft seal be inspected and overhauled.
Renewal of wearing parts of the shaft sealing such as carbon ring, O-ring's, springs and anode protection.
Report to be submitted.
Pressure test to be performed.
Shaft seal to be reinstalled.

RESTRICTED

TASK 006 Compensators of the turning motor (3 in No)
Items to be renewed.
Fitting No's. 25181038, 1039, 1040
Items to be renewed.

BUILD GROUP **2544**

DESCRIPTION **HOLLOW SPRING MAIN COUPLING**

TASK 001 Hollow spring coupling:
Inspection to be carried out.
Report to be submitted.

TASK 002 Corroded areas to be ground down to clean material.
The area to be repaired & painted in accordance to Coating
Plan.

BUILD GROUP: **2551**

DESCRIPTION: **Main Generators**

TASK: 001 4 in number generators
Generators 25510101, 0201, 0301, 0401 to be opened and cleaned.
Carry out an inspection of the charging Generators.
Report to be submitted.
Generators to be reclosed.
Pre-condition:
For the inspection the generators have to be ready for operation, also
the battery has to be ready.

TASK: 002 Generator cables insulation resistance and brittleness test to be
performed.
Report to be submitted.

TASK: 003 Anti vibration and shock absorber (24 pcs.) of the generators to be
renewed.
Corroded areas on the generator foundations to be cleaned to remove
all corrosion.

RESTRICTED

The areas are to be repaired in accordance with SA Navy Submarine coating plan.

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with coating plan.

Rubber elements to be coated with 1 coat of Pliobond.

BUILD GROUP: 2552

DESCRIPTION: Propulsion Motor

TASK: 001 Propulsion motor Type 1GR4484-9ZZ99-Z Ident No 25520101

Inspection to be carried out.

Propulsion motor to be opened, cleaned & dried.

Removal of the upper bearing halves of both bearings. Bearing halves to be cleaned for inspection.

4 pcs .dial oil shaft seals to be renewed. ~~Anker body to lift.~~

Propulsion motor and bearing halves to be checked.

Report to be submitted.

Spare part proposal and cost offer to be submitted for tasks 1 - 8

Propulsion motor to be reassembled and tested on completion of all work.

Test protocol to be submitted.

TASK: 002 Brush-carrier to be cleaned, turning device to be checked.

192 carbon brushes E50-12, 5*20*32, 5 to be renewed.

TASK: 003 Tacho generator J712325P5, 7, 8 and revolution counter J712325P4, 8 to be checked.

1pc. Gear belt to be renewed.

Report to be submitted.

TASK: 004 Transmitter for temperature measurement to be cleaned, checked and adjusted.

Report to be submitted.

RESTRICTED

- TASK: 005** Propulsion motor cables insulation resistance and brittleness test to be performed.
- Report to be submitted.
-
- Task: 006** 2 pcs. Air coolers Ps + Stbd Type 1870/650/46/ DSv-S200-50N202 for the propulsion motor deflection and socket chamber.
- Cooler to be inspected, results to be reported.
- Cooler to be cleaned insitu with pipe brushes and high pressure flushed. O- and U-profile seals for the chamber to be renewed.
- Pressure test to be performed.
- Report to be submitted.
-
- Task: 007** Anti vibration and shock absorber (32 pcs.) for the propulsion motor
- To be renewed.
- Spacers to be manufactured and alignment to be checked.
- Report to be submitted.
-
- Corroded areas on the propeller motor foundation to be ground down to the clean material.
- The areas shall be repaired in accordance with coating plan
- After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating Plan.
- Rubber elements to be coated with 1 coat of Pliobond.
-
- Task: 008** 4 separate cooling fans for the propulsion motor Type 1GA4 136
- To be transported to the workshop
- Motors to be overhauled
- Carbon brushes E50-12, 5*20*32, 5 to be renewed
- Motors to be tested.
- Report to be submitted.

RESTRICTED

All painting to be in accordance with the coating plan.

BUILD GROUP	2553
DESCRIPTION	PUMPS FOR COOLING SEAWATER SYSTEM
TASK 001	Main cooling sea water pumps HP (2 in No) Ident. No: 25530100 (REW 100-200) N0.1 Ident. No: 25530200 (REW 65-200) N0.2 Pumps to be cleaned and transported to the workshop. Pumps to be dismantled & overhauled. Report to be submitted. Impeller, as well as split rings and seals to be renewed. Pumps to be reinstalled.
TASK 002 and	Damage paint to HP cooling sea water pumps to be repaired given 1 x full coat in accordance with coating plan.
TASK 003	E-motors for Main sea water cooling pumps HP Type GMS518 Ident. No: 25530101, Type GMS413 Ident. No. 25530201 Motor to be dismantled; checked & overhauled. Report to be submitted. Motor to be cleaned, brushes and bearings to be renewed and re impregnated. Commentator to be skimmed and undercut. Armature to be balanced. Motor to be reassembled. A 4 hr test bench run with vibration analysis to be performed. Damaged paint to be repaired & coated in accordance with the coating plan. Reinstall on completion of maintenance
TASK 004	Anti-vibration and shock absorbers (4 pcs.) and screws for main cooling sea water pumps (HP) to be renewed.
TASK 005	Corroded spots on the foundations in the area of the Main sea water cooling pump shock absorber to be removed down to clean material. The spot shall be patch coated with 1x primer

RESTRICTED

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with coating plan.
Rubber elements to be coated with 1 coat of Pliobond.

- TASK 006** Converter sea water cooling pumps (2 in No)
Ident. No's 25530300, 25530400 (REW 65-200)
Pumps to be transported to the workshop.
Pumps to be cleaned, dismantled & overhauled.
Report to be submitted.
Impeller as well as split rings and seals to be renewed.
Pumps to be reinstalled.
- TASK 007** Damaged paint to be coated with 1x primer and 3 x corrosion protection paint, followed by 1 x complete coat in accordance with the coating plan.
- TASK 008** E-motors for Converter sea water cooling pumps (2 in No)
Type GMS309 Ident. No: 25530301, 25530401
Motors to be dismantled, cleaned and overhauled.
Report to be submitted.
Motor brushes and bearings to be renewed and re impregnated.
Commentator to be skimmed and undercut.
Armature to be balanced.
Motor to be reassembled.
A 4 hr test bench run with vibration analysis to be performed.
Damaged paint to be repaired in accordance with the coating plan.
Motors to be reinstalled on completion
- TASK 009** Anti-vibration and shock absorber (4 in No) for Converter sea water cooling pumps to be renewed.
- TASK 010** Corroded spots on the foundation in the area of the shock absorbers to be removed down to the clean material.
The spot shall be patch coated with 1x primer
After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating plan.
Rubber elements to be coated with 1 coat of Pliobond.
- BUILD GROUP:** 2556
- DESCRIPTION:** Leonard Converter 180 – 290 V DC
- TASK: 001** 1 pc. Leonard converter Type: 1FR4259+1GR5222+1FR4259
No.: 25560101
To be cleaned in situ.

RESTRICTED

Converter to be checked.

Report to be submitted.

TASK: 002

Shock absorber (HFSE 120/90/75) (26 in No) for:

Leonard converter platform.

To be renewed.

Corroded areas on the foundation of the Leonard converter to be ground down to the clean material.

The area shall be repaired in accordance with the coating plan

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating plan.

Rubber elements to be coated with 1 coat of Pliobond.

TASK: 003

Static exciter converter (Traveling range 1) (1 in No)

Type: E 10236-T8029-M001, Equipment No.: 25560201

To be cleaned in situ.

Exciter converter to be checked.

Report to be submitted.

TASK: 004

Anti vibration and shock absorber (3 in No) for the static converter

To be renewed.

Corroded areas on the foundation of the exciter converter to be ground down to the clean material.

The area shall be repaired in accordance with the coating plan.

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating plan.

Rubber elements to be coated with 1 coat of Pliobond.

BUILD GROUP: 2778

DESCRIPTION: Depth Measuring System

TASK: 001

Hull valves and valves of the second shut-off.

Valves to be disassembled in workshop.

RESTRICTED

Components to be cleaned and to be checked.

Inspection report to be submitted.

All seals to be renewed.

Valves to be reassembled and pressure tested

Valve sealing surfaces on the PH glands to smooth and to grind.

Necked studs and nuts to be renewed.

Reinstallation of the valves including pressure test on board to be performed.

Valves of the depth measuring system. (4 in No)

Fitting No's: 2778 F012, F013, F023, F024

TASK: 002

The following listed fittings to be cleaned.

Components to be disassembled, checked & tested.

Report to be submitted.

Pressure gauges to be calibrated.

Seals to be renewed.

Fittings to be reinstalled.

Depth gauges (2 in No)

Fitting No's 2778 F104, F105

Depth gauge units (2 in No)

Fitting no's 2778 F143, F144

Buoyancy meter (Papenberg) (1)

Fitting No 2778 F107

Differential pressure gauges (3 in No)

Fitting No's 2778 F101, F102, F127

Depth transmitters (2 in No)

Fitting No's 2778 F147, F148

TASK: 003

Screwed bonnet type shut-off valves (13 in No)

Fitting No's 2778 F005, F014, F015, F016, F017, F021, F022, F026, F028, F030, F041, F044, F055 and

1 pc. Regulating valve

RESTRICTED

Fitting-No 2778 F027

To be replaced by Göpfert valves.

Pipe and pipe connection to the new valve type to be renewed.
(max 1m ea.)

TASK: 004 1 pc. Aerometer 2778 F112 to be replaced

TASK: 005 5 pcs rubber compensators to be renewed.
Fitting No. 2778F130, F131, F140, F141, F153

TASK: 006 Pipe for deep measuring system CIC (12 m) to be renewed.

TASK: 007 Pressure test of the system to be performed.

BUILD GROUP: 2910

DESCRIPTION: Propulsion Battery

TASK: 001 Examine the battery compartments for corrosion.
Carry out a paint adhesion test.
Performance of electrostatic tests required.
Report to be submitted

BUILD GROUP: 2914

DESCRIPTION: Acid Circulation System

TASK: 001 2 pcs. El-motors Type GMS309 Ident No: 29140101, 29140202
Motors to be dismantled by specialist.
Report to be submitted.
Rotor (armature windings) and stator to be washed, dried and re-impregnated. Commutators to be machined and undercut.
Rotor to be balanced.
Brushes and bearings to be renewed.
Motor to be reassembled.
4 hr test bench run with vibration analysis to be performed,

RESTRICTED

Report to be submitted.

Paintwork to be in accordance with the coating plan

TASK: 002 2 pcs Air filters to be cleaned.
Inserts to be renewed.
Fitting No's. 2914H111, H112

TASK: 003 Acid circulation compressors
4 pcs. Anti- vibration and shock absorbers to be renewed
Corroded areas on the foundation of the acid circulation compressors to be ground down to the clean material.
The area shall be repaired in accordance with the coating plan
After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the Coating Plan.
Rubber elements to be coated with 1 coat of Pliobond.

TASK: 004 System to be checked.

BUILD GROUP: 2916
DESCRIPTION: H2 Measuring System

TASK: 001 H2 Concentration measuring device
Measuring device No: 2916 H105 to be renewed.

TASK: 002 The measuring device is to be calibrated with test gas.

TASK: 003 1 Distributor Fitting No: 2916 H106
Leakage test to be performed.

TASK: 004 H2 Eliminators
8 pcs. H2 Eliminator to be renewed.

RESTRICTED

Fitting-No.: 29160101-0108

The regenerators have been in service for 8 years

TASK: 005

Screwed bonnet shut-off valve

Fitting-No.: 2916 H104

Valve to be replaced by a Göpfert valve.

Pipe and pipe connection to the new valve type to be renewed.
(max.1m)

BUILD GROUP: 2919

DESCRIPTION: Battery Cooling System

TASK: 001

Hull valves and valves of the second shut-off

Valves to be disassembled in the workshop.

Components to be cleaned and checked.

Inspection report to be submitted.

Seals to be renewed.

Valves to be reassembled & pressure tested.

Valve sealing surfaces on the PH gland to smooth and to grind.

Reinstallation of the valves including pressure testing on board to be performed.

Valves of the battery cooling system (4 in No)

Fitting No. 2919G047, G048

Fitting No. 2919G049, G050

TASK: 002

Expansion tank for the battery cooling system

Equipment No. 29190050

To be removed, cleaned and disassembled.

To be re-certified by an AIA.

Report to be submitted.

Diaphragm and screws to be renewed.

RESTRICTED

Damaged paint to be repaired in accordance with the coating plan.
Expansion tank to be reinstalled.

TASK: 003

Sea water cooling pumps (2 in No)
Equipment No's: 29190100, 29190200
Sea water cooling pumps to be disassembled, cleaned & overhauled.
Report to be submitted.
Impeller, split rings, seals and bearings to be renewed
Pumps to be tested.
Painting to be in accordance with the coating plan
Note: The pumps were in service for 13 000 hours

TASK: 004

E-motors for Sea water cooling pumps (2 in No)
Type GMS309 Equipment No's: 29190101, 29190201
Motors to be dismantled by specialist. Report to be submitted.
Armature (armature windings) and stator to be washed, dried and re- impregnated.
Commutator to be skimmed and undercut.
Armature to be balanced.
Carbon brushes and bearings to be renewed.
Motor to be re-assembled.
A 4hr test bench run with vibration analysis to be performed.
Report to be submitted.
Paintwork to be in accordance with the coating plan

TASK: 005

Distillate pumps for battery cooling (2 in No)
Equipment No's: 29190300, 29190400
Pumps be disassembled and cleaned.
Report to be submitted.
Pumps to be overhauled.
Impeller, split rings, seals and ball bearings to be renewed.

RESTRICTED

Pumps to be tested.

Painting to be in accordance with the coating plan

Pumps to be reinstalled.

Note: The pumps were in service for 27,000 hours

TASK: 006

E-motors for distillate battery cooling pumps (2 in No)

Type GMS309, Equipment No's 29190301, 29190401

Motors to be dismantled & overhauled by specialist.

Report to be submitted

Armature (armature windings) and stator to be washed, dried and re impregnated.

Commutator to be skimmed and undercut.

Armature to be balanced.

Carbon brushes and bearings to be renewed. Motor to be re-assembled.

A 4 hr test bench run with vibration analysis to be performed.

Report to be submitted.

Paintwork to be in accordance with the coating plan

Note: The motors were in service for 27,000 hours

TASK: 007

Anti vibration and shock absorber to be renewed (4 in No) for:

Distillate cooling pumps

Seawater cooling pumps

Corroded areas on the distillate and seawater cooling pump foundations to be ground down to the clean material.

The areas shall be repaired in accordance with the coating plan

After installation, the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating plan.

Rubber elements to be coated with 1 coat of Pliobond.

TASK: 008

Distillate coolers (2 in No)

Equipment No's 29190001, 29190002

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End covers to be cleaned & inspected
Cooler & cooler tubes to be cleaned & inspected
Report to be submitted
Gaskets to be renewed
Coolers to be pressure tested on completion of work.
Painting to be in accordance with the coating plan.

TASK: 009 Ion exchanger ESP-20-MB (7 in No)
Items to be renewed.
Fitting-No's: 29190003, 29190004, 29190005,
29190006, 29190007, 29190008, 29190009

TASK: 010 Water tight shut off flaps (20 in No)
Valves to be stripped, cleaned & overhauled.
Seals to be renewed.
Valves to be tested.
Report to be submitted.
Fitting No. 2919G001,G002,G005,G013,G014,G015,G016,
G017,G018,G027,G29,G030,G032,G033,G034,G035,G038,
G040,G041,G042
Valves to be reinstalled.

TASK: 011 Rubber compensators to be renewed. (20 in No)
Fitting No. 2919G228, G223, G227, G222, G226, G224, G225, G221,
G219, G220, G238, G239,G240,G241, G242, G243, G249, G251,
G250, G252.

TASK: 012 Safety valves (2 IN No)
Fitting No's: 2919 G232, 2919 G234
Strip, clean & inspect
Seals & springs to be replaced
Report to be submitted

RESTRICTED

Assemble and test.
Re-install the valves.

TASK: 013 Strainers (2 in No)
Fitting No's: 2919 O012, 2919 G145
Strainers to be cleaned.
Filter insert to be renewed.

TASK: 014 Screwed bonnet type shut-off valve (14 in No)
Fitting-No.: 2919 G006, G008, G009, G036, G037,
G039, G044, G046, G051, G052, G053, G054, G055, G056.
Valves to be replaced by Göpfert valves.
Pipes and pipes connection to the new valves type to be
Renewed (max. 1m)

TASK: 015 Pressure test of the Battery cooling system to be performed.

BUILD GROUP: 3135

DESCRIPTION: Transmitter Converters 115V 400 Hz 3 Phase

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 3137

DESCRIPTION: Transmitter Converters 115V 60 Hz 3 Phase

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 3310

DESCRIPTION: Common Power Supply System for Shipboard Auxiliaries
& Propulsion

RESTRICTED

**The following components to be cleaned and checked in situ.
Report to be submitted on individual items**

- TASK: 001** 2721 Main and Generator Switchboard Type: E10236-T2025-M001
Equipment No: 27210101
- TASK: 002** 2721 Switch device battery 1+2 Type: E10236-T2015-M005
Equipment No: 27210301
- TASK: 003** 2721 Switching device battery 3+4 Type: E10236-T2015-M006
Equipm.No.:27210401
- TASK: 004** 2721 Twin field setter Type: E10236-T8019-M003,
Equipment No: 27210501
- TASK: 005** 2721 Step switch for twin field setter Type: E10236-T8019- 003,
Equipment No: 27210501
- TASK: 006** 2722 Switch board exciter control Type: E10236-T5050 - M003;
Equipment No: 27220101
- TASK: 007** 2722 Switchboard fan control Type: E10236-T5048-M003
Equipment No: 27220201
- TASK: 008** 2179 Snorkel control panel
Equipment No: 21790101
- TASK: 009** 3313 Auxiliary Switch board with speed step switch Type E10236-
T3019-T3019-M001

RESTRICTED

Equipment No: 33130101.

- TASK: 010** 3313 CIC distributor Type: E10236-T5083-M002,
Equipment No: 33130201
- TASK: 011** 3313 Galley distribution board Type: E10236-T5052-M003
Equipment No: 33130301
- TASK: 012** 3315 Converter control board Type: E10236-T5056,
Equipment No: 33150101
- TASK: 013** 3331 Motor protection switch distillate refilling pump
Type: 3RV1021-1GA1 (4,5 - 6,3 A),
Equipment No: 33310101
- TASK: 014** 3331 Motor protection switch hydraulic filter pump
Type: 3RV1021-1FA1 (3,5 - 5,0 A)
Equipment No: 33310201
- TASK: 015** 3185 Resistance unit 220V DC Type: K 7228-61,
Equipment No: 31850101.
- TASK: 016** 4311 Control unit piston bilge pump 1+2
Type: E10236-T6016-M003
Equipment No: 43110102
- TASK: 017** 4529 (2 in No) Switch devices domestic fresh water heater
Type: E10236-T5058-M003/Version 1 and
Type: E10236-T5058-M004/Version 2
Equipment No: 45290101, 45290202

RESTRICTED

TASK: 018 5188 Hoistable mast control panel Type: E-10236-T5085-M002
Equipment No: 51880101

TASK: 019 5188 Power supply for masts control Type: E10236-T5088-M002
Equipment No: 51880102

BUILD GROUP: 3321
DESCRIPTION: Automatic Starters

All undermentioned equipment to be inspected in the fitted condition.

A report to be submitted on individual items.

TASK: 001 Starters Main sea water cooling pump HP (2 in No)
Type 3PA8203-1AZ 24
Equipment No's 33210205, 33210212

TASK: 002 Starters air condition compressor (2 in No)
Type: 3PA8403-1A Z 24
Equipment No's 33210102, 33210103

TASK: 003 Starters sea water pump battery cooling pump (2 in No)
Type 3PA8203-1AZ24
Equipment No's 33210206, 33210207

TASK: 004 Starters distillate battery cooling pump (2 in No)
Type 3PA8203-1AZ24,
Equipment No's 33210214, 33210215

TASK: 005 Starter Piston pump (2 in No)

RESTRICTED

Type 3PA8403-1A Z 24
Equipment No 33210101, 33210104

TASK: 006 Starter battery fan (1 in No)
Type 3PA8203-1A Z 24,
Equipment No 332113

TASK: 007 Starters hydraulic oil pumps (4 in No)
Type: 3PA8203-1A Z 24
Equipment No's 33210208 - 33210211

TASK: 008 Starter Freon Compressor for ISUS Cooling (1in No)
Type: 3PA8203-1A Z 24,
Equipment No 33210116

TASK: 009 Starter rotating exciter converter (1 in No)
(Leonard Converter 180-290V)
Type: 3PA8203-1A Z 24
Equipment No 33210201.

TASK: 010 Starters HP Air –compressors (2 in No)
Type: 3PA8203-1A Z 24
Equipment No's 33210202, 33210203

BUILD GROUP: 3370
DESCRIPTION: Shore & Charge Connection

TASK: 001 Shore and charge connection to be checked.
Report to be submitted.
Isolation disk of the charging connector, contact pin and seals to be replaced.

RESTRICTED

Isolation discs of the charging connection, PWT 2 contact bushes,
2 Contact inserts and seals to be replaced.

BUILD GROUP: 3494

DESCRIPTION: Penetration Plugs & Socket Connectors

TASK: 001 37pcs Gisma Pressure Hull Penetrations

5 pcs Gisma junction box,

3 pcs Gisma bulkhead penetrator

2 pcs Honneywell junction box

Components to be stripped, cleaned and inspected.

Inspection report to be submitted.

Serviceable parts to be re-used.

Seals to be renewed.

47 pcs hull penetrations to be reinstalled.

Note As a result of the inspection there is a possibility that several
Gisma - pressure hull penetrations could have to be renewed.

Pressure testing of items on completion of overhaul & assembly.

TASK: 002 Gisma Blind plugs (8 in No)

IKL plugs (13 in No)

To be cleaned and inspected.

Inspection report to be submitted.

Seals to be renewed.

TASK: 003 12 IKL cable hull penetrations to be cleaned and visually inspected.

Inspection report to be submitted

BUILD GROUP: 3662

DESCRIPTION: Internal Communications Equipment (FOCON)

RESTRICTED

TASK: 001	Internal communication system to be checked. Report to be submitted.
TASK: 002	FOCON Comms CIC 3662 0110 Speaker to be renewed.
TASK: 003	Cables to be checked. Where required insulation tests are to be carried out and recorded by insulation measurements. Report to be submitted.
BUILD GROUP	4120
DESCRIPTION	HYDROPLANES AND STEERING RUDDER
TASK 001 disassembled	Rudder blades incl. rudder shafts and drive linkages incl. socket joints for hydroplanes fore and aft as well as rudder and cleaned. Friction surfaces on the shafts to be checked and measurements to be performed. Protocol to be submitted. Anode protection and seals to be renewed. Parts to be reassembled and to be reinstalled.
TASK 002	Bearings forward Hydroplane Stbd and Port to be renewed. 2 pcs. KSC 175300V-2 1 pc. KSC 175300V-1 1 pc. KSC 175300V-3
TASK 003	Forward and aft Hydraulic cylinders (4 pcs.) to be dismantled. Components to be cleaned and checked. Report to be submitted. Seals and piston ring to be renewed. Hydraulic cylinders to be reassembled, tested and reinstalled on board. Damaged paint to be repaired and coated in accordance with the coating plan.
TASK 004	Linkage joint bearings for Hydroplane forward Stbd, 2 pcs. KSC 186400V-2 (256238) Hydroplane forward PS, 2 pcs. KSC 186400V-2 (256238)

RESTRICTED

Steering rudder 2 pcs. KSC 186400V-1 (254474)
Hydroplane aft 2 pcs. KSC 186400V-1 (254474)
All above to be renewed.

TASK 005 4 in No PH- penetrations for Hydroplanes and Rudder to be cleaned and checked.
Report to be submitted.
Seals of the PH-penetration to be renewed.

TASK 006 Central greasing system of the rudder and hydroplane to be cleaned.
System to be checked.
Report to be submitted.
System to be refilled.

BUILD GROUP 4174

DESCRIPTION HYDRAULIC CONTROL OF RUDDER AND PLANES

TASK 001 Emergency Control for Steering Rudders & Hydroplanes.
Hand pump 4174X078.

TASK 002 Hand pump 4174X078 to be overhauled.
Seals to be renewed.
Hand pump to be tested.
Report to be submitted.
Hand pump to be reinstalled on completion of work

TASK 003 10 pcs. Compensators of rudder steering to be renewed.
Fitting No's 41741063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071,1072.

TASK 004 5 pcs. High-pressure filter to be cleaned.
Inserts to be renewed.
Fitting-No.: 4174X584, X593, X601, X603, X608.

BUILD GROUP 4192

DESCRIPTION ANCHOR EQUIPMENT

RESTRICTED

TASK 001 Hull valves and valves of the second shut-off to be
disassembled in workshop.
Components to be cleaned and to be checked.
Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled pressure tested (according to the
appropriate specification).
Valve sealing surfaces on the PH gland to be smooth and clean.
Hull studs and screws to be renewed.
Installation of the valves including pressure testing on board to
be performed.
2 pcs. Valve of the rudder central grease system.
Fitting No. 4192W001, W002.

TASK 002 Anchor & Anchor chain assembly to be disassembled.
Components to be cleaned and checked.
Report to be submitted.
Chain link measurements to be verified.

TASK 003 Anchor & Anchor chain to be sandblasted and painted in
accordance with the coating plan.

TASK 004 Anchor winch to be disassembled, cleaned and checked.
Report to be submitted.
Bearings and brake linings to be renewed.
Anchor claw clutch to be overhauled.
Report to be submitted.

TASK 005 Anchor winch casing and assembly to be grit blasted and
painted in accordance with the coating plan.

TASK 006 Windlass, hydraulic motor, gearing, capstan head, guide rollers,
drive- and brake linkage, anchor release device and chain
securing to be disassemble, and overhauled.
Components to be cleaned and checked.
Report to be submitted.
Bearings, bolts and seals to be renewed.
All parts to be reassembled, tested and to be reinstalled on
board.
All painting is to be in accordance with the coating plan.

BUILD GROUP 4228

DESCRIPTION Hydraulic System Escape Trunk

RESTRICTED

- TASK 001** Hull valves and valves of the second shut-off to be
disassembled in workshop.
Components to be cleaned and to be checked.
Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled & pressure tested (according to the
appropriate specification).
Valve sealing surfaces on the PH gland to be clean & undamaged.
Hull studs and screws to be renewed.
Installation of the valves including pressure testing on board to
be performed.
Valves of the Hydraulic System escape trunk (8 in No)
Fitting No's 4228X201, X202, X250, X251, X252, X253, X254,
X255.
- TASK 002** The following system valves to be overhauled, seals to be
renewed and pressure tested.
Fitting No's 4228X263, X264, X265.
- TASK 003** Rotary piston cylinders 4228X108, X662, X663 to be renewed.
System to be checked.
Report to be submitted.
- TASK 004** 1in No Hydraulic oil accumulator 4228X658 to be renewed.
Hydraulic oil Accumulator to be painted in accordance with the
coating plan.
- Equipment to be reinstalled & tested on-board on completion of
work.

BUILD GROUP: 4261
DESCRIPTION: Towing Hook

TASK: 001 Towing Hook to be cleaned and inspected.
Inspection report to be submitted

BUILD GROUP: 4311
DESCRIPTION: Piston Bilge Pumps 1 & 2

TASK: 001

Type: Piston Pump HH 140K (2 in No)

Fitting No's: 43110100, 43110200

Pumps to be overhauled. (In situ)

Report to be submitted.

All seals and wearing parts to be renewed.

Internal zinc anodes to be replaced.

Note: The piston rod on pump No 1 is to be renewed.

TASK: 002

E-motors GMS835 (2 in No)

Identity No's: 43110101, 43110201

Bilge pump motors to be dismantled by specialist.

Report to be submitted

Armature (armature windings) and stator to be washed, dried and re impregnated.

Commutator to be skimmed and undercut.

Armature to be balanced.

Carbon brushes and bearings to be renewed.

Motor to be re-assembled.

A 4 hr test bench run with vibration analysis to be performed.

Motors to be painted iaw the coating plan.

TASK: 003

Piston Pump Anti vibration and shock absorber (18 in No.)

To be renewed.

Corroded areas on the piston pump foundations to be ground down to the clean material.

The area shall be repaired in accordance with coating plan

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with coating plan.

RESTRICTED

Rubber elements to be coated with 1 coat of Pliobond.

BUILD GROUP: 4315

DESCRIPTION: Bilge Water De-Oiler

TASK: 001 Bilge water De-oiler HDWO 25 A1

Identification No 43150100

Equipment to be inspected and overhauled on-board. All wearing parts after an operating time of 4500 hours to be renewed.

Report to be submitted.

TASK: 002 Screwed bonnet type shut-off valve (3 in No)

Fitting-No's 4315I450, I465, I470

3 pcs. Screwed bonnet non-return valve

Fitting-No's 4315I451, I464, I472

1 in No Three-way cock

Fitting-No 4315 I460 to be replaced by a Göpfert valve.

Pipes and pipe connection to the new valve type to be renewed. (max.1m).

TASK: 003 Compensators to be renewed (11 in No)

4315 I513, I514, I515, I516, I517, I518, I519, I520, I521, I524, I525

BUILD GROUP 4318

DESCRIPTION Main Line System

TASK 001 Hull valves and valves of the second shut-off to be
disassembled in workshop.

Components to be cleaned and to be checked.

Inspection report to be submitted.

Seals and balls (I019 and I022) to be renewed.

Valves to be reassembled & pressure tested (according to the appropriate specification).

Valve sealing surfaces on the PH glands to be clean & undamaged.

Hull studs and screws to be renewed.

RESTRICTED

- be
Installation of the valves including pressure testing on board to be performed.
Valves of the main line system (9 in No)
Fitting No's 4318I018, I019, I021, I022, I038, I051, I061, I062, and I089.
- TASK 002** Safety valves to be disassembled (2 in No)
Fitting No's 4318 I221, I225
Seals, and springs to be renewed.
Valves to be reassembled tested and adjusted as required.
Report to be submitted.
Valves to be installed.
- TASK 003** Watertight shut off flaps (14 in No)
Fitting No's 4318I005, I006, I007, I009, I010, I011, I020, I024, I050, I058, I068, I096, I097, and I098
Valves to be overhauled, tested and reinstalled.
Seals to be renewed.
- TASK 004** 4 pcs. Non return flaps (4 in No)
Fitting No's 4318I014, I023, I090, I101.
Valves to be overhauled, tested and installed.
Seals to be renewed.
Report to be submitted
- TASK 005** Strainers (4 in No)
Fitting No's 4318I218, I252, I257, I271.
Strainers to be cleaned, seals and insert to be renewed.
Report to be submitted
- TASK 006** Flow meter (1 in No)
Fitting No 4318 I264
Flowmeter to be disassembled, cleaned and checked.
Report to be submitted.
Gaskets to be renewed.
Flowmeter to be calibrated and installed.
- TASK 007** Rubber compensators to be renewed. (7 in No)
Fitting No's 4318I201, I203, I202, I210, I232, I244, and I277.
- TASK 008** Screwed bonnet shut-off valves (3 in No)
Fitting No's 4318I004, I012, I069

Straight-way cock (3 in No)
Fitting-No's 4318I001, I002, I003

RESTRICTED

Above items to be replaced by Göpfert valves.
Pipes and pipe connections to the new valve type to be renewed.

TASK 009 Remote actuating valve, fitting No 4318/ I032 (1 in No)
ORC- Angle valve fitting No's: 4318/I036, I037 (2 in No)
Hydraulic actuated valve fitting No: 4318/ I017, I027 (2 in No)

Valves to be overhauled & pressure tested.
Seals, piston rings, and approximation indicators to be renewed.
Report to be submitted

Valves to be installed and pressure tested on completion of work

TASK 010 System pressure test to be performed.
Report to be submitted.

BUILD GROUP 4338

DESCRIPTION Compensating System

TASK 001 Hull valves and valves of the second shut-off (10 in No)
Fitting No's 4338 I042, I043, I053, I084, I085, I039, I040, I064, I065 & I086.
Valves to be disassembled in workshop.
Components to be cleaned, checked & overhauled
Inspection report to be submitted.
Seals and balls to be renewed.
Valves to be reassembled & pressure tested (according to the appropriate specification).
Valve sealing surfaces on the PH glands to be clean & undamaged.
Hull studs and screws to be renewed.
Installation of the valves including pressure testing on board to be performed on completion of overhaul & workshop testing.

Replace strainer 4338/ I133.

TASK 002 Safety valves (12 in No)
Fitting No's 4338 I134, I135, I136, I137, I138, I139, I140, I141, I142, I143, I144, I145.
Valves to be disassembled, cleaned & overhauled.
Seals, and springs to be renewed.
Valves to be reassembled, adjusted & tested.
Valve to be installed.

TASK 003 Hydraulic actuated angle control valves (4 in No)

RESTRICTED

Fitting no's 4338 I028, I033, I034, I035
Valves to be stripped, cleaned overhauled, tested and installed.
Sealing's to be renewed.

TASK 004 Watertight shut off flaps (5 in No)
Fitting No's 4338 I044, I045, I066, I067, I095.
Valves to be stripped, cleaned, overhauled, tested and reinstalled.
Seals to be renewed.

TASK 005 Hydraulic actuated control valves (4 in No)
Fitting no's 4338 I029, I030, I031 and I041
Valves to be disassembled, cleaned & inspected.
Inspection report to be submitted.
Valves to be overhauled and pressure tested.
Seals to be renewed.

TASK 006 Flooding valve (1 in No)
Fitting No 4338 I345
Valve to be stripped, inspected, overhauled & pressure tested.
Seals to be renewed.
Report to be submitted.
Valve to be reinstalled on completion

TASK 007 Flow meter
Fitting No 4338/ I102
Flow meter to be disassembled, cleaned and checked.
Report to be submitted.
Flow meter parts to be renewed.
Gaskets to be renewed.
Flow meter to be calibrated.
Flow meter to be reinstalled.

TASK 008 System pressure test to be performed.
Report to be submitted on all above tasks

BUILD GROUP 4350

DESCRIPTION Main Ballast Tank Vents

TASK 001 Flaps and linkages for the main ballast tank vents (5 in No)
Equipment to be cleaned, checked & overhauled
Report to be submitted
Packing's, Bushes and seals to be renewed.
Painting to be in accordance with the coating plan.
Flaps to be reinstalled.

RESTRICTED

TASK 002 Hydraulic Drives for Main Ballast Tank Vents (5 in No)
Hydraulic motor OMSW80-151F0521
Fitting no's 4358 X416, X417, X767, X768, and X769

Approximation indicators IFL10-30L-10STP-2092 (5 in No)
To be cleaned, checked, overhauled & tested.
Report to be submitted.

TASK 003 Approximation indicators (5 in No)
IFL10-30L-10STP-2092
To be cleaned, inspected & tested
Report to be submitted

TASK 004 Lubricating nipples and pressure hull penetration seals to
be renewed.

All Painting to be in accordance with the coating plan.

BUILD GROUP 4363

DESCRIPTION Hydraulic Remote Control Valve Blocks

TASK 001 Hydraulic blocks (3 in No)
Block 4363X978 Hydraulic valves 4363X132 - X138 (7 in No)
Block 4363X976 Hydraulic valves 4363X125 - X131 (7 in No)
Block 4363X974 Hydraulic valves 4363X154 - X159 (6 in No)

Equipment to be stripped, cleaned, checked & overhauled.
Seals & wear parts to be renewed.
Report to be submitted.
Pressure test on completion.

TASK 002 Hydraulic blocks to be re-installed

All painting to be in accordance with the coating plan

BUILD GROUP: 4368

DESCRIPTION: Trim System

TASK: 001 Air distributors to be overhauled (2 in No)
Fitting No's. 4368 K003, K005.
Seals to be renewed.

RESTRICTED

Report to be submitted
Test on completion & reinstall

TASK: 002 Watertight shut off flaps to be overhauled (2 IN No)
Fitting No's. 4368 K006, K007
Seals to be renewed.
Report to be submitted
Pressure test on completion & reinstall

TASK: 003 Flow meters (2 in No)
Fitting No's 4368 K101, K102
Flowmeters to be disassembled, cleaned and checked.
Report to be submitted.
Gaskets to be renewed.
Flowmeter to be calibrated and reinstalled

TASK: 004 System pressure test to be performed on completion of all work.
Report to be submitted.

BUILD GROUP: 4410
DESCRIPTION: CO2 Fire Extinguishing System for Diesels

TASK: 001 Fire extinguishing cabinet
Cabinet to be cleaned, checked and overhauled by an accredited agency.
Report to be submitted.
Cabinet to be reinstalled.
Shock mounts to be renewed. (4 in No)
Compensator to be renewed.
Functional test of the fire extinguishing system to be carried out by a specialist.

RESTRICTED

Report to be submitted.

Damaged paintwork to be repaired.

Painting to be in accordance with the coating plan.

BUILD GROUP: 4416

DESCRIPTION: Co2 Pressure Vessels For Fire Fighting System

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP 4522

DESCRIPTION Fresh Water Generator

TASK 001 Fresh Water Generator
Equipment No 45220001
Type PALL WASSERTECHNIK
Control Cabinet Part No 16997
To be inspected by.
Report to be submitted.
Membrane and pressure gauges to be renewed.
Remarks: Motor control valve not working properly.
All connections to the pressure gauges and to the module are leaking.

BUILD GROUP 4528

DESCRIPTION Domestic Freshwater System

TASK 001 Rubber compensators to be renewed. (2 in No)
Inspection report to be submitted.
Fitting No's 4528 L107, L108.

TASK 002 Safety valves (7 in No)
Fitting No's 4528 L189, L194, L195, L144, L145, L186, and L187.
Valves to be disassembled, cleaned, inspected & overhauled.

RESTRICTED

Seals, and springs to be renewed.
Valves to be reassembled and adjusted & tested.
Valve to be reinstalled.

TASK 003 Filter to be cleaned. (1 in No)
Fitting No. 4528L122.
Seals to be renewed.

TASK 004 Domestic Freshwater Heater
Equipment No's 4528L119, 4528L120
Equipment to be renewed (located in the sanitary rooms)

TASK 005 Domestic Freshwater boiler (urn) in the galley to be renewed.

TASK 006 Screwed bonnet shut-off valves (17 in No)
Fitting-No's 4528L003, L004, L006, L015, L021, L025, L050,
L051, L052, L053, L054, L055, L059, L060, L064, L065, L081.
Screwed bonnet non-return valves (2 in No)
Fitting-No.: 4528L019, L020
Valves to be replaced by Göpfert valves.
Pipes and pipe connection to the new valve types to be renewed.

TASK 007 Lonen filters ESP-30-MB (2 in No)
For osmosis plant to be renewed.
Fitting-No's 4528L111, 4528L112.

TASK 008 System pressure test to be performed.
Report to be submitted.

BUILD GROUP 4548

DESCRIPTION SEAWATER WASH SYSTEM

TASK 001 Safety valve to be disassembled.
Fitting No. 4548 M101
Seals, and springs to be renewed.
Valve to be reassembled, tested and adjusted.
Report to be submitted
Valve to be installed.

TASK 002 Pressure reducer 40 to 2.5 bar
Fitting No. 4548 M100
Reducer to be overhauled, tested and installed.
Seals to be renewed.

RESTRICTED

Report to be submitted

TASK 003 Seawater Filter
Fitting No.4548 M104.
To be overhauled and installed.
Seals to be renewed.
Report to be submitted.

TASK 004 Spraying devices to be renewed.
Fitting No's 4548M005 & M016.

TASK 005 System pressure test to be performed.
Report to be submitted.

Painting to be in accordance with the coating plan

BUILD GROUP **4558**

DESCRIPTION **Sewage and Waste Water System**

TASK 001 Hull valves and valves of the second shut-off (3 in No)
Fitting No's, 4558 N009, N010, N011
Valves to be disassembled in workshop.
Components to be cleaned and to be checked.
Inspection report to be submitted.
Seals and balls to be renewed.
Valves to be reassembled pressure tested (according to the appropriate specification).
Valve sealing surfaces on the PH gland to clean & undamaged.
Hull studs, bolts and nuts to be renewed.
Installation of the valves including pressure test on board to be performed.

TASK 002 3 pcs. Filters to be cleaned (3 in No)
Fitting No: 4558 N135.
Active charcoal to be renewed.
Fitting No. 4558 N136, N137
Seals and inserts to be renewed.
Report to be submitted.

TASK 003 System pressure test to be performed.
Report to be submitted.

TASK 004 Garbage ejector including the drive mechanism
To be disassembled, cleaned, overhauled and assembled.
Seals to be renewed.

RESTRICTED

Pressure test to be performed.
Report to be submitted.
Garbage ejector to be painted in accordance with the coating plan.

TASK 005 Valves of the systems to be overhauled and installed. (4 in No)
Fitting No. 4558 N018, N020, N021, N029.
Seals to be renewed.
Valves to be pressure tested in workshop prior to fitting.

TASK 006 System of the garbage ejector to be checked.
Report to be submitted.

TASK 007 2 pcs. Toilet bowls (2 in No)
To be cleaned, and disassembled.
WC flushing and closing devices (365/1753-01-00-00 Pos.1) to be overhauled, pressure tested and installed.
Seals and wearing parts to be renewed.
Report to be submitted.

TASK 008 1 pcs. Ball Cock (1 in No)
Fitting No: 4558N005
To be cleaned, disassembled, overhauled, pressure tested and installed.
Seals and ball to be renewed.
Report to be submitted.

TASK 009 Safety valve (1 in No)
Fitting No. 4558N025
Valve to be disassembled, cleaned & overhauled.
Seals, and springs to be renewed.
Valve to be reassembled, adjusted & tested.
Report to be submitted.
Valve to be installed.

All painting to be in accordance with the coating plan.

BUILD GROUP: 4578

DESCRIPTION: Oxygen System

TASK: 001 Hull valve: (1 in No)
Fitting No. 4578 Q072
To be disassembled in workshop.

RESTRICTED

Components to be cleaned and checked.

Inspection report to be submitted.

Seals to be renewed.

Valve to be reassembled & pressure tested.

Valve sealing surfaces on the PH gland to be clean & undamaged.
Hull studs and nuts to be renewed.

Reinstallation of the valve including pressure test on board to be performed.

BUILD GROUP: 4610

DESCRIPTION: Battery Room & Boat Fan

TASK: 001 Battery room fan (1 in No)
E-motor 46130101 Type GMS413
To be stripped, cleaned and overhauled
Armature (armature windings) and stator to be washed, dried and re impregnated.
Commutator to be skimmed, undercut and bevelled
Armature to be balanced.
Carbon brushes, bearings & seals to be renewed.
Motor to be reassembled.
A 4 hr test bench run with vibration analysis to be performed.
Report to be submitted
Motor to be reinstalled
Damaged paint to be repaired
All painting to be in accordance with the coating plan

TASK: 002 Boat fan (1 in No)
E-motor 46130102 Type GMS413
To be stripped, cleaned and overhauled

RESTRICTED

Armature (armature windings) and stator to be washed, dried and re impregnated.

Commutator to be skimmed, undercut and bevelled

Armature to be balanced.

Carbon brushes, bearings & seals to be renewed.

Motor to be reassembled.

A 4 hr test bench run with vibration analysis to be performed.

Report to be submitted

Motor to be reinstalled

Damaged paint to be repaired

All painting to be in accordance with the coating plan

TASK: 003 Battery & Boat fans anti vibration and shock absorber mounts to be renewed. (8 in No)

Corroded areas on the Battery and Boat fans foundations to be ground down to the clean material.

The areas shall be repaired in accordance with the coating plan.

After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating plan.

Rubber elements to be coated with 1 coat of Pliobond.

BUILD GROUP 4628

DESCRIPTION VENTILATION SYSTEM

TASK 001 Rubber compensators to be renewed (25 in No)
Fitting No's. 4628 P100, P101, P102, P104, P106, P114, P130, P132, P133, P105, P107, P111, P134, P135, P112, P113, P202, P131, P108, P115, P103, P142, P143, P144, P145

TASK 002 Throttle Flap to be renewed and installed. (6 in No)
Fitting No. 4628P016, P017, P018, P019, P020, P021.

TASK 003 Damaged paint in way of the replacement is to be repaired in accordance with the coating plan.

RESTRICTED

TASK 004	Vapour Vent Fitting No 4628 P127 Grease separator plate to be renewed.
TASK 005	System to be checked. Report to be submitted.
BUILD GROUP	4671
DESCRIPTION	Air Condition System
TASK 001	Compressors NKS 15C (OSK 7441K) (2 in No) Units R215, R216 Equipment to be removed and transported to the workshop.
TASK 002	Compressors to be cleaned, disassembled and overhauled. Report to be submitted. Seals and normal ware parts to be renewed. Air conditioning Compressor to be reinstalled on completion of work.
TASK 003	Air Conditioning compressors to be painted in accordance with the coating plan.
TASK 004	E-motors Type GX120 for air condition compressors and sea water cooling pumps (2 in No) Equipment No's 4671 0103, 0104 Equipment to be dismantled cleaned, inspected & overhauled. Report to be submitted. Armature and stator to be washed, dried, and re impregnated. Commutator to be skimmed and undercut. Rotor to be balanced. Carbon brushes and bearings to be renewed. Motor to be reassembled. A 4 hrs test run with vibration analysis to be performed. Painting to be in accordance with the coating plan.
TASK 005	Anti vibration and shock absorbers (8 in No) Air conditioning compressors mounts to be renewed.
TASK 006	Corroded areas on the air conditioning compressors foundations to be cleaned down to clean material. The area is to be repaired in accordance with coating plan. After installation of the shock absorbers they are to be cleaned and coated in accordance with the coating plan.

RESTRICTED

Rubber elements are to be coated 1 coat of Pliobond.

TASK 007 Switch and Regulating Cabinet to be checked. (1 in No)
Report to be submitted.

TASK 008 Condensers 4671R211 & R212 including Safety devices,
shut-off valves, safety valves and inspection glasses (2 in No)
Equipment to be removed and transported to the workshop.
Condenser covers to be removed, equipment to be cleaned.
Cooling pipes to be cleaned by pipe brush
Condensers to be inspected.
Report to be submitted.
All seals to be renewed.
Condensers to be painted in accordance with the coating plan.

Condensers to be assembled, pressure tests to be performed.
Condensers 4671R211, R212 including Safety devices, shut-off
valves, safety valves and inspection glasses to be reinstalled.

TASK 009 Pipes, inspection glasses, filter, oil separators and fittings to be
checked.
Report to be submitted.

TASK 010 Air condition unit K1 to be cleaned and checked.
Ventilation Fan Motor to be overhauled.
Motor to be cleaned,
Bearings to be renewed.
Rotor to be balanced
Unit to be painted in accordance with the coating plan.
A 4 hour bench test including vibration analysis on completion of
the overhaul
Report to be submitted.
Remark: The fan motor was in service for 55000 hours.

TASK 011 Air condition unit K2 to be cleaned and checked.
Ventilation Fan Motor to be overhauled.
Motor to be cleaned,
Bearings to be renewed.
Rotor to be balanced
Unit to be painted in accordance with the coating plan.
A 4 hour bench test including vibration analysis on completion of
the overhaul
Report to be submitted.
Remark: The fan motor was in service for 55000 hours.

TASK 012 Air condition unit K3 to be cleaned and checked.
Ventilation Fan Motor to be overhauled.
Motor to be cleaned,
Bearings to be renewed.
Rotor to be balanced
Unit to be painted in accordance with the coating plan.
A 4 hour bench test including vibration analysis on completion of the overhaul
Report to be submitted.
Remark: The fan motor was in service for 55000 hours.

TASK 013 Air condition unit K4 to be cleaned and checked.
Ventilation Fan Motor to be overhauled.
Motor to be cleaned,
Bearings to be renewed.
Rotor to be balanced
Unit to be painted in accordance with the coating plan.
A 4 hour bench test including vibration analysis on completion of the overhaul
Report to be submitted.
Remark: The fan motor was in service for 55000 hours.

TASK 014 Air condition unit K5 to be cleaned and checked.
Ventilation Fan Motor to be overhauled.
Motor to be cleaned,
Bearings to be renewed.
Rotor to be balanced
Unit to be painted in accordance with the coating plan.
A 4 hour bench test including vibration analysis on completion of the overhaul
Report to be submitted.
Remark: The fan motor was in service for 55000 hours.

TASK 015 Air condition unit K6 to be cleaned and checked.
Ventilation Fan Motor to be overhauled.
Motor to be cleaned,
Bearings to be renewed.
Rotor to be balanced
Unit to be painted in accordance with the coating plan.
A 4 hour bench test including vibration analysis on completion of the overhaul
Report to be submitted.
Remark: The fan motor was in service for 55000 hours.

RESTRICTED

- TASK 016** Anti vibration and shock absorber (24 pcs.) air condition sets.
K1, K2, K3, K4, K5 & K6 to be renewed.
- TASK 017** Corroded spots on the foundation in the area of the shock absorber for air condition sets. K1, K2, K3, K4. K5 to be ground down to the clean material.
The spot shall be patch coated with 1x primer
After installation the foundation plates of each shock absorber to be cleaned and coated with 2 x corrosion protection paint in accordance with the coating plan.
Rubber element to be coated 1 x with Pliobond.
- TASK 018** Galley exhaust
Fitting No 46710701
Casing to be opened, cleaned and checked.
Report to be submitted.
Gaskets to be renewed.
64pcs. Filter cartridge (64 pieces)
Fitting no. 4628P126 & P128
Galley Fan Compensator P131 (1 in No)
Compensator to be renewed.
- TASK 019** 1pcs. Galley fan 46710702 to be installed.
- TASK 020** 1pcs. Galley fan 46710702 to dismantled, cleaned (free of grease) and checked.
Seals, bearings and V belt to be renewed.
- TASK 021** 1 pcs. El-motors 46710704 for galley fan to be dismantled.
Report to be submitted.
Rotor and stator to be washed, dried, and re impregnated.
Rotor to be balanced.
Bearings to be renewed.
Motor to be reassembled.
A 4 hr bench test run with vibration analysis to be performed.
- TASK 022** 4pcs. Anti-vibration and shock absorber galley fan to be renewed.
- TASK 023** Corroded spots on the foundation in the area of the shock absorber for galley fan to be ground down to the clean material.
The spots shall be patch coated with 1x primer

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After installation, each shock absorber to be cleaned and coated accordance with the coating plan.
Rubber element to be coated with 1 coat of Pliobond.

TASK 024 Pipe lagging to be checked.
Inspection report to be submitted.

TASK 025 Pipe system includes rinsing of the condenser and to pressure test in the fitted condition.
Carry out a leak detection on the system.
Perform a vacuum test for 24hrs (Holding for 24 hrs under a vacuum).
On completion of a successful 24 hr vacuum, refill with the safety cooling agent R134 A.

TASK 026 Carry out an inspection and insulation test on the power cables.
Report to be submitted.

BUILD GROUP 4672

DESCRIPTION Air-conditioning Seawater Cooling System

TASK 001 Air conditioning sea water cooling pumps No. 1 + 2
Fitting No's 4672R219, R220 (REW 65-200)
Pumps to be cleaned, dismantled, Inspected and overhauled
Report to be submitted.
Impeller as well as split rings and seals to be renewed.
Damaged paint to be repaired (corrosion protection) followed by 1 complete coat in accordance with the coating plan.
Pumps to be installed.

TASK 002 Freon Metal compensators (36 in No)
Perform a tightness test under workshop pressure (workshop/onboard) with a Freon leak detector.
Fitting No's 4672 R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R184, R185, R186, R187, R188, R189, R190, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R235, R236.
Report to be submitted.

TASK 003 Non-return valves (2 in No)
Fitting-No's 4672R012 & R013
Valves to be replaced by Göpfert valves.
Pipes and pipes connection to the new valve type to be renewed. (max. 1m)

BUILD GROUP	4676
DESCRIPTION	Built in Breathing Air System (BIBS)
TASK 001	Hull valves and valves of the second shut-off. (4 in No) Fitting No's 4676 Q083, Q084, Q085, Q086 Valves to be disassembled, cleaned, inspected & overhauled Inspection report to be submitted. Seals to be renewed. Valves to be reassembled & pressure tested (according to the appropriate specification). Valves to be installed & tested on-board on completion of work. Valve sealing surfaces on the PH gland to clean & undamaged. Hull studs, bolts and nuts to be renewed.
TASK 002	Valve of the breathing air system (1 in No) Fitting No 4676 Q029 to be replaced.
TASK 003	Pressure reducer, pressure controller and H.I.S controller Fitting No's 4676 Q094, Q125, Q119, Q120, and Q127 to be transported to the workshop.
TASK 004 No)	Pressure reducers, pressure controller & H.I.S controller (5 in Fitting No's 4676 Q094, Q125, Q119, Q120, & Q127 Parts to be disassembled, inspected, overhauled & tested. Inspection report to be submitted. Seals and wearing parts to be renewed. Equipment to be reinstalled on completion of work.
TASK 005	Valves of the BIBS system (22 in No) Fitting No's 4676 Q001, Q002, Q003, Q004, Q005, Q007, Q008, Q015, Q016, Q030, Q031, Q034, Q036, Q081, Q082, Q087, Q089, Q091, Q093 & Q156, Valves to be disassembled, inspected, overhauled & tested. Report to be submitted. Seals to be renewed. Valves to be installed on completion of work. Fitting No's 4676 Q006, Q157 to be replaced.
TASK 006	Safety Valves Fitting No's 4676 Q032, Q033, Q088, Q092. Valves to be disassembled, cleaned inspected & overhauled. Seals & springs to be renewed.

RESTRICTED

Valves to be reassembled and adjusted and tested.
Valves to be installed.

TASK 007 Pressure Gauge Units (5 in No)
Fitting No's 4676 Q101, Q104, Q105, Q106 & Q121
Equipment to be cleaned, overhauled & adjusted.
Calibration certificate to be provided.
Equipment to be installed on completion.

TASK 008 Filter (3 in No)
Fitting No's 4676 Q123, Q124, Q128.
Filters to be opened & cleaned
Seals to be renewed.
Report to be submitted

TASK 009 BIBS Quick Couplings (185 in No)
(Q035) to be renewed.

TASK 010 Locking Couplings (4 in No)
Fitting No's 4676 Q113, Q114, Q116, Q117.
Fittings to be overhauled and installed.
Report to be submitted.
Seals to be renewed.

TASK 011 Compensators to be renewed (5 in No)
Fitting No. 4676 Q115, Q118, Q130, Q141, Q142.

TASK 012 Pressure controller 1/4" NB56199/SA634MK3 to be
Fitting No 4676 Q158
Equipment to be stripped, cleaned and inspected.
Seals and wearing parts to be renewed.
Inspection report to be submitted.
Test certificate to be provided.

Pressure Controller to be installed.

TASK 013 System to be checked and pressure tested.
Report to be submitted.

BUILD GROUP 4677

DESCRIPTION CO2 – O2 Measuring

RESTRICTED

TASK 001	Combined O2/CO2 Measuring Unit. Both measuring devices to be calibrated. Report to be submitted. Calibration certificates to be provided.
TASK 002	O2 sensor of Measuring Instrument to be renewed.
BUILD GROUP	4715
DESCRIPTION	Provision Cooling System
TASK 001	Provision sea water cooling pumps No. 1 + 2 Equipment No's 47150105, 47150106 Pumps to be stripped, cleaned, inspected & overhauled. Report to be submitted Impeller, bearings as well as split rings, seals & V-belts to be renewed. Pumps to be installed. Remarks: Pump No1 has been in service for 21.000h, No 2 for 20.500h.
TASK 002	Damaged paint to the sea water cooling pumps to be repaired in accordance with the coating plan. This is to be followed by 1 complete coat.
TASK 003	Freon Compressor cooling units Equipment No's 47150109, 0110 Equipment to be removed, stripped, overhauled, tested and reinstalled on completion of work Seals and wearing parts to be renewed. Protocols to be submitted. Remark: The compressors were in service for 21.000 hours. Compressors to be replace on completion of work
TASK 004	Damaged paint to the Freon Compressors to be repaired in accordance with the coating plan. This is to be followed by 1 complete coat.
TASK 005	Thermal insulation of the deep freezer, refrigerator & the cold store including the refrigerator doors and the piping's to be checked. Report to be submitted.
TASK 006	Cold store, refrigerator & deep Freezer evaporators Equipment No's 47150101, 0102 & 0103.

RESTRICTED

Drain lines, heating, fan and fan motor to be checked in the fitted condition.

Report to be submitted.

for

Remark: The evaporator, the Fan incl. E-Motor were in service 21.000 hours.

Damaged paint to be repaired in accordance with the coating plan. This is to be followed by 1 complete coat.

TASK 007

Freon condenser cooling units 1 +2

Equipment No's 47150107 & 47150108

Equipment to be removed.

Condenser covers to be removed.

Cooling pipes (sea water side) to be cleaned and inspected.

Condenser covers to be refitted, Seals to be renewed.

Pressure test the condensers

Report to be submitted.

Condensers to be installed.

TASK 008

Freon pipe system including the Condenser

Pipes & equipment to be rinsed, inspected & pressure tested in the fitted condition.

Dryer to be renewed.

After checking the pipe system, leak detection and vacuum test to be performed for 24 hrs

Report to be submitted.

test.

Refill of the system on successful completion of the vacuum

TASK 009

Electrical switches and equipment of the system

Equipment to be opened, checked and cleaned including the wiring.

Cable connections to be checked for tightness.

Electrical equipment to be reclosed.

Report to be submitted.

TASK 010

Anti vibration and shock absorbers (8 in No)

Provision cooling system plant shock mounts to be renewed.

TASK 011

Corroded spots on the foundation in the area of the shock mounts to be removed down to the clean material.

These areas shall be patch coated and painted in accordance with the coating plan.

This is to be followed by 1 complete coat.

After installation the foundation plates of each shock absorber to be cleaned and coated with 2 coats of anti -corrosion protection paint.

Rubber elements to be coated with 1 coat of Pliobond.

RESTRICTED

TASK 012	Pressure switch Equipment No's 4715S110 & S111. Functional test to be carried out. Report to be submitted.
TASK 013	System Cables and cable connections Cables to be checked. Connections to be checked for tightness. Report to be submitted.
TASK 014	Screwed bonnet shut-off valve (1 in No) Fitting-No.: 4715S001 Valve to be replaced by a Göpfert valve. Pipes and pipes connection to the new valve type to be renewed. (Max 1m).
TASK 015	Rubber compensator (10 in No) Fitting No's 4715S160-S169. To be renewed.
TASK 016	Fittings and pipe lagging of the provision cooling system to be checked. Report to be submitted.
TASK 017	Setting the system to work Adjustment of the fittings. Report to be submitted
BUILD GROUP	4719
DESCRIPTION	E-Motor Provision Cooling System
TASK 001	Electric Motors GX70SPEZ (2 in No) Equipment No's 47190102 & 47190103 Motors for provision cooling compressors & cooling pumps Motors to be stripped, cleaned, inspected & overhauled. Armatures & stators to be washed, dried & re impregnated. Commutators to be skimmed and undercut. Armatures to be balanced. Carbon brushes and bearings to be renewed. Motors to be reassembled. Motors to be bench tested for 4 hrs & vibration analysis to be carried out Damaged paint to be repaired followed by 1 complete coat in accordance with the coating plan.

RESTRICTED

Remark: E-motor No1 has been in service for 21.000h, No 2 for 20.500h.

BUILD GROUP 4778

DESCRIPTION Chilled Water System

TASK 001 Chilled water cooling system compressor (1 in No)
Equipment No 47780102
Equipment to be stripped, cleaned & overhauled
Seals and wearing parts to be renewed.
Protocol (Report) to be submitted.
Damaged paint to be repaired followed by 1 complete coat in accordance with the coating plan.

Remark: The compressor was in service for 8000 hours.

TASK 002 Chilled water cooling compressor Motor
Equipment No 47780201
Motor to be stripped, cleaned, inspected & overhauled.
Armature and stator to be washed, dried, re- impregnated.
Commutator to be skimmed & undercut.
Armature to be balanced.
Carbon brushes, V belts and bearings to be renewed.
Motor to be reassembled.
A 4 hr test bench run with vibration analysis to be performed.
Report to be submitted
Damaged paint to be repaired followed by 1 complete coat in accordance with the coating plan.

TASK 003 Chilled Water Pumps Type UZ32-160 (2 in No)
Equipment No's: 47780402, 47780502
Pumps to be dismantled, cleaned, inspected & overhauled
Reports to be submitted.
Bearings as well split rings and seals to be renewed.
Damaged paint to be repaired followed by 1 complete coat in accordance with the coating plan.

Remark: The Pumps were in service for 4000 hours.

- TASK 004** Motors Type GMS309 (2 in No)
Equipment No's 47780401 & 47780501
- TASK 005** 2 pcs E-motors Type GMS309 to be to be dismantled.
Motors to be dismantled, cleaned, inspected & overhauled
Armatures and stators to be washed, dried, and re-impregnated.
Commutator to be skimmed & undercut.
Armatures to be balanced.
Carbon brushes, and bearings to be renewed.
Motor to be reassembled.
A 4 hr test bench run with vibration analysis to be performed.
Report to be submitted
Damaged paint to be repaired followed by 1 complete coat in accordance with the coating plan.
- TASK 006** Chilled water pumps Anti vibration & shock absorbers (11 in No)
Corroded areas on the foundation in the area of the shock absorber to be cleaned down to clean material.
The areas shall be patch coated in accordance with the coating plan.
After installation the foundation plates of each shock absorber to be cleaned and coated with in accordance with the coating plan.
Rubber elements to be coated with 1 coat of Pliobond.
- TASK 007** Freon condenser (1 in No)
Equipment No 47780103
Covers to be removed, Sea water cooling pipes to be cleaned and inspected.
Condenser covers to be refitted,
Seals to be renewed.
Report to be submitted.
Damaged paint to be repaired followed by 1 complete coat in accordance with the coating plan.
- TASK 008** Pipe system including the Condenser
System to be rinsed and to be pressure tested in situ.
Carry out an inspection
Dryer to be renewed.
After checking the pipe system, leak detection and vacuum test to be performed for 24hrs
Report to be submitted.
Refill the system.
- TASK 009** Chilled water system Control Panel:
Switches & contacts of the system equipment to opened.

RESTRICTED

Carry out an inspection of all switches and electrical parts.
Wiring is to be cleaned & all connections checked for tightness.
Insulation tests results to be submitted.
Electrical equipment to be closed on completion.
Report to be submitted.

TASK 010

Engine room chilled water compensators (8 in No)
Equipment No's R311, R312, R313, R314, R318, R319, R321, R320

CIC chilled water compensators (12 in No)
Equipment No's R297, R298, R299, R300, R301, R302, R303,
R304, R305, R306, R331, R332,

Electronic equipment room chilled water compensators (8 in No)
Equipment No's R293, R294, R307, R308, R309, R310, R315,
and R316.

All above compensators to be renewed.

TASK 011

Screwed bonnet shut-off valves (2 in No)
Fitting No's 4778 R263, R283

Globe valves (6 in No)
Fitting No's 4778 R259, R260, R261, R262, R273, R274

Regulating valves (10 in No)
Fitting No's 4778 R275, R276, R277, R278, R279, R280, R281,
R282, R317, R330

All above valves to be replaced by Göpfert valves.

Pipes and pipe connections to the new valve type to be renewed
(max. 1m).

TASK 012

Fittings, pipe lagging and coupling flexible discs of the chilled
water cooling system to be checked.
Report to be submitted.

TASK 013

Expansion tank
Equipment No 47780205
To be replaced.

TASK 014

Equipment to be installed on completion of work.
A system pressure test is to be performed.

RESTRICTED

Setting the system to work and adjustment of the fittings.
Report to be submitted on completion.

BUILD GROUP	4923
DESCRIPTION	Hydraulic Oil System
TASK 001	Hydraulic oil collecting tanks to be opened and cleaned. Running-dry-protection to be checked.
TASK 002	Hydraulic Oil System Rubber Compensators (24 in No) Fitting No's 49231003, 1013, 1015,1016, 1017, 1018, 1020, 1023, 1024, 1028, 1030, 1033, 1034, 1035, 1036, 1052, 1053, 1054, 1055, 1109, 1110, 1111, 1112, 1113. To be renewed.
TASK 003	Filters (5 in No) Filter No's 4923X450, X460, X478, X484, and X528. Filters to be cleaned. Inserts to be renewed.
TASK 004	Hydraulic oil accumulators (4 in No) Fitting No's 4923 X518, X519, X520, X521 Accumulators to be renewed Accumulators to be painted in accordance with the coating plan
TASK 005	Accumulators to be reinstalled on-board.
TASK 006	8pc. Anti-vibration and shock absorbers (8 in No) Hydraulic oil accumulators shock mounts to be renewed.
TASK 007	Corroded areas of the Hydraulic oil accumulators shock mounts foundation plates to be ground down to clean material and coated in accordance with the coating plan. Rubber elements to be coated with 1 coat of Pliobond.
TASK 008	Hydraulic oil pumps No 1 – 4 (4 in No) Fitting No's 4923X503, X504, X505, and X506 Pumps to be renewed. Report to be submitted.

RESTRICTED

Remark: The pumps were in service about 18.000 hours.

TASK 009	E-Motors for the hydraulic pumps (4 in No) GMS 618 Equipment No's 49231524- 49231527. Motors to be stripped, cleaned, inspected & overhauled. Armature and stator to be washed, dried, and re impregnated. Commutator to be skimmed and undercut. Armature to be balanced. Carbon brushes, and bearings to be renewed. Motor to be reassembled. A 4 hr test bench run with vibration analysis to be performed. Motors to be painted in accordance with the coating plan. Motors to be reinstalled on completion of work.
TASK 010	Anti vibration and shock absorber (4 in No) Hydraulic oil pumps shock mounts to be renewed.
TASK 011	Corroded areas of the Hydraulic oil pump shock mounts foundation plates to be ground down to the clean material and coated in accordance with the coating plan. Rubber elements to be coated with 1 coat of Pliobond.
TASK 012	Pump control block (1 in No) Equipment No: X453 Equipment to be overhauled & tested. Seals & wear parts to be renewed Report to be submitted. Pump control block to be installed on completion of work Remark: The hydraulic block was in service about 18.000 hours.
TASK 013	Bypass pump 4923X477 to be renewed.
TASK 014	System to be checked. Pressure test to be carried out on the system.
BUILD GROUP	4935
DESCRIPTION	Compressed Air System
TASK 001	Valves of the compressed air system (10 in No). Fitting No's. 4935 U003, U004, U026, U040, U133, U135, U137, U138, U170, U183 Hull valves and valves of the second shut-off to be disassembled in workshop.

RESTRICTED

Components to be cleaned and checked.
Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled pressure tested (according to the appropriate specification).
Valve sealing surfaces on the PH gland to clean and undamaged.
Hull studs and nuts to be renewed.
Installation of the valves including pressure tests on board to be performed.

TASK 002 HP-Compressor Aggregates (2 in No)
Equipment No's 49320100 & 49320200
Equipment to be overhauled & tested.
On completion of overhaul the equipment is to be refitted on-board.

TASK 003 HP-air compressors WP4253/54 (2 in No)
Equipment to be stripped.
Components to be cleaned and inspected.
Piston bolts to be taken off and measured.
Connecting rods and main bearings to be measured.
Crankshafts to be measured Pins to be polished. Cooling spaces in bodies and covers to be rinsed.
Renewal of following parts for each compressor:
1 set of piston rings
1 set of bearings and piston bolt bushings
2 pcs piston bolts
1 pc vent valve
4 pcs optical oil monitors
1 set of fan belts
1 set of suction and pressure valves
1 set of zinc protections
1 set of oil and air filter
1 set of safety valves
1 set of seals
1 pc suction filter
2 sets of air coolers to be disassembled and checked in workshop.
Housings and inserts to be cleaned and checked.
Zinc protections and seals to be renewed.
Air coolers to be reassembled.
Compressors to be reassembled.
Test run to be performed.
Compressors to be painted in accordance with the coating plan.
Report to be submitted on all work and tests.

RESTRICTED

- TASK 004** E Motors for HP-Air Compressor (2 in No)
Motors to be stripped, cleaned, inspected & overhauled
Report to be submitted.
Armatures & stators to be washed, dried, and re impregnated.
Commutator to be skimmed and undercut.
Armature to be balanced.
Carbon brushes, bearings and V belts to be renewed.
Motor to be reassembled.
A 4 hr test bench run with vibration analysis to be performed.
Motors to be painted in accordance with the coating plan.
- TASK 005** HP Air Compressor Anti vibration and shock absorber (4 in No)
Shock mounts to be renewed.
Corroded spots on the foundation in the area of the shock absorber to be ground down to the clean material.
Areas to be repaired in accordance with the coating plan.
After installation the foundation plates of each shock absorber to be cleaned and coated in accordance with the coating plan.
Rubber elements to be coated with 1 coat of Pliobond.
- TASK 006** Pressure Reducers of the compressed air system (5 in No) to be Fitting No's 4935 U019, U705, U706, U707, U708.
Reducers overhauled, tested and installed.
Report to be submitted.
Seats, needles, seals and membranes to be renewed.
Pressure Reducers to be reinstalled.
- TASK 007** Safety Valves (3 in No)
Fitting No. 4935U210, U211, U221.
Valves to be stripped, cleaned, inspected & overhauled
Seals, and springs to be renewed.
Valves to be reassembled and tested & adjusted.
Valves to be reinstalled.
Report to be submitted.
- TASK 008** Filter (1 in No)
Fitting No. 4935U654.
To be opened, cleaned, inserts to be renewed and the filters to be reassembled.
- TASK 009** 6 pcs. Emergency Blow Connections (6 in No)
Fitting No's 4935U145, U146, U147, U148, U164, U306.
Fittings to be opened, cleaned & checked.
Seals to be renewed & tested.
Report to be submitted.

RESTRICTED

Emergency Blow Connections to be reinstalled.
Report to be submitted.

- TASK 010** Air manifolds (4 in No)
Fitting No's 4935U901, U902, U203, U904.
Manifolds to be opened, cleaned, inspected & overhauled.
Seals to be renewed.
Manifolds to be tested.
Air manifolds to be reinstalled.
Report to be submitted.
- TASK 011** Blow-Off air Manifold (1 in No)
Equipment No 4935U903 comprising of:
Safety valve U903
Valves inserts fitting No's 4935U092, U093, U094, U095, U096, U097, U101 and Drain Valve insert 4935 U099
Manifold, safety valve, valve inserts & drain valve to be overhauled & pressure tested.
Seals and springs to be renewed.
Report to be submitted.
Manifold to be installed on completion of work.
- TASK 012** Emergency blow valves fwd.
Fitting-No's 4935U285, U286, U287, U288, U391, and U392.
Blow valves to be overhauled & tested.
Seals to be renewed.
Report to be submitted.
Valves to be installed on completion of work.
- TASK 013** Rubber compensators of the compressed air system (26 in No)
Fitting No's 4935U636; U639; U936; U637; U638; U935; U604, U605; U606; U611; U609; U613; U615; U616; U617; U614, U608; U618; U619; U620; U621; U622; U656; U657; U658; U659.
Compensators to be renewed.
- TASK 014** Compressed air system to be pressure tested & checked.
Report to be submitted.
- BUILD GROUP** 4936
- DESCRIPTION** Compressed Air Life Raft System
- TASK 001** Hull valves and valves of the second shut-off.(4 in No)
Fitting No's 4936U201, U203, U207, U208.
Components to be stripped, cleaned, inspected & overhauled.

RESTRICTED

Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled & pressure tested.
Valve sealing surfaces on the PH glands to be clean and undamaged.
Hull studs and nuts to be renewed.
Installation of the valves including pressure tests on board to be performed.

TASK 002 Pressure Reducers (2 in No)
Fitting No's 4936U759, U766.
Reducers to be stripped, cleaned inspected & overhauled.
Inspection report to be submitted.
Seals and wearing parts to be renewed.
Pressure reducers to be tested
Pressure reducers to be installed.

TASK 003 Globe valves (2 in No)
Fitting No's 4936U266 & U267.
Valves to be stripped, cleaned, inspected & overhauled
Seals to be renewed.
Pressure test on completion of overhaul.
Report to be submitted
Globe valves to be reinstalled

BUILD GROUP 4937

DESCRIPTION Service Air System

TASK 001 Hull valves and valves of the second shut-off
Fitting No 4937V028 (1 in No)
Strip, clean, inspect & overhaul the valve
Report to be submitted.
Seals to be renewed.
Valves to be reassembled & pressure tested
Valve sealing surfaces on the PH gland to be clean and undamaged.
Hull studs and nuts to be renewed.
Installation of the valve including a pressure test on board to be performed.

TASK 002 Solenoid valves (8 in No)
Fitting-No's 4937V001, V004, V039, V050, V92, V93, V94, V95.
Solenoid valves to be overhauled, pressure tested

RESTRICTED

Seals to be renewed.
Report to be submitted.
Solenoid Valves to be reinstalled.

TASK 003 Three-way-cock to snorkel head valve (1in No)
Fitting-No.: 4937V027
3 Way cock to be cleaned, inspected, overhauled & pressure tested.
Seals to be renewed.
Install & test valve on completion of overhaul

TASK 004 Pressure reducing station (1 in No)
Fitting No. 4937V130.
Strip, clean, inspect & overhaul the reducing station.
Report to be submitted.
Seats, needles, seals and membranes to be renewed.
Test on completion of overhaul.
Pressure Reducer to be installed.

TASK 005 Reducing station (1in No)
Fitting No.: 4937V138.
To be renewed

TASK 006 Rubber Compensators of the compressed air system (7 in No)
Fitting No's 4937V222; V223; V224; V225; V226; V227; V229.
Compensators to be renewed

TASK 007 Pneumatic control unit for safety shut off valve.
Fitting Nr.4937V150
Disassemble & check.
Report to be submitted.

BUILD GROUP 4938

DESCRIPTION Compressed Air System HP

TASK 001 Hull valves and valves of the second shut-off (10 in No)
Fitting No's 4938U114, U115, U116, U117, U121, U122 U141,
U142, U163, and U194.
Valves to be disassembled in the workshop.
Components to be cleaned and checked
Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled & pressure tested

RESTRICTED

Valve sealing surfaces on the PH glands to be clean and undamaged.

Hull studs and nuts to be renewed.

Installation of the valves including pressure testing on board to be carried out.

TASK 002 Rubber Compensators of the compressed air system (7 in No)
Fitting No.4938U600, U601, U602, U603, U670, U671, U939.
Compensators to be renewed.

TASK 003 Pressure Reducers of the compressed air system (2 in No) to be
Fitting No's 4938U702 & U709
Pressure reducers to be disassembled, inspected & overhauled.
Report to be submitted.
Seats, needles, seals and membranes to be renewed.
Test on completion of overhaul
Pressure Reducers to be installed.
Safety valves to be adjusted.

TASK 004 Filters (8 in No)
Fitting No's 4938U820, U821, U822, U823, U824, U825, U826, U829.
Filters to be opened, cleaned, inserts to be renewed and the filters to be reassembled.

TASK 005 Safety Valves (5 in No) to be disassembled.
Fitting No. 4938U196, U230, U231, U232, U233.
Valves to be disassembled, cleaned, inspected & overhauled.
Springs & seals to be renewed.
Valves to be reassembled, adjusted & tested in the workshop.
Report to be submitted
Valve to be installed.

TASK 006 Air manifold (1 in No)
Fitting No. 4938U900
Manifold to be opened, cleaned, inspected and overhauled.
Seals to be renewed.
Air manifold to be tested and installed.

TASK 007 16 pcs. Compressed Air Cylinders 4938U918 - U933.
26 pcs. Foundation caps.
64 pcs. Connecting rods
Above items to be grit blasted.
Parts to be painted in accordance with the coating plan.

RESTRICTED

- TASK 008** Air drier FHD-10-95 (1 in No)
Fitting No: 49380200
To be cleaned, inspected & overhauled.
Seals & wear parts to be renewed.
Air drier to be tested by TÜV/DNV
Report to be submitted.
Air drier to be installed.
Drier to be painted in accordance with the coating plan.
- TASK 009** Pressure maintaining valve (1 in No)
Fitting No 4938U827.
To be renewed
- TASK 010** Reducing Station 250>100BAR (1 in No)
Equipment No (4938U702)
Valve inserts fitting No's 4938U102, 103, 104
Reducing station & inserts to be stripped, cleaned & overhauled.
Reinstall and pressure test.
Safety valves to be adjusted.
Report to be submitted.
- BUILD GROUP 5070**
- DESCRIPTION Hydraulic System Hoistable Masts**
- TASK 001** 5 pcs. Hose compensators (5 in No) to be renewed.
Fitting No's 50701060, 1061, 1062, 1088, 1089.
To be renewed
- TASK 002** Hydraulic oil accumulator (1 in No)
Fitting No: 5070X562
Hydraulic oil accumulators to be repaired/ replaced and refitted on-board.
- TASK 003** Stop valves of the hydraulic system (2 in No)
Fitting No's 5070X212, X213
Valves to be stripped, cleaned, inspected & overhauled.
Test on completion of overhaul.
Report to be submitted.
Reinstall on-board & test.
PH passages to be clean and undamaged.
PH studs & nuts to be renewed.

BUILD GROUP: 5141

DESCRIPTION: HF-MAST

TASK: 001 HF emergency Antenna
Equipment to be inspected.
Report to be submitted.

BUILD GROUP: 5183

DESCRIPTION: Combined Antenna (2-stage transmitting and receiving antenna)

TASK: 001 2-Stage Transmitting and Receiving Antenna Type AT 4125
To be disassembled, inspected & overhauled.
Report to be submitted.
Seals and wear parts to be renewed.

TASK: 002 Corroded spots on the FM-Mast to be spot blasted and painted
in accordance with the coating plan.

TASK: 003 On completion of overhauling of the PH-penetration the
hoistable mast is to be installed.
PH-Penetration gasket set to be renewed.
Functional test report to be submitted.

BUILD GROUP: 5243

DESCRIPTION: ESM System type UME 100 EW (Head)

TASK: Indicate capability to conduct maintenance & repair for this build
group

BUILD GROUP: 5254

DESCRIPTION: Plotting Table Type S.P.L

TASK: Indicate capability to conduct maintenance & repair for this build
group

BUILD GROUP: 5281

DESCRIPTION: Hoisting Masts for Radar Antenna

RESTRICTED

- TASK: 001** Hoistable Mast for Radar antenna.
Equipment No 50701509
Mast to be disassembled, cleaned, inspected & overhauled.

Seals and wear parts to be renewed.
Corroded spots on the Mast to be spot blasted and painted in accordance with the coating plan.
- TASK: 002** Locking coupling 5070X738
To be overhauled, seals and wear parts to be renewed.
Report to be submitted.

Remark: The Radar Rotating Drive is very noisy.
Any damaged components are to be identified at an early stage
Report to be submitted on components requiring replacement.
- TASK: 003** Magnetron for Navigation Radar Type SCANTER 1024 to be renewed.

Remarks: Evidence of burn marks at the Magnetron Supply Wires and inner Plate.
- TASK: 004** Hoistable Mast for Radar antenna to be stored on completion of work.
After completion of the overhaul of the PH penetration, the hoistable mast is to be installed.
PH-Penetration seals to be renewed.
Functional test to be carried out.
Functional test report to be submitted.

All painting to be in accordance with the coating plan.

BUILD GROUP 5292

DESCRIPTION Optronic System Type OMS100

- TASK 001** Hull valves (3 in No)
Fitting No's X233, X221 & X220
Valves to be disassembled, cleaned, inspected & overhauled.
Inspection report to be submitted.
Seals to be renewed.
Valves to be reassembled & pressure tested (according to the appropriate specification).

RESTRICTED

Valve sealing surfaces on the PH passages to be clean & undamaged.
Hull studs and nuts to be renewed.
Install the valves and carry out a pressure test.

TASK 002 Combined Hull Valve of the central grease system (1 in No)
Fitting No.5292 W051
Valve to be disassembled, cleaned, inspected & overhauled.
Inspection report to be submitted.
Seals to be renewed.
Valve to be reassembled & pressure tested (according to the appropriate specification).
Valve sealing surfaces on the PH passages to be clean & undamaged.
Hull studs and nuts to be renewed.
Install the valve and carry out a pressure test.

BUILD GROUP: 5321

DESCRIPTION: Hoistable Mast for Optronic Sensor

TASK: 001 Optronic Mast to be disassembled, cleaned, inspected & overhauled.
Report to be submitted.
Seals and wear parts to be renewed.
Corroded areas of the Optronic Mast to be blasted, repaired and coated in accordance with the coating plan.

Know defects: The Optronic mast moves in the hoisted position from port- to starboard side while the boat is rolling.
Leakage on the 2nd stage - 39c3 / 100c3 - 26.05.14
Leakage on the 2nd stage - 100c3 / 100c3 - 27.05.14
Leakage on the Revolution drive - 500c3 / 500c3

TASK: 002 Optronic Mast be stored on completion of overhaul.
After refurbishment of the PH-penetration the Optronic hoistable mast is to be installed.
PH-Penetration seals to be renewed.
Hull studs/bolts & nuts to be renewed
Functional test to be carried out.
Report to be submitted.

BUILD GROUP: 5326

DESCRIPTION: ESM System Type UME 100 (Mast)

RESTRICTED

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 5342

DESCRIPTION: Attack Periscope

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 5485

DESCRIPTION: Radio Communication System

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 5553

DESCRIPTION: Seawater System S²VTD Probes Mod S250 Raytheon

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 5761

DESCRIPTION: Signal Ejector

TASK: 001 Ejector to be disassembled, cleaned, inspected & overhauled.
Seals and wear parts to be renewed.
Pressure test to be performed.
Report to be submitted.
Signal ejector to be installed and pressure tested.

TASK: 002 System Valves (13 in No)
Fitting No's 5761Y001, Y002, Y003, Y 004, Y005, Y 006, Y007, Y008, Y009, Y010, Y011, Y111 & Y115.

RESTRICTED

Valves to be stripped, cleaned, inspected, overhauled & tested.
Seals to be renewed.
Report to be submitted.
Replace valves on completion and pressure test.

TASK: 003 Pressure gauges (2 in No)
Fitting No's 5761 Y110 & Y113.
Clean, test & calibrate.
Submit a report on completion.
Reinstall gauges

All painting to be in accordance with the coating plan.

BUILD GROUP: 5810

DESCRIPTION: Navigation System

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 5831

DESCRIPTION: Gyro Compass STD 20M

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 5840

DESCRIPTION: AGILOG Speed Measuring System

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 6331

DESCRIPTION: Integrated Combat System (ISUS)

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 6722

RESTRICTED

DESCRIPTION: Navigation Data Management Centre (NDMC)

TASK: Indicate capability to conduct maintenance & repair for this build group

BUILD GROUP: 7325

DESCRIPTION: TORPEDO SYSTEM

TASK: 001 Hull valves and valves of the second shut-off to be
disassembled in workshop.
Fitting No's 7325Z132, Z133.
Strip, clean, inspect & overhaul the valves.
Seals to be renewed.
Report to be submitted

TASK: 002 Replace valve on-board & pressure test.
Pressure test on completion
Valve sealing surfaces on the PH gland to clean & undamaged.
Hull studs and nuts to be renewed.
Installation of the valves including pressure test on board to be performed.

TASK: 003

Shell flaps to be uncoupled and removed together with the linkages.

Components to be checked.

Report to be submitted.

Zinc anodes and bearings of the linkages to be renewed.

All greasing pipes for torpedo shell flaps to be cleaned.

All parts to be installed and adjusted.

TASK 004 Corroded areas on the shell flaps and linkages to be ground down to clean material.
Areas to be repaired and painted in accordance with the coating plan.

TASK 005 Mechanical Functional test of the performance of all valves and linkages to the 8 torpedo tubes.

TASK 006	Hostalen-parts of the guide rails in the torpedo launching area to be removed. Inspection report to be submitted.
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TASK 007 Guide rail foundations to be cleaned.
Corroded spots to be ground down to the clean material.

RESTRICTED

Bare spots to be primed, patch coated & painted in accordance with the coating plan.

Hostalen guide rails to be reinstalled and calibrated by calibre jig.

TASK 008 Tube I - VIII: Functional test of the performance of all valves and linkages of the Torpedo Tubes.
Report to be submitted.

TASK 009 Tube I-VIII: Muzzle doors opening shafts, stuffing boxes, linkages, bolts, operating gear to be removed.
The removed parts to be cleaned and inspected.
Inspection report to be submitted.
Shafts, operating gear, stuffing boxes to be overhauled.
Seals to be renewed.

TASK 010 8 pcs. Muzzle doors Seals and Zinc anodes to be renewed.

TASK 011 Breech door
Seals to be renewed.
System to be adjusted.

TASK 012 Transport slides of the weapon embarkation & mine laying system (4 in No)
To be cleaned & checked.
Report to be submitted.

TASK 013 Guide rails in the torpedo tubes to be inspected.
Inspection report to be submitted.

TASK 014 Safety Valves (4 in No)
Fitting No's 7325 Z125, Z126, Z127, Z128.
Strip, clean, inspect & overhaul the valves.
Seals and springs to be renewed.
Test and adjust as required.
Report to be submitted
Refit on-board.

TASK 015 Reducing Station (1 in No)
Fitting No 7325 Z067
Strip, clean, inspect, overhaul & test the reducing station
Seals to be renewed.
Report to be submitted
Refit on-board.

RESTRICTED

- TASK 016** Filter (1 in No)
Fitting No 7325 Z130
Filter to be cleaned.
Seal to be renewed.
- TASK 017** Screwed bonnet shut-off valve (1 in No)
Fitting-No 7325 Z062
Valve to be replaced by a Göpfert valve.
Pipes and pipe connections to the new valve type to be renewed
(max. 1m).
- TASK 018** System pressure test & functional test to be performed.
Report to be submitted.

All paint to be in accordance with the coating plan.

BUILD GROUP: 7328

DESCRIPTION: Torpedo Hydraulic Accumulator

- TASK: 001** Hydraulic compensators (6 in No)
Fitting No's 7328 1118, 1119, 1124, 1125, 1036 & 1041.
To be renewed.

BUILD GROUP: 7340

DESCRIPTION: Torpedo Loading and Stowage Equipment.

- TASK: 001** Lifting masts, lifting traverses, lifting ropes, hydraulic motors,
cross-transport trolley, fastening belts and holders of the torpedo
loading and stowage
System to be inspected.
Report to be submitted.

- TASK: 002** Holding bolts including bearings and drive rods for torpedo
loading platform to be disassembled, cleaned and inspected.
Parts to be free of burrs and scouring.
Report to be submitted
All parts to be reassembled and aligned.
Greasing lines to be modified.

BUILD GROUP: 7378

RESTRICTED

DESCRIPTION: Weapon Embarkation

TASK 001: Torpedo System Compensators (7 in No)
Fitting No's 7378 1075, 1076, 1077, 1114, 1115, 1116, & 1117.
To be renewed.

BUILD GROUP: 8454

DESCRIPTION: TCM System

TASK: 001 Torpedo Counter Measures TCM
To be inspected.
Report to be submitted.

TASK: 002	Stop valves of the hydraulic system (5 in No)
	Fitting No's 8454 X047, X090, X091, X092 & X093.
disassembled	Hull valves and valves of the second shut-off to be in workshop.
	Components to be cleaned & checked.
	Inspection report to be submitted.
	Seals to be renewed.
	Valves to be reassembled, pressure tested.
undamaged	Valve sealing surfaces of the PH gland to be clean &
	Installation of the valves including pressure test on board to be carried out

TASK: 003 Hydraulic Diaphragm Accumulator (0, 16 l) (8 in No)
Fitting No's X104, X107, X231, X232, X234, X239, X248, &
X261 To be renewed.

TASK: 004 Compensators for the TCM system (18 in No)
Fitting No's 8454 9301, 9302, 9303, 9304, 9305, 9306, 9307,
9308, 9309, 9318, 9319, 9320, 9321, 9322, 9323, 9324, 9325,
and 9326.
To be renewed

TASK: 005 Corroded areas on the TCM to be ground down to the clean material.
Areas to be repaired in accordance with the coating plan.

RESTRICTED

ANNEXURE B: PRICING PER BUILD GROUP

ITEM No.	BUILD-GROUP NO.	TASK NO.	UNIT PRICE IN FOREIGN CURRENCY	UNIT PRICE IN S.A. CURRENCY	SUBTOTAL	LEAD TIMES (Hours/days/weeks/months)
1.	1171	001				
2.	1172	001				
3.	1175	001 to 005				
4.	1276	001 to 002				
5.	1280/1282	001 to 014				
6.	1613	001 to 003				
7.	1636	001				
8.	1910	001				
9.	1916	001 to 005				
10.	1947	001 to 002				

ANNEXURE B: PRICING PER BUILD GROUP

11.	2110	001 to 005				
12.	2124	001 to 007				
13.	2128	001 to 004				
14.	2129	001 to 006				
15.	2136	001 to 009				
16.	2148	001 to 008				
17.	2154	001 to 012				
18.	2155	001 to 008				
19.	2156	001 to 004				
20.	2158	001 to 005				
21.	2178	001 to 005				

ANNEXURE B: PRICING PER BUILD GROUP

22.	2510	001 to 006				
23.	2544	001 to 002				
24.	2551	001 to 003				
25.	2552	001 to 008				
26.	2553	001 to 010				
27.	2556	001 to 004				
28.	2778	001 to 007				
29.	2910	001				
30.	2914	001 to 004				
31.	2916	001 to 005				
32.	2919	001 to 015				

ANNEXURE B: PRICING PER BUILD GROUP

33.	3310	001 to 019				
34.	3321	001 to 010				
35.	3370	001				
36.	3494	001 to 003				
37.	3662	001 to 003				
38.	4120	001 to 006				
39.	4174	001 to 004				
40.	4192	001 to 006				
41.	4228	001 to 004				
42.	4261	001				
43.	4311	001 to 003				

ANNEXURE B: PRICING PER BUILD GROUP

44.	4315	001 to 003					
45.	4318	001 to 010					
46.	4338	001 to 010					
47.	4350	001 to 004					
48.	4363	001 to 002					
49.	4368	001 to 004					
50.	4410	001					
51.	4522	001					
52.	4528	001 to 008					
53.	4548	001 to 005					
54.	4558	001 to 009					

ANNEXURE B: PRICING PER BUILD GROUP

55.	4578	001					
56.	4610	001 to 003					
57.	4628	001 to 005					
58.	4671	001 to 026					
59.	4672	001 to 003					
60.	4676	001 to 013					
61.	4677	001 to 002					
62.	4715	001 to 017					
63.	4719	001-002					
64.	4778	001 to 014					
65.	4923	001 to 014					

ANNEXURE B: PRICING PER BUILD GROUP

66.	4935	001 to 014					
67.	4936	001 to 003					
68.	4937	001 to 007					
69.	4938	001 to 010					
70.	5070	001 to 003					
71.	5141	001					
72.	5183	001 to 003					
73.	5281	001 to 004					
74.	5292	001 to 002					
75.	5321	001 to 002					
76.	5761	001 to 003					

ANNEXURE B: PRICING PER BUILD GROUP

77.	7325	001 to 018				
78.	7328	001				
79.	7340	001 to 002				
80.	7378	001				
81.	8454	001 to 005				

ANNEXURE C

1. WORK AUTHORIZATION (WA) FOR STAFF SUPPORT TASKS

All on demand (ad hoc) tasks will be formally approved by means of a Work Authorization (WA) prior to the commencement of any task.

1. TYPES OF RESOURCES

The following functions are needed to execute the tasks:

Project Manager
Marine/ Naval Architect
Engineer
System Technician
Technician
Artisan
Administrator/data clerk
Labourer

These functions could be performed by any combination of either one or more people.

1. DECLARATION OF COMMITMENT OF RESOURCES

The bidder shall declare to Armscor the number of hours that will be committed, per build group by each resource offered for this bid, as well as for any other project for which the resource has committed hours. The bidder further undertakes to inform Armscor of any change in this situation.

1. SPECIFIC RESOURCES

The bidder acknowledges that this bid for rendering of services by specific resources, and that the resources appointed to perform the services shall be competent and suitably qualified in accordance with the specified critical criteria, e.g.

- Thorough knowledge and an exposure to class 209 mod 1400 submarines;
- Have been involved in maintaining and refitting class 209 mod 1400 submarines;
- The Armscor Dockyard reserves the right to utilize their internal resources for some of the Scope of Work (SoW).
- The Armscor Dockyard reserves the right to remove or add some tasks from the SoW.

1. CHANGE OF RESOURCES

Should the bidder be appointed as the Contractor, then, in such event changes to the offered resources shall only be permitted if duly authorized by Armscor subject to the resource offered as replacement complying fully with the same criteria as the resources being replaced.

Annexure D: Spare Parts Codification Requirements



SOUTH AFRICAN NAVY

This document is the property of the SOUTH AFRICAN NAVY. Any person who finds this document should hand it to the nearest Service Unit of the SANDF or Police Station for its safe return.

This document contains information relating to the defence of the Republic of South Africa. The provision of Sections 118 of the Defence Act, Act No. 44 of 1957, as well as the provisions of the Protection of Information Act, Act No. 84 of 1982, are applicable to this document.

TITLE: DD 1376 REQUIREMENTS FOR THE CODIFICATION OF ITEMS OF SUPPLY.

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1. SCOPE

- 1.1 This document provides guidance to Contractors for the correct completion of forms DD 1376.
- 1.2 Purpose. The purpose of this document is to ensure that recommendations by Contractors for spares and servicing equipment to be held by the SA Navy in support of their equipment is formally initiated on form DD 1376 Recommended Spares and/or Servicing Equipment.

2. ACRONYMS AND ABBREVIATIONS

- 2.1 DD 1376 : Recommended Spares and/or Servicing Equipment list
- 2.2 IOS : Item of Supply
- 2.3 LRU : Line Replaceable Unit
- 2.4 SRU : Shop Replaceable Unit
- 2.5 S & TE : Support and Test Equipment
- 2.6 SANDF : South African National Defence Force
- 2.7 NLB : Naval Logistics Base

3. DEFINITIONS

For the purpose of this document the following definitions shall apply:

- 3.1 National Codification Bureau (NCB). A country's central authority responsible for the establishment and maintenance of the National Codification system.
- 3.2 National Stock Number (NSN). A 13-digit number assigned to an item of supply, consisting of the four-digit National Supply Classification Code and the nine-digit National Identification Number.
- 3.3 Line Replacement Unit (LRU). LRU's are defined as assemblies (containing PCB's, modules and components) and items that can be replaced by operators at the Organisational level.
- 3.4 Shop Replacement Unit (SRU). SRU's are defined as assemblies or items that can only be tested at Intermediate (Dockyard) or Depot level.

4. APPLICABLE DOCUMENTS

- 4.1 LOG 5 Vol. 1 Pamphlet 9 : National Codification System procedural manual for the
supply of codes for manufacturers/non-manufacturers.
- 4.2 LOG 5 Vol. 2 Pamphlet 32 : National Codification System procedural manual for
National Codification System abbreviations.

5. REQUIREMENTS

- 5.1 Form DD 1376.
- 5.1.1 Contractors shall submit separate DD 1376 forms to the Naval Logistics Base in respect of the following:
- Spare and repair parts to be held by the SA Navy in support of the equipment. This shall include Line Replaceable Units (LRU's), Shop Replaceable Units (SRU's) and consumables.
 - Peculiar and Common Support and Test Equipment (S & TE) to be held by the SA Navy in support of the maintenance of equipment. This includes test, diagnostic and measuring equipment, jigs, special and common tools.

- 5.1.2 The DD 1376 shall be prepared taking into account the maintenance concept established for the equipment in question and based on the results of the Logistic Support Analysis where such an analysis has been conducted.
- 5.1.3 The DD 1376 shall list the lowest level of spare/repair parts and consumables required by the SA Navy in support of maintenance. Where maintenance is to be carried out to the component level then components such as fasteners, resistors, filter elements, lubricating oil etc. shall be reflected. Where maintenance is carried out down to a card or module level and not to the component level then the cards/modules fitted in the next level up shall be reflected on the DD 1376.

EXAMPLE : A DD 1376 could be submitted for components fitted on an excitor card. The next higher assembly to the excitor card could be a power supply unit. The major assembly could be a Radio Receiver Type "XYZ" while the major equipment could be the Radio Sub-System for SAS Drakensberg

NOTE : When developing spares recommendations a bottom up approach should be taken.

- a. Lowest level of spare: items list on the DD 1376
 - b. Recommended Spare for: the next highest assembly to the spares listed in a.
 - c. Next Assembly: the next higher assembly to b.
 - d. Major Assembly: the next higher assembly to c.
 - e. Major Equipment: the next higher assembly to d.
- 5.1.4 A set of DD 1376's shall contain the header sheet and a number of continuation pages , if necessary.
- 5.2 DD 1376 Header Data. The following information shall be completed by contractors on the header sheet. This sheet shall be page 1 of
- 5.2.1 Recommended spares and/or Servicing equipment. The item for which the spares/servicing equipment is recommended.
- 5.2.2 Manufacturer. The name and address of the true manufacturer of the item for which the spares are recommended.
- 5.2.3 Local Agent. The name and address of the authorised local agent in the RSA, if applicable, who supplied the item to the contractor.
- 5.2.4 Publication/Tech. Order No. The order number against which the main equipment was supplied to the SA Navy.
- 5.2.5 Next Assembly. Refer paragraph 5.1.3 Note c.
- 5.2.6 Major Assembly. Refer paragraph 5.1.3 Note d.
- 5.2.7 Major Equipment. Refer paragraph 5.1.3 Note e.
- 5.2.8 Remaining Header Data. These fields are for the use of the SA Navy and shall be left blank by contractors.
- 5.3 DD 1376 Column Data. Contractors shall supply the following data in respect of column data required on header and continuation sheets :

set of DD 1376 forms start from item no. 1.

- 5.3.2 National Stock Number (NSN) (b). Where the NSN is available, it is to be inserted.
- 5.3.3 Manufacturer's Part No. (c). The item identifying part number of the true manufacturer for the spare/repair part, servicing item or consumable. The true manufacturer is defined as the organisation that physically manufactured or carried out modifications to the spare part in question. Where a part is manufactured to a specification or standard then such specifications or standards' reference number shall be inserted in parenthesis on the line below the part number.
- 5.3.4 Manufacturer's Code (d). The five-digit code allocated to manufacturers. Refer LOG 5 Vol. 1 pamphlet 9. This field is to be left blank by the contractors where the code is not known.
- 5.3.5 Supplier's Part Number (e). The item identifying part number of the supplier of the item. The part number of the local agent in the RSA is required or where this is not known, the number allocated by the organisation which supplied the item to the contractor completing the DD 1376 form.
- 5.3.6 Supplier's Code (f). The five-digit code allocated to suppliers. Refer LOG 5 Vol. 1 pamphlet 9. This field to be left blank by contractors where the code is not known.
- 5.3.7 Item Name (g). A full definitive description of the item e.g. Washer, lock, A8-A3C or lamp, incandescent, 220V, 100W, BC.
- 5.3.8 Quantity per Next Higher Assembly (NHA) (h). The quantity of the specific item fitted to the next assembly referred to in paragraph 6.2.1.
- 5.3.9 Unit of Issue (i). The basic measurement of issue i.e. each (ea), pair (pr). Refer LOG 5 Vol. 2 pamphlet 32 for abbreviations used within the SANDF.
- 5.3.10 Quantity recommended for onboard use (k). The quantity recommended by the contractor to be carried as a spare for one vessel.
- 5.3.11 Quantity recommended for Base Use (l). The quantity recommended by the contractor to be held in support base or bases, if applicable.
- 5.3.12 Quantity recommended for Depot Stock (m). The quantity recommended by the contractor to be held by the SAN Stores Depot(s).
- 5.3.13 Lead Time (n). The lead time for the delivery of an item to the SAN Stores Depot from the time that a contractor receives an official order. The lead time shall be given in weeks.
- 5.3.14 Shelf life (o). The shelf life, in years, of the item once delivered to the SA Naval Store Depot e.g. batteries, seals etc.
- 5.3.15 Price (each) (p). The unit price for each line item.

1. SENSITIVE ACQUISITION

- 6.1 It may be necessary, due to the sensitive nature of the equipment or the name and reference number of the manufacturer, for certain information normally disclosed on DD 1376's not being available or not deemed advisable to disclose. Contractors are to refer all such requests to the NLB.

7. LANGUAGE

- 7.1 DD 1376 forms shall be completed in the English language, which is the official language for logistics in the SANDF.

8. MEDIUM

electronic media specified by Naval Logistics Base.

8.2 Hand written forms DD 1376 may under no circumstances be submitted.

9. STANDARD ITEMS

9.1 Contractors are reminded that where standard items have been selected, spares and repair parts for such standard items must comply with the original manufacturer's specification.

10.1 Contractors shall, during the life cycle of their equipment, supply the SA Navy with change notices in respect of the following :

- a. Changes to item part numbers.
- b. Supersession of items with other items.
- c. Modification data applicable to the equipment, to spares and possibly S & TE.
- d. Details of final production runs for spares.

11. SUPPORTING DATA

11.1 Contractors shall submit together with DD 1376 submissions the relevant supporting documentation required to identify all line items reflected on the DD 1376 forms.

11.2 Such supporting data may be brochures (glossies), technical specifications, standard sheets, manufacturer's drawings etc. All supporting documentation forwarded shall be legible and reflect the name of the company that originally produced such documentation.

12. QUALITY ASSURANCE

12.1 The Project Officer shall ensure that all DD 1376 submissions by contractors conform to the requirements of the guidelines prior to the handing over to the SA Navy for the completion of column data for column q, r, s and t.

12.2 Contractors are requested to contact the NLB for advice or guidance should there be any doubt regarding the correct completion of forms DD 1376.

RESTRICTED

[illegible]

ANNEXURE E

OHASA ACT AGREEMENT

WRITTEN AGREEMENT ON

OCCUPATIONAL HEALTH AND SAFETY

In accordance with the provisions of Section 37(2)
Of the Occupational Health and Safety Act, Act No 85 of 1993

AS ENTERED INTO BY AND BETWEEN

(Hereinafter referred to as the "Employer")

and

(Hereinafter referred to as "the Contractor")

Contractor Compensation Fund Certificate Number: _____

Vendor Number: _____

Contract Number: _____

DEFINITIONS

In this agreement, unless the context indicates otherwise –

Contractor

Contractor will be understood to represent the word "mandatory" as defined in the Construction Regulations of the Occupational Health and Safety Act, 85 of 1993

Employer

Employer will be understood to represent the word "client" as defined in the Construction Regulations of the Occupational Health and Safety Act, 85 of 1993

Hazard

means a source of or exposure to danger;

he/his/him/himself

will be used for the sake of expediency and is meant to incorporate the feminine.

Mandatory

includes an agent, a contractor or a subcontractor for work, but without derogating from his status in his own right as an employer or a user as defined in the Occupational Health and Safety Act 85 of 1993

Safe

means free from any hazard;

Workplace

means any premises or place where a person performs work in the course of his employment;

WARRANTY OF COMPLIANCE

*In terms of this agreement the **Contractor** warrants agreement to the arrangements and procedures as prescribed by the **Employer** and as provided for in terms of Section 37(2) of the OHS Act for the purposes of compliance with the Act and its regulations.*

*The **Contractor** further accepts that this contract, made in terms of Section 37(2), shall be read with the Occupational Health and Safety Act and any Regulation made in terms of Section 43 and any Standard Incorporated in terms of Section 44.*

*The **Contractor** acknowledges that this agreement constitutes an agreement in terms of Section 37(2) of the OHS Act, whereby all responsibility for health and safety matters relating to the work that the **Contractor** and his employees are to perform on behalf of the **Employer** shall be the obligation of the **Contractor**.*

CONTRACTOR AS AN EMPLOYER

*The **Contractor** shall be deemed to be an employer in its own right while engaged in the execution of the project. In terms of Section 16(1) of the OHS Act, the **Contractor** shall accordingly ensure that the requirements of the OHS Act are complied with by itself and/or its nominated Chief Executive Officer*

ENVIRONMENTAL COMPLIANCE

The **Contractor** shall ensure that all National Environmental Management Act (NEMA) principles are considered. This shall not be considered in isolation but include the individual requirements of Specific Environmental Management Acts (SEMA's).

MSDS shall be available for all herbicides, pesticides, fertilisers and solvents where applicable, and sufficient safety briefings shall be conducted with appropriate employees regarding the risks associated with working with the aforementioned chemicals.

APPOINTMENTS AND TRAINING

The **Contractor** undertakes to ensure that he and all staff that will perform any work on behalf of the **Employer** will undergo induction training before doing any work what so ever.

The **Contractor** shall appoint competent persons as per Section 16(2) of the OHS Act. Any such appointed person shall be trained on any occupational health and safety matter and the OHS Act provisions pertinent to the work that is to be performed under his responsibility. Copies of any appointments made by the **Contractor** shall immediately be provided to the **Employer**.

The **Contractor** shall further ensure that all his employees are trained on the health and safety aspects relating to the work and that they understand the hazards associated with such work being carried out. Without derogating from the foregoing, the **Contractor** shall, in particular, ensure that all operators and users of any vehicles, materials, machinery or equipment are properly trained in the use of such materials, machinery or equipment.

Notwithstanding the provisions of the above, the **Contractor** shall ensure that he, his appointed responsible persons and his employees are at all times familiar with the provisions of the OHS Act, and that they comply with the provisions of the Act.

SUPERVISION, DISCIPLINE AND REPORTING

The **Contractor** shall ensure that all work performed is done under strict supervision and that no unsafe or unhealthy work practices are permitted. Discipline regarding health and safety matters shall be strictly enforced against any of his employees regarding non-compliance by such employee with any health and safety matters.

The **Contractor** shall further ensure that his employees report to him all unsafe or unhealthy work situations immediately after they become aware of them and that he in turn immediately reports these to the **Employer** and/or his representative.

ACCESS TO THE OHS ACT

The **Contractor** shall ensure that he has an updated copy of the OHS Act on site at all times and that this is accessible to his appointed responsible persons and employees.

CO-OPERATION

The **Contractor** and/or his responsible persons and employees shall provide full co-operation and information if and when the **Employer** or its representative inquiries into occupational health and safety issues concerning the **Contractor**. It is hereby recorded that the **Employer** and its representatives shall at all times be entitled to make such enquiry.

Without derogating from the generality of the above, the **Contractor** and his responsible persons shall make available to the **Employer** and its representative, on request, all and any checklists and inspection registers required to be kept in respect of any of machinery or equipment.

WORK PROCEDURES

The **Contractor** shall implement safe work practices and shall ensure that his responsible persons and employees are made conversant with and adhere to such safe work practices.

HEALTH AND SAFETY MEETINGS

In terms of the OHS Act, as applicable, the **Contractor** shall establish his own health and safety committee(s) and ensure that his employees, being the committee members, hold health and safety meetings as often as may be required and at least once every 3 months should it be required in terms of the Act.

COMPENSATION REGISTRATION

The **Contractor** shall ensure that he has a valid registration with the Compensation Commissioner, as required in terms of the Compensation for Occupational Injuries and Diseases Act 130 of 1993, and that all payments owing to the Commissioner are discharged. The **Contractor** shall further ensure that the cover shall remain in force while any such employee is present on the premises. Certified copies of valid letters of good standing shall be submitted to the employer before work commences.

MEDICAL EXAMINATIONS

The **Employer** reserves the right to compel the **Contractor** to ensure that all his employees undergo routine medical examinations, and that they are medically fit for the purposes of the work they are to perform.

INCIDENT REPORTING AND INVESTIGATION

All incidents referred to in Section 24 of the OHS Act shall be reported by the **Contractor** to the Department of Labour and to the **Employer**. The **Employer** shall further be provided with copies of any written documentation relating to any incident occurring in the execution of work under contract or agreement with the **Employer**.

The **Employer** retains an interest in the reporting of any incident as described above as well as in any formal investigation and/or inquiry conducted in terms of Section 32 of the OHS-Act into such incident.

FIRE PRECAUTIONS AND FACILITIES

The **Contractor** shall ensure that an adequate supply of fire-protection and first-aid facilities is provided for the work to be performed where indicated as being required in terms of a risk assessment.

The **Contractor** shall further ensure that all his employees are familiar with fire precautions at the, which include fire-alarm signals and emergency exits, and that such precautions are adhered to.

Smoking is only to be permitted in designated smoking areas.

HYGIENE AND HOUSEKEEPING

The **Contractor** shall ensure that the work site and surrounding area is at all times maintained to a reasonably practicable level of hygiene and cleanliness.

NO NUISANCE

The **Contractor** shall ensure that no hindrance, hazard, annoyance or inconvenience is inflicted on the **Employer**.

INTOXICATION NOT ALLOWED

No intoxicating substance of any form shall be allowed. The **Contractor** shall ensure that adequate measures are implemented to ensure that no employee is, or remains, under the influence of alcohol when engaged in the **Employer's** business. Any person

required to take medication shall notify the relevant responsible person thereof, as well as the potential side effects of the medication.

PERSONAL PROTECTIVE EQUIPMENT

The **Contractor** shall ensure that his responsible persons and employees are provided with adequate personal protective equipment (PPE) for the work they may perform and in accordance with the requirements of General Safety Regulation 2(1) of the OHS Act. The **Contractor** shall further ensure that his responsible persons and employees wear the PPE issued to them at all material times.

The **Employer** reserves the right to instruct the **Contractor** to obtain and use specific PPE, appropriate to the nature of the work and with due regard to the principle of reasonable practicality.

The **Contractor** shall provide appropriate safety signage and barricading and demarcation where necessary and appropriate. The **Employer** reserves the right to inform the **Contractor** of inadequate signage, barricading or demarcation and to instruct him to improve it before work may continue.

PLANT, MACHINERY, EQUIPMENT AND VEHICLES

In accordance with the provisions of Section 10(4) of the OHS Act, the **Contractor** hereby confirms that he has noted his liability for taking the necessary steps to ensure that any machine, article or substance that is provided to it is safe to use. The mandatory further warrants that this agreement is one made in terms of Section 10(4) of the OHS Act.

QUALIFICATIONS

The **Contractor** will provide the **Employer** with certified copies of all certificates necessary to confirm the competence of the **Contractor's** employees, such as operators certificates of competence, drivers licenses, PDP's, first aid training certificates and any other appropriate documents that the **Employer** may require.

NO USAGE OF THE EMPLOYER'S EQUIPMENT

The **Contractor** hereby acknowledges that his employees shall not be permitted to use any materials, machinery or equipment of the **Employer** unless the prior written consent of the **Employer** has been obtained, in which case the **Contractor** shall ensure that only those persons authorised to make use of them, have access thereto.

TRANSPORT

The **Contractor** shall ensure that all road vehicles used on the premises are in a roadworthy condition and are licensed and insured. All drivers shall have relevant and valid driving licences and no vehicle shall carry passengers unless it is specifically designed to do so. All drivers shall adhere to the speed limits and road signs on the premises at all times. All occupants of a vehicle must wear safety belts and the drivers are not to use a hand held cell phone.

In the event that any hazardous substances are to be transported on or to the premises, the **Contractor** shall ensure that the requirements of the Hazardous Chemical Substances Act 15 of 1973 are complied with at all times.

INDEMNITY

The **Contractor** indemnifies the **Employer** against any claim, whether based in common law or legislation, which any party, including employees of the **Contractor**, may have against the **Employer** arising out of the performance or execution of the work.

DURATION OF AGREEMENT

*This agreement shall remain in force for the duration of the work to be performed by the **Contractor**.*

HEADINGS

The headings as contained in this agreement are for reference purposes only and shall not be construed as having any interpretative value in themselves or as giving any indication as to the meaning of the contents of the paragraphs contained in this agreement.

COSTS

*The **Contractor** accepts that ensuring full compliance with the relevant Legislation and other health and safety requirements may have a cost implication. The **Contractor** accepts these costs as for its account, and warrants that the potential cost implication was disclosed prior to entering into contract.*

SIGNATURES**FOR AND ON BEHALF OF THE CONTRACTOR**

SIGNED at _____ on this _____ day of _____ 2023

Name:

WITNESSES:

1. _____

2. _____

FOR AND ON BEHALF OF THE EMPLOYER

SIGNED at _____ on this _____ day of _____ 2023

Name:

WITNESSES:

1. _____

2. _____

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APPENDIX A OF THE RFB –NON STANDARD TASK

The intent of this item is to specify the rates/costs and conditions for services to be rendered on an "on demand" (Non Standard Tasks) basis.

CLAUSE NO	DESCRIPTION	RATES/TARIFFS/COSTS FOR THE DURATION OF THE CONTRACT.	RATES/TARIFFS/COSTS AFTER THE INITIAL 12 MONTH PERIOD	
1.1	Labour (normal working hours) Project Manager System Engineer Engineer System Technician Technician Artisan Administrator/data clerk Labourer	Fixed rates for the first 12 months after order placement. R p/hour R p/hour R p/hour R p/hour R p/hour R p/hour R p/hour R p/hour	Rates will escalate as per Appendix "A" paragraph 2.0	
1.2	Labour (After normal working hours) Rates as per 1.1 with the Multiplying Factor below: 1.0 – Normal Weekdays 1.5 – Weekends and Public Holidays	Fixed rates for the first 12 months after order placement	Rates will escalate as per Appendix "A" paragraph 2.0	
1.3	Handling Fee for SPARES, CONSUMABLES and SUBCONTRACTOR SERVICES.	Item value	Handling Fee	Handling fee cost basis (if applicable)
		R1,00 to R100 000,00	10%	ROE, clearance, shipping or delivery into store included in the handling fee.
		More than R100 000,00	8%	Direct costs for ROE, clearance, shipping or delivery into store not included in handling fee and will be paid for against documentary proof
		More than R500 000,00	6%	
1.4	Packaging, Handling, Storage And Transportation (PHS & T)	Actual cost incurred.		
1.5	Local Subsistence and Travel cost.	Actual cost incurred as per Armscor's rates and conditions.		
1.6	Contractor and subcontractor support services	Subject to an approved quotation.		

Escalation of manpower rates/tariffs

$$Pf = \frac{Pq \times (L1)}{(L0)}$$

Where:

Pf = Escalated man-hour tariff

Pq = Offered man-hour tariff

L1 = SEIFSA Index for "Hourly Rated Employees", Table C3, published for the month, three (3) months prior to the month of adjustment.

L0 = SEIFSA Index for "Hourly Related Employees", Table C3, published for the Base Date.

Note: Base date is date of quotation.

NOTE. Tariffs for the first 12 months from order placement are to be fixed and will thereafter be subject to escalation annually by the escalation formula as indicated below:

2.0 NON STANDARD SERVICES. LABOUR COSTS AS PER CLAUSE 1.1 and 1.2 ABOVE.

The intent of this item is to cater for "on demand" (Non Standard Tasks) services to be rendered against the applicable man-hour rates. A Works Authorization shall be opened for each task.

2.1 Conditions of acceptance:

- 2.1.1 A copy of the completed Works Authorization signed by the SA Navy or his delegated representative and the Armscor Programme Manager or his delegated representative,
- 2.1.2 The Contractor's official certificate of conformance stating that all tasks are completed in accordance with the conditions of the Order.
- 2.1.3 A Job Card signed by the main contractor, and a SA Navy representative indicating the completion of the task.

3.0 SPARES, CONSUMABLES AND SUBCONTRACTOR SERVICES AS PER CLAUSE 1.3 ABOVE

- 3.1 The spares, consumables and Subcontractor services will be purchased/supplied by the Contractor and invoiced per Works Authorization. The Contractor shall provide formal motivation and justification for the prices quoted. (Proof of comparative prices shall be provided with the WA. In cases of single source quotations, proof of actual cost shall be provided).
- 3.2 The existing SANDF owned spares must be utilized before any procurement of that particular spare or material can take place. These spares/materials shall be invoiced at "No Charge".
- 3.3 The bidder shall supply a list of his Proprietary Spares applicable to this RFO and indicate the discounted rates of these spares. The bidder must take note that handling fees are not applicable to his Proprietary Spares.

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3.4 Supplementary conditions:

3.4.1 A Works Authorization must be opened for each task.

3.4.2 Documentary proof of prices charged for spares/consumables and Subcontractor services must be available for auditing when so required by Armscor.

3.5 Conditions of acceptance:

3.5.1 FOR HARDWARE DELIVERABLES

3.5.1.1 The A copy of the Inspection Release Certificate (Form K225), issued, signed and stamped by a representative of Armscor's Quality and Information Technology Department, and the proof of delivery portion, duly completed, signed and stamped by the responsible SA Navy official at the Contractor's premises or various SA Navy sites.

3.5.1.2 The Contractor's official certificate of conformance stating that all tasks are completed in accordance with the conditions of the Order.

3.5.1.3 A copy of the completed Works Authorization signed by the SA Navy or his delegated representative and the Armscor Programme Manager or his delegated representative.

3.5.2 FOR SUBCONTRACTOR SERVICES AND CONSUMABLES

3.5.2.1 The Contractor's official certificate of conformance stating that all tasks are completed in accordance with the conditions of the Order.

3.5.2.2 A copy of the completed Works Authorization signed by the SA Navy SSC Manager or his delegated representative and the Armscor Programme Manager or his delegated representative.

3.5.2.3 A Job Card signed by the main contractor, and a SA Navy representative indicating the completion of the task.

4.0 PACKAGING, HANDLING, STORAGE AND TRANSPORT AS PER CLAUSE 1.4 ABOVE.

4.1 The intent of this item is to cater for all material and consumables required for packaging purposes.

4.2 The Contractor shall supply, maintain, insure, license, purchase or lease and operate at his own risk and in his own name all transport considered necessary to carry out his obligations.

4.3 Supplementary conditions

4.3.1 Documentary proof of prices charged must be available for auditing when so required by Armscor.

4.3.2 Where not specified the Contractor shall ensure that the items are suitably packed for the method of transport or storage.

RESTRICTED

4.4 Conditions of acceptance:

- 4.4.1 A copy of the completed Works Authorization signed by the SA Navy or his delegated representative and the Armscor Programme Manager or his delegated representative.
- 4.4.2 The Contractor's official certificate of conformance stating that all tasks are completed in accordance with the provisions of the Order.

5.0 SUBSISTENCE AND TRAVEL AS PER CLAUSE 1.5 ABOVE.

- 5.1 The intent of this item is to cater for local Subsistence and Travel in accordance with the Armscor rates and conditions applicable at the specific time.
- 5.2 Supplementary conditions
 - 5.2.1 The Contractor/Subcontractor shall be obliged to make use of Armscor's nominated travel bureau and motor rental service. (Contact numbers 012 428 2034/5/2453 or after hours at 082 554 8764).

6.0 TECHNICAL SUPPORT SERVICES COSTS AS PER CLAUSE 1.6 ABOVE.

The intent of this item is to cater for Technical and support services to be rendered against an approved Works Authorization supported by a quotation.

6.1 Supplementary conditions:

- 6.1.1 Technical and support services will be approved by Armscor and the SA Navy against a Works Authorization and quotation submitted by the Main Contractor before commencement of any work.

6.2 Conditions of acceptance:

- 6.2.1 A copy of the completed Works Authorization and approved quotation signed by the SA Navy SSC Manager or his delegated representative and the Armscor Programme Manager or his delegated representative.
- 6.2.2 The Contractor's official certificate of conformance stating that all tasks are completed in accordance with the conditions of the Order.
- 6.2.3 A Job Card signed by the main contractor, and a SA Navy representative indicating the completion of the task.

FILE NO.: ARMD/2022/07	ISSUE: 00	12 January 2023	Page 4 of 11
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APPENDIX B OF THE RFB: MANPOWER CAPABILITY MATRIX

It is required that the bidder provides personnel with the expertise able to support the systems listed in the SOW Annexure A. The expertise has been broken down into the following categories:

Designation	Minimum Qualification (NQF)	System Knowledge	Minimum No. of Years of related experience	
Project Manager	6	Submarine platform	1yr.	
Marine/ Naval Architect	7	Submarine platform	2 yr.	
Engineer	7	Submarine platform	1 yr.	
System Technician	6	Submarine platform	1 yr.	
Technician	6	Submarine platform	1 yr.	
Artisan	National Trade test certificate	Marine environment	1 yr.	
Others				

Note: The bidder to refer to the categories below for **guidance** on expected qualification and experience on various categories of personnel as captured in the table above.

Refer to Item 8: Special requirements

The bidder shall ensure that personnel utilised during execution of the work has the necessary skills and qualifications to perform the work as required in accordance with Appendix B of the RFB. Personnel will be vetted in accordance with Appendix B of the RFB prior approval of a Work Authorization

- Project Manager: Management personnel capable of executing the management tasks.
- Marine/ Naval Architect: A tertiary qualification (NQF Level 7) as for the Engineer, plus the proven ability of executing system-engineering tasks.
- Engineer: A nationally recognised Engineering degree (NQF Level 7) with a proven ability of providing in depth diagnostic services as well as solving complex defects
- System Technicians: A tertiary qualification (NQF Level 6) as for the Technician, plus the proven ability of providing in-depth system level diagnostic services as well as solving complex defects.
- Technician: A Nationally recognized Engineering Technical Diploma (NQF Level 6) plus the proven capability of providing in-depth equipment level diagnostic services as well as solving complex defects.
- Artisans: A recognized National Trade Test Certificate plus the proven capability of executing maintenance of equipment.
- Others

FILE NO.: ARMD/2022/07	ISSUE: 00	12 January 2023	Page 5 of 11
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RESTRICTED

APPENDIX C OF THE RFB: SUPPORT CAPABILITY MATRIX

The bidder shall complete a Support Capability Matrix in accordance with the format outlined below. The table hereunder lists all the applicable build groups for the **Technical, Maintenance and repair services for the Submarine platforms of the SA Navy.**

Note that the percentage sum total of column A, B and C below shall be equal to *D =100%

Example:

ITEM No.	BUILD-GROUP NO.	TASK No.	A IN HOUSE SUPPORT CAPABILITY	B EXISTING SUBCONTRACTORS UNDER YOUR MANAGEMENT	C NEW SUBCONTRACTORS	D TOTAL*
1	1171	001	100	0	0	100
2	1172	001	40	60	0	100
3	1175	001 to 005	40	0	60	100
4	1276	001 to 002	0	40	60	100
5	1280/1282	001 to 014	0	0	100	100
6	1613	001 to 003	0	100	0	100
TOTAL						100

DEFINITIONS

1. In house capability

The bidder has the ability to carry out the work with his own personnel, equipment and facilities.

2. Existing subcontractors under their control

The bidder has an existing arrangement with subcontractors to perform the work and is able to manage and accept full responsibility for his subcontractors.

3. New subcontractors

The bidder is able to supply and manage the service, but the work will be carried out by new subcontractors who have not been contracted by him in the past.

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APPENDIX C OF THE RFB: SUPPORT CAPABILITY MATRIX

ITEM No.	BUILD-GROUP NO.	TASK No.	A IN HOUSE SUPPORT CAPABILITY	B EXISTING SUBCONTRACTORS UNDER YOUR MANAGEMENT	C NEW SUBCONTRACTORS	D TOTAL *
1.	1171	001				
2.	1172	001				
3.	1175	001 to 005				
4.	1276	001 to 002				
5.	1280/1282	001 to 014				
6.	1613	001 to 003				
7.	1636	001				
8.	1910	001				
9.	1916	001 to 005				
10.	1947	001 to 002				
11.	2110	001 to 005				
12.	2124	001 to 007				
13.	2128	001 to 004				
14.	2129	001 to 006				
15.	2136	001 to 009				
16.	2148	001 to 008				
17.	2154	001 to 012				
18.	2155	001 to 008				
19.	2156	001 to 004				
20.	2158	001 to 005				
21.	2178	001 to 005				

RESTRICTED

ITEM No.	BUILD-GROUP NO.	TASK No.	A IN HOUSE SUPPORT CAPABILITY	B EXISTING SUBCONTRACTORS UNDER YOUR MANAGEMENT	C NEW SUBCONTRACTORS	D TOTAL*
22.	2510	001 to 006				
23.	2544	001 to 002				
24.	2551	001 to 003				
25.	2552	001 to 008				
26.	2553	001 to 010				
27.	2556	001 to 004				
28.	2778	001 to 007				
29.	2910	001				
30.	2914	001 to 004				
31.	2916	001 to 005				
32.	2919	001 to 015				
33.	3310	001 to 019				
34.	3321	001 to 010				
35.	3370	001				
36.	3494	001 to 003				
37.	3662	001 to 003				
38.	4120	001 to 006				
39.	4174	001 to 004				
40.	4192	001 to 006				
41.	4228	001 to 004				
42.	4261	001				
43.	4311	001 to 003				
44.	4315	001 to 003				

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ITEM No.	BUILD-GROUP NO.	TASK No.	A IN HOUSE SUPPORT CAPABILITY	B EXISTING SUBCONTRACTORS UNDER YOUR MANAGEMENT	C NEW SUBCONTRACTORS	D TOTAL*
45.	4318	001 to 010				
46.	4338	001 to 010				
47.	4350	001 to 004				
48.	4363	001 to 002				
49.	4368	001 to 004				
50.	4410	001				
51.	4522	001				
52.	4528	001 to 008				
53.	4548	001 to 005				
54.	4558	001 to 009				
55.	4578	001				
56.	4610	001 to 003				
57.	4628	001 to 005				
58.	4671	001 to 026				
59.	4672	001 to 003				
60.	4676	001 to 013				
61.	4677	001 to 002				
62.	4715	001 to 017				
63.	4719	001-002				
64.	4778	001 to 014				
65.	4923	001 to 014				
66.	4935	001 to 014				
67.	4936	001 to 003				

RESTRICTED

ITEM No.	BUILD- GROUP NO.	TASK No.	A IN HOUSE SUPPORT CAPABILITY	B EXISTING SUBCONTRACTORS UNDER YOUR MANAGEMENT	C NEW SUBCONTRACTORS	D TOTAL*
68.	4937	001 to 007				
69.	4938	001 to 010				
70.	5070	001 to 003				
71.	5141	001				
72.	5183	001 to 003				
73.	5281	001 to 004				
74.	5292	001 to 002				
75.	5321	001 to 002				
76.	5761	001 to 003				
77.	7325	001 to 018				
78.	7328	001				
79.	7340	001 to 002				
80.	7378	001				
81.	8454	001 to 005				
TOTAL						

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ADDITIONAL SUPPORT MATRIX

The bidder is required to complete the matrix below indicating whether they are able to support the build groups listed.

Note: This matrix and the information provided will not be used as qualifying criteria.

ITEM No	BUILD GROUP No	A IN HOUSE SUPPORT CAPABILITY	B EXISTING SUBCONTRACTORS UNDER YOUR MANAGEMENT	C New SUBCONTRACTORS
1.	1780			
2.	3135			
3.	3137			
4.	4416			
5.	5243			
6.	5254			
7.	5342			
8.	5326			
9.	5485			
10.	5553			
11.	5810			
12.	5831			
13.	5840			
14.	6331			
15.	6722			