



KHULNA SHIPYARD LIMITED

BANGLADESH NAVY, KHULNA

PHONE NO: PABX 02-47772003
E-mail: oiccomf.ksy@gmail.com, Web: www.khulnashipyard.com

BABE (F) – PT/2024-2025/ 03

DATE: 21 October 2024

INTERNATIONAL TENDER NOTICE

01	Procuring Entity Name	Khulna Shipyard Limited, Bangladesh Navy, Khulna
02	Invitation For	a) Marine Refrigerant Plant. b) Main Switchboards and Emergency Switchboards. c) Various Items of piping System (Pipe, valve, Flange, Elbow etc.)
03	Invitation Reference No.	(a) BABE (F) - 632/ MRP/ 2024-2025 DATE: 21 October 2024 (b) BABE (F) - 632/MESBd/2024-2025 DATE: 21 October 2024. (c) BABE (F) - 632/PS/2024-2025 DATE: 21 October 2024.
04	Procuring Method	For-a & b : Open Tender (Two Envelop System) For-c : Open Tender (Single Envelop System)
05	Budget & Source of Funds	Khulna Shipyard Limited Fund.
06	Tender Last Selling Date	For-a & b: 05 November 2024 For-c : 21 November 2024
07	Tender Closing Date & Time	For-a & b; Date: 06 November 2024 Time:1115am For-c : Date: 24 November 2024 Time:1115am
08	Tender Opening Date & Time	For-a & b; Date: 06 November 2024 Time:1130am For-c : Date: 24 November 2024 Time:1130am
09	Name & Address of the Office for Selling of Tender Documents:-	
	(1) Cash Section, Khulna Shipyard Ltd. Bangladesh Navy, Khulna. (2) Naval Store Sub Depot, Khilkheta Nama Para, Khilkheta, Dhaka.	
	Receiving & Opening Tender	Khulna Shipyard Ltd, Bangladesh Navy, Khulna
	(Tenderer's and their Authorized Representatives are allowed to attend)	
10	Price of Tender Document	Each Tender (SL. a, b) Per set Tk 2,000.00 (Two Thousand) & (SL-c) Per set Tk 5,000.00 (Five Thousand) Non-refundable.
11	Contact Details of Official	Mob: +8801674950715 Email: oiccomf.ksy@gmail.com
12	Special Instructions	The Procuring Entity reserves the right to reject all or any Tenders prior to acceptance without showing any reason.

Manager Admin



KHULNA SHIPYARD LIMITED

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IMPORTANT POINT

1. **TENDER NO: BABE (F) - 632/PS/2024-2025** **DATE: 21 October 2024.**
2. **DUE FOR OPENING ON:** 24 November 2024.
3. **PRICE OF TENDER DOCUMENT:** 5,000.00 (Tk. Five Thousand) Non-refundable.
4. **NAME OF THE COMMODITY:** Various Items of Pipe, Valve, Elbow, Flange, Gasket, Pressure Indicator, 'U' Clamp with spring Washer & Nut, Reducer, Reducing Tee, Strainer, Tee & Equal Tee Adaptor, Thermometer/ Pyrometer, Nut- Bolt with Spring Washer, Bell mouth, Tank alarm, Duplex Filter, Equal Bilge Eductor, Pipe Nipple, Hand pump, Portable Diesel Engine driven Fire pump as per Annex- B.
5. **SOURCE OF FINANCE:** Khulna Shipyard Limited Fund.
6. **TERMS OF SUPPLY:** CFR Chattogram Sea Port.
7. **PRICE:**
 - i) FOB and Ocean freight should be shown separately.
 - ii) Freight should be shown/endorsed on Bill of Lading.
 - iii) Freight will be paid at actual against Bill of Lading but not exceeding the amount shown in quotation/offer.
 - iv) Khulna Shipyard will process all customs formalities with related duties and taxes.
8. **DELIVERY/SHIPMENT:** 60 Days from the date of letter of credit (LC).
9. **TENDER SHOULD REMAIN VALID:** 45 Days from the date of Tender on opening date.
10. **THE TENDER DOCUMENTS MUST BE REQUIRED WITH SEAL AND SIGN THEREOF ON EACH PAGE:**

The Khulna Shipyard Ltd., Khulna invites quotation by **Single envelop** (marked as "Original" and "Duplicate") from Manufacturers / Principal Suppliers for supply of the item(s) described in the attached sheet schedule (Annex-B) on firm CFR Chattogram. Quotations will be received by this office up to **11-15 A.M.** and will be opened **11-30 A.M.** in public on the date specified above.
11. **AMENDMENTS TO TENDER DOCUMENTS:**
 - a. At any time prior to deadline for submission of bids the purchaser may, for any reason, whether of its own initiative or in response to a clarification requested by a prospective bidder, modify the Tender documents by the amendment(s).
 - b. The amendment(s) will be notified in writing by letter / email / KSY website or by cable to all prospective bidders who have received Tender documents and the same will be binding on them.
 - c. In order to allow the prospective bidders reasonable time to take the amendment into account in preparing their bids, the purchaser may at its sole discretion extend the deadline for submission of bids.

PREPARATION AND SUBMISSION OF TENDER

12. **GENERAL:**
 - a. Tenders are to be dropped in the tender box provided for the purpose at the office of Khulna Shipyard Ltd., Khulna.
 - b. Tender number and opening date as above should be written on the envelope. The envelope containing quotation should be sealed and addressed as follows:-

- i. CONSIGNEE : **THE MANAGING DIRECTOR
KHULNA SHIPYARD LIMITED
BANGLADESH NAVY
KHULNA – 9201, BANGLADESH**
- ii. NOTIFYING PARTY : **COMMANDING OFFICER
NAVAL STORES DEPOT,
NEW MOORING, CHATTOGRAM, BANGLADESH.**

Tender number and opening date as above should be written on the envelope.

c. Tender may be put into the Tender Box kept for this purpose at the above address, but care must be taken to ensure that it reaches this office on the date and time fixed. Late Tenders will not be considered. Suppliers may also post the tenders to the **MANAGING DIRECTOR, KHULNA SHIPYARD LIMITED, BANGLADESH NAVY, KHULNA-9201, BANGLADESH**, so, as to reach him on due date and time. No responsibility will be accepted by buyer for late receipt.

d. The Manufacturers / Principal Suppliers may quote in their own letter head, but it is essential that the tender schedule is also completed and returned, along with original money receipt to the buyer. If the schedule is not accordingly returned the quotation may not be considered

e. Tenderers may quote price Bangladesh Taka/ US Dollar / in any International trading currency.

f. Tenderers should be confirmed their credit report issued from Tenderers banks and this credit report should be enclosed in the original Tender / quotation otherwise LC opening bank should be arranged to collect this credit report and necessary cost in this respect will be realized from the supplier during LC opening.

g. Tenders should enclose with the quotation the Original Proforma Invoice of their Principal and the Proforma should be based on CFR.

h. Quotation should be strictly in accordance with the following:

- (1) Accounting unit prescribed in the Tender enquiry.
- (2) Terms of delivery and place of delivery as specified in the Tender enquiry.

i. The name of the manufacturers, principal suppliers and country/countries of origin with port of shipment proposed should invariably be indicated.

j. Tenderers must submit with the quotation the Original Proforma Invoice of their Principals and the Proforma Invoice shall clearly indicate detail technical specification, the percentage of commission, if any, included in Material Price for the local agent. Commission payable to the local agent by the foreign supplier will be deducted and paid to local agent in equivalent Local currency at the exchange rate on the Purchase Order date (bank BC selling rate).

k. No claims on the ground of typographical errors in calculating prices would be entertained later and the Tendering firms would be asked under points of penalty and disciplinary action to supply at price they have originally quoted.

l. Tenderers should quote the price as per schedule given in Annex A to this document. **KSY reserve the right to purchase partially or full quantity of the quoted goods.**

m. Local Agent/ supplier should also submit along with the tender valid Indenting agent registration certificate issued by the Bangladesh Indenting Agent Association (BIAA), Trade license, and TIN certificate. In absence of original certificate attested Photostat copy by first class officer may serve.

13. **CONTRACT.** The terms and conditions of the Tender document shall form an integral part of the contract/purchase order document. The Tenderer is requested to check this set of Tender documents in order to ensure proper compliance and the "Form of Acknowledgement" along with the "Certificate as to **Corporate Principal**", where applicable,' duly filled in be returned along with the **Tender**.

14. **BID LANGUAGE.** The bid's, all correspondences and documents relating thereto exchanged between the bidders and the purchaser shall be written in English Language.

15. **TERMS OF PAYMENT:**

i. LC for full purchase amount will be opened by Khulna Shipyard Limited in favour of the principal supplier under the following payment terms where the **LC commission charge 0.30% (per quarter) of the total LC Value equivalent of BDT taka** including related VAT & others will be borne by foreign principal/ local agent (supplier) at LC opening that will be included of quotation.

a. 80% of total CFR value will be paid on delivery of the items described under the scope of supply and on production of following shipping documents:

- (1) Complete set of original 'Clean on Board' Bill of Lading / mentioning the amount of freight on Bill of Lading,
- (2) Supplier's invoice signed in ink,
- (3) Buyer's authorized satisfactory inspection agent's certificate,
- (4) Certificate of standard test,
- (5) Fax/E-mail/Swift advice for insurance cover,
- (6) Certificate of origin,
- (7) Authorization certificate,
- (8) Certificate showing that the material has been shipped in a non-Israel vessel,
- (9) Undertaking regarding supply/ re-placement of short supplied and defective materials on free of cost demanded by the buyer.

b. Remaining 20% of LC amount will be paid after receiving the material at KSY site with satisfactory acceptance that will be generated by user end & supplier representative or satisfactory Material Quality Inspection note that will be generated by KSY.

ii. Bank charges in Bangladesh for opening of LC shall be borne by the supplier. Any Bank charges for revalidation or amendment of the LC on the request of the supplier shall be exclusively borne by the beneficiaries and not by the Khulna Shipyard Ltd. Confirmation of letter of credit by foreign bank will not be entertained or if applicable that will be borne by the supplier.

iii. Bank charges for withdrawal against LC established by buyer will be borne by the beneficiary/ Supplier.

iv. The beneficiary/ Supplier will have to borne the following foreign bank charges: -

- (1) Negotiation commission.
- (2) Payment & Discrepancy commission.
- (3) Postage & Cable charges.
- (4) LC confirmation charges / additional (ADD) confirmation charges.
- (5) LC amendment commission/ LC extension commission.
- (6) LC cancellation charges.
- (7) LC confirmation charges (if any).

16. **PACKING AND MARKING:**

a. The seller shall be responsible for proper packing and marking the goods for shipment by rail, road and sea. Goods shall be assembled to the maximum extent practical prior to shipment. Goods shall be packed so as to withstand usually rough handling and ensure delivery without loss or damage.

b. Each packet/ Bundle must have the following information printed in BOLD LETTERS on the outside

- (1) Name of the consignee and Destination,
- (2) Letter of credit number,
- (3) Gross and net weight,
- (4) Serial number of Bundle and,
- (5) Name and address of the seller,

17. **QUANTITY:**

a. Check of quality, quantity and condition of goods at the discharging port/ place i.e. chattogram will be carried out by the buyer if required, it will be at their cost.

- b. The quotation must be based on firm prices for individual items as per Annex-A. Average prices should not be quoted.
- c. The approximate weight of each Packet/ Bundle should be shown separately on quotation.
- d. The Khulna Shipyard Ltd., reserves the right of awarding contracts for individual technically acceptable items on the lowest acceptable prices. Firms quoting on an average basis for joint items do so at their own risk. The Khulna Shipyard Ltd., will not make any allowances for this action of the Tendering firms when awarding contracts for individual items which if and when refused by Tendering firms any lead to disciplinary action.

SPECIAL CLAUSES

18. **PRE SHIPMENT INSPECTION (PSI):** Comprehensive inspection of the stores regarding quality, specifications, quantity and supervision of the ship/ loading port will be carried out prior to shipment by our nominated inspection company or their accredited agent who will issue an inspection certificate in token of their having carried out the inspection. Suppliers/manufacturers name and full address with the name and address of the supplier, if any should be intimated to the inspection agent. Supplier will be liable to pay the expenses for rejected stores and also for such inspection, which will become payable to the inspection due to multiple intervention/visits and/ or fruitless visits the call of and to suit the convenience of the supplier. The inspector should be provided with all facilities to carry out their job smoothly and without interface. The provisions laid down above do not restrain the buyer from a detailed inspection of quality and quantity of the cargo on arrival of the same at the port of discharge. Charge to be borne by the buyer.

Furthermore, if any defective or 2nd hand item is found during the joint mustering of KSY & supplier at KSY premises the defective or 2nd hand item will not be acceptable. Supplier shall undertake the full responsibility to supply and replace the defective or 2nd hand item by new one.

19. **LATE SHIPMENT/DELIVERY AND LIQUIDATED DAMAGES:** Late shipment/ delivery will not be accepted. However with reasonable cause, if KSY agrees for late Shipment/ Delivery, in that case followings will be imposed:

- a. On genuine reasons / grounds beyond the control of the suppliers / contractor, extension of delivery period may, however, be granted by the Purchase Approving Authority (KSY) without realization of any liquidated damage provided validity of their performance guarantee covers such extension.
- b. Liquidity damage equivalent to half percent per week or part thereof on the value of the undelivered goods will be realized from the supplier/contractor.
- c. In specific cases, where delay in shipment is likely to cause dislocation of work or financial loss, or related to the delivery of ships/ handed over of construction work, a higher rate of liquidity damage from 05% to 10% (as decided by KSY) per week or part thereof on the value of the undelivered goods will be charged.
- d. In case of delay in shipment beyond approved timeframe as stated in Clause no. 8, this schedule will be treated as cancelled and the full Performance Guarantee shall also be forfeited as a consequential effect.
- e. Minimum 14 days free time for container shipment at destination port must allow for each shipment.

20. **TERMINATION OF CONTRACT:**

- a. At any time during the period of this contract, the Purchaser shall have the right to cancel contract under following reasons:
 - (1) If the supplier fails to supply the contracted item as per specification given in the purchase order/contract of the contracted item being rejected by the competent technical authority.
 - (2) If the supplier fails to deliver the contracted item within the date specified in the purchase order/contract or any extensions thereof.

(3) In the event of breach of any contractual obligations given in the terms and conditions of the purchase order/contract.

b. Moreover, in case of termination of contract as under this clause the Purchaser shall have the right to decide taking appropriate punitive action against the supplier as deemed suitable by the KSY authority.

c. Should the suppliers be adjudged insolvent, the buyer shall have the power to terminate the contract.

d. Decisions under this clause SHALL not be subject to arbitration.

21. **INSURANCE.** After shipment to the destination upto buyers premises (Khulna Shipyard Ltd.), marine insurance of the consignment will be arranged by buyer but considering **insurance charge 0.30% of the total LC Value equivalent of BDT** including VAT, Stamp & all related charge will be paid by foreign principal/ local agent (supplier) at LC opening. Quotation should, therefore, be included with the insurance charges.

22. **EARNEST MONEY.** All bidders must submit earnest money for an amount equivalent to 02% (two) of the actual quoted CFR value of the stores either by Bangladesh currency or equivalent to any International Trading currencies favouring the Khulna Shipyard Ltd., in bank draft/pay order / bank guarantee /which will be issued by any scheduled bank of Bangladesh. In case bank guarantee is submitted, the same should remain valid for 120 days from the date of opening of the tender. Neither any inland cheque for a cheque /guarantee issue by Bank of foreign countries will be entertained. Earnest money is liable to forfeiture if the bidder for any reason whatsoever withdraws or modifies its offer; or violates the terms after opening of the tender and before expiry of the validity of the offer; or fails to furnish the required performance bond within the stipulated time after issuance of letter of intent. Bid bond/earnest money of unsuccessful tenderer would be returned once a decision of the tender is made. A tender not accompanied by earnest money/bid bond would be rejected as non responsive. Bid bond of the successful bidder shall be returned after furnishing performance bond. A specimen copy of bid bond is enclosed herewith as annex-C.

23. **PERFORMANCE BOND.** The successful Tenderer will be required to furnish performance bond to the extent 05% of the total CFR value either in the form of pay order or bank guarantee from any scheduled bank of Bangladesh for the satisfactory execution of the order. The submitted bank guarantee must remain valid 06 (Six) months beyond the day of shipment. Performance bond must be furnished within 10 (Ten) day's from the date of letter of intent. It will be liable for forfeiture if the supplier fails to supply the goods within the specified time or commits any breach of contract. The Performance Guarantee will be released after satisfactory inspection (quantity, quality and weight) by Khulna Shipyard Limited Quality Control committee and in presence of supplier's representative at Khulna Shipyard Premises. The buyer shall have the right to forfeit the performance guarantee for failure of the supplier in fulfilling the terms and conditions of this contract partially or wholly, besides taking any other action against the supplier that may be warranted. A specimen copy of performance bond is enclosed herewith as Annex-D.

24. **WARRANTY.** Supplier shall undertake the full responsibility to rectify any defect of supplied items free of charges under warranty period. To rectify/ replace any such defective item, provided that the defects are appeared / discovered during the period of 12 months after acceptance and delivery of each vessel by BN. Warranty repair/ replacement shall be accomplished within 03 months of notification of the relevant defect. Otherwise warranty will be extended by non-operational period of the item.

25. **GUARANTEE FOR WARRANTY.** Supplier shall furnish to KSY a guarantee for warranty for an amount equivalent to 05% (five percent) of the total contract price from any scheduled bank situated in Bangladesh. The buyer shall have the right to forfeit the performance guarantee for failure of the supplier in fulfilling the terms and conditions of this contract partially

or wholly, besides taking any other action against the supplier that may be warranted. It will be released after completion of warranty period

26. **INDEMNITY.** The supplier has to indemnify the buyer against all claims which may be made in respect of the stores for infringement of any right protected by patent, registration of design etc and shall take all risk of accidents or damage which may cause or failure of the supply from whatever cause arising and take entire responsibility for the sufficiency of the means used by the supplier for the fulfillment of the contract.

27. **INCREASE OR DECREASE IN QUANTITY OF CONTRACT:** The buyer reserves the right at the time of award of contract, with no adjustment in unit price (bid), to increase or decrease the quantity Tendered. The buyer also reserves the right to accept or reject any or all the Tenders or to waive any informality, minor deviation or omission.

Award would be made to the bidder whose responsive bid determined to be the lowest evaluated bid and who meets the specification and other terms and conditions of the Tender document.

28. **COMPLIANCE STATEMENT.** A compliance statement considering all clauses of Technical and Financial (as per ANNEX-A including relevant information a tabular format) fulfilling all the given requirement of the specifications is to be submitted for evaluation of the Tenders. Stating mere 'Yes', 'No' "Complied" will not suffice and detailed description/ information as required is to be given. An incomplete compliance statement may attribute to cancellation of the Tender. If any clause of this specification does not commensurate with tender, the deviation has to be spelt out clearly and reasonably. **Information/ document/ certificate/ data shared by the bidder must be genuine which can be cross-checked through authentic website information.** Before giving purchase order, KSY may ask any type of technical, financial, administrative queries to the tender. Tender will provide all information/ document/ data to comply KSY's requirement immediately.

29. **DISQUALIFICATION OF TENDER:**

a. Any addition or alteration to the specification or rate quoted by a firm in the Tender after not only be ignored but should also render the firms liable to disqualification.

b. Any Tender received late and not strictly confirming to the terms and conditions prescribed in this Tender documents not accompanied with the requisite earnest money and the money receipt of Tender price and registration certificate may be liable for rejection.

30. **TAXES, DUTIES AND DELAY DOCUMENTS:**

a) All Customs duties, taxes and other charges (C&F charge, port charge etc. except dumping charge (Cargo/ Barge/ Truck/ Trailer loaded from mother vessel)) levied on the goods by authorities in buyer's country shall be borne by the buyer and shall not be included in the bid price.

b) Charges of such nature in seller's country or in any country other than the buyer's country shall be borne by the sellers.

c) In the event of any delay in dispatch of the shipping documents or their incorrect preparation, the supplier shall be responsible for any demurrage, extra handling charges or any other expense arising there from.

31. **BREACH OF CONTRACT.** On any breach of contract by the seller, the buyer may recover the actual loss suffered and the amount may be realized by encashing the performance guarantee.

32. **APPLICABLE LAW.** The purchase order shall be interpreted in accordance with the law of the buyer's country.

33. **FORCE MAJEURE.** Should any circumstance arise preventing either contracting party from wholly or partly carrying its obligations under the present contract, namely Natural Calamity, Strike, Riots, firm acts and elements of War, Military Operation of any, Nature, Block

ads and any unforeseen event which is beyond human control the period stipulated for the performance of this contract shall be extended or as long as the circumstances prevail. Provided that in the event of these circumstances continuing for more than thirty days, either party shall have to refuse to fulfill its obligations under this contract and in such case neither party shall be entitled to indemnification of any losses it may sustain.

The party unable to carry out its obligation under this contract shall immediately advise the other party of the commencement and the termination of circumstances preventing the performance of the contract. A certificate issued by the Chamber of Commerce of the sellers of the buyers' country shall be sufficient proof of the existence and duration of such circumstances.

34. **ARBITRATION.** In the event of any dispute or difference arising out of the terms and conditions as specified above, the same shall be referred to the award of a sole. Arbitrator appointed by the parties on mutual agreement, failing which it shall be referred to the award of the two Arbitrators, from each side (buyer and seller), or in the case of disagreement between the two arbitrators to the award of an umpire to be appointed by the two arbitrator in writing before proceeded on the reference of the decision of the sole arbitrator or of the two arbitrator in the writing before proceeded on the reference of the decision of the sole arbitrator or of the two Arbitrators or the umpire as the case may be shall be final, conclusive and binding upon the parties. The provisions of the arbitration Act 2001 and rules there under and any statutory modification there of shall deem to apply to the said arbitration. The place of arbitration shall be Dhaka, Bangladesh any statutory modification enactment thereof for the time being in force in Bangladesh shall apply to the arbitration proceeding.

The above terms and conditions are not absolute, the Khulna Shipyard Ltd., Bangladesh Navy, reserves the right to incorporate additional terms and conditions, if necessary. The Khulna Shipyard Ltd., BN also is not bound to accept the lowest Tender and reserves the right to reject any or all Tenders without assigning any reason whatsoever.

Yours faithfully

SK. SHAH MOSHIUR RAHMAN
OIC Commercial Foreign
For Managing Director

Enclosure:

- | | | |
|--|---|------------|
| A. | Format of Price Schedule (Annex - A) | - 01 Page |
| B. | Technical Specification (Annex - B) | - 66 Pages |
| (Download the Specification from the KSY website or e-mailed on demand.) | | |
| C. | Format of Bank Guarantee in Lieu of Earnest Money (Annex-C) | - 01 Page |
| D. | Format of Performance Bank Guarantee (Annex-D) | - 01 Page |

**KHULNA SHIPYARD LTD.****BANGLADESH NAVY, KHULNA****PHONE NO: PABX 02-477720003**E-mail: oiocomf.ksy@gmail.com, Web: www.khulnashipyard.com

ANNEX-A

SCHEDULE TO TENDER ENQUIRY NO: BABE (F)-632/PS/2024-2025 DATED: 21 OCTOBER 2024**TENDER OPENING DATE: 24 November 2024 AT 1130 AM HOURS****The Complete Raw materials of piping system:**

Sr No	DESCRIPTION OF ITEM (As per Annex- B)	Quantity	Material Price (Itemize)	LC commission cost	Insurance cost	Freight	Itemize Total CFR Price
1	Pipe	Itemize					
2	Valve	Itemize					
3	Elbow	Itemize					
4	Flange	Itemize					
5	Gasket	Itemize					
6	Pressure Indicator	Itemize					
7	'U' Clamp with spring Washer& Nut	Itemize					
8	Reducer	Itemize					
9	Reducing Tee	Itemize					
10	Strainer,	Itemize					
11	Tee & Equal Tee Adaptor	Itemize					
12	Thermometer/ Pyrometer	Itemize					
13	Nut- Bolt with Spring Washer	Itemize					
14	Bell mouth	Itemize					
15	Tank alarm	Itemize					
16	Duplex Filter	Itemize					
17	Equal Bilge Eductor	Itemize					
18	Pipe Nipple	Itemize					
19	Hand pump	Itemize					
20	Portable Diesel Engine driven Fire pump	Itemize					

N.B. Supplier must follow commercial & Financial Terms that are integrated at schedule. LC commission cost, Insurance cost & Freight need to mention line itemize and KSY will calculate LC commission cost, Insurance cost & Freight only for purchased product by taking average.

Yours quotation No.

Signature, Name and address of the tenderer:

Date:

Terms of delivery:

Telephone No:

Technical Specification of Pipe, Valve, Elbow, Flange, Gasket, Pressure Indicator, 'U' Clamp with spring Washer& Nut, Reducer, Reducing Tee, Strainer, Tee & Equal Tee Adaptor, Thermometer/ Pyrometer, Nut-Bolt with Spring Washer, Bell mouth, Tank alarm, Duplex Filter, Equal Bilge Eductor, Pipe Nipple, Hand pump, Portable Diesel Engine driven Fire pump

Ser	Item Name	Total Quantity for 3 vessels
	Technical Specification of Pipe	
	a. Copper Nickel Pipe	
1	Size: DN 15; OD = 21.30mm Thickness: 1.6 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: FW Generation & Domestic FW, SW Cooling	1854 m
2	Size: DN 20; OD = 26.9mm Thickness: 1.6 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: FW generation & Domestic FW, Chilled water, Magazine Spraying.	216 m
3	Size: DN 25, OD=33.4mm Thickness: 1.7 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: FW System, Chilled water, Magazine Spraying.	132 m
4	Size: DN 32, OD=42.2mm Thickness: 1.8mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: FW generation & Domestic FW	210 m
5	Size: DN 40, OD=48.3mm Thickness: 1.8mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: FW generation & Domestic FW, Magazine Spraying.	366 m
6	Size: DN 50, OD=60.3mm Thickness: 2.1mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: FW generation & Domestic FW, Vehicle deck sprinkler, SW cooling.	360 m
7	Size: DN 65, OD=73.0mm Thickness: 2.1mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Pipe Standard: Seamless Certificate: Manufacturer Certificate System: FW generation & Domestic FW, Chilled water, Vehicle deck sprinkler, Fire main and wash down, Bilge, ME & AE SW cooling.	1971 m

Ser	Item Name	Total Quantity for 3 vessels
8	Size: DN 80, OD=88.9mm Thickness: 2.4mm Pipe Standard: Seamless Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: Manufacturer Certificate System: Fire main and wash down, Vehicle deck sprinkler, Chilled water, Bilge.	804 m
9	Size: DN 100, OD=114.3mm Thickness: 2.8mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: Fire main and wash down, Vehicle deck sprinkler, Vents and sounding, Ballast and Bilge.	1911 m
10	Size: DN 125, OD=141.3mm Thickness: 3.2mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: Fire main and wash down, Vehicle deck sprinkler, SW cooling.	387 m
11	Size: DN 150, OD=168.3mm Thickness: 3.4mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Pipe Standard: Seamless Class: III Certificate: Manufacturer Certificate System: Fire main and wash down, Main sea chest line	36 m
12	Tube (Voice Pipe)Size: DN 40, OD=48.3mm Thickness:1.5mm Material: Copper alloy Pipe Standard: Seam Certificate: Manufacturer Certificate System: Voice pipe.	288 m
b. Carbon Steel Pipe		
13	Size: DN 08; OD= 13.66mm Thickness: SCH.40/ 2 mm Pipe Class: III Materials: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Oily water	36 m
14	Size: DN 15, OD=21.3mm Thickness: SCH.40/ 2.0mm Pipe Class: III Materials: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Oily Water, Compressed and control Air.	1110 m
15	Size: DN 15, OD=21.3mm Thickness: SCH.40/ 2.0mm Pipe Class: II Materials: Carbon Steel, Seamless Certificate: LR (Material) Certificate System: Compressed and control Air.	18 m
16	Size: DN 20, OD=26.9mm Thickness: SCH.40/ 2mm Pipe Class: III Material: Carbon Steel , Seamless Certificate: Manufacturer Certificate System: Compressed and control Air.	588 m

Ser	Item Name	Total Quantity for 3 vessels
17	Size: DN 25, OD=33.7mm Thickness: SCH.40/ 2mm Pipe Class: III Material: Carbon Steel , Seamless Certificate: Manufacturer Certificate System: Compressed and control Air, Oily Water.	492 m
18	Size: DN 25, OD=33.7mm Thickness: SCH.40/ 2mm Class of pipe: II Material: Carbon Steel Certificate: LR (Material) Certificate System: Compressed and control Air	36 m
19	Size: DN 32, OD=42.4mm Thickness: SCH.40/ 2mm Class of pipe: III Material: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Black & Grey water, Compressed and control Air, Oily Water.	720 m
20	Size: DN 32, OD=42.4mm Thickness: SCH.40/ 2mm Class of pipe: II Material: Carbon Steel Certificate: LR (Material) Certificate System: Compressed and control Air	222 m
21	Size: DN 40, OD=48.3mm Thickness: SCH.40/ 2.3mm Class of pipe: III Material: Carbon Steel , Seamless Certificate: Manufacturer Certificate System: Compressed and control Air, Vents and sounding, Deck scuppers and Internal Drains, Oily water, Lube oil.	1914 m
22	Size: DN 40, OD=48.3mm Thickness: SCH.40/ 2.3mm Class of pipe: II Material: Carbon Steel, Seamless Certificate: LR (Material) Certificate System: Compressed and control Air	204 m
23	Size: DN 50, OD=60.3mm Thickness: SCH.40/ 2.3mm Class of pipe: III Material: Carbon Steel , Seamless Certificate: Manufacturer Certificate System: Compressed and control Air, Deck scuppers and Internal Drains, Black & Grey water, Oily water, Lube oil.	1086 m
24	Size: DN 50, OD=60.3mm Thickness: SCH.40/ 2.3mm Class of pipe: II Material: Carbon Steel, Seamless Certificate: LR (Material) Certificate System: Compressed and control Air	138 m
25	Size: DN 65, OD=76.1mm Thickness: SCH.80/ 4.5mm Class of pipe: III, Material: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Vents and sounding.	918 m

Ser	Item Name	Total Quantity for 3 vessels
26	Size: DN 65, OD=76.1mm Thickness: SCH.40/ 2.6mm Class of pipe: III Material: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Deck scuppers and Internal Drains, Black & Grey water, FO Fill & Transfer, Oily water.	549 m
27	Size: DN 80, OD=88.9mm Thickness: SCH.80/ 4.5mm Class of pipe: III, Material: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Vents and sounding.	426 m
28	Size: DN 80, OD=88.9mm Thickness: SCH.40/ 4.5mm Class of pipe: III Material: Carbon Steel, Seamless Certificate: Manufacturer Certificate System: Deck scuppers and Internal Drains, Black & Grey water, FO Fill & Transfer.	306 m
29	Size: DN 100, OD=114.3mm Thickness: SCH.40/ 3.2mm Pipe Class: Class-III Material: Carbon Steel, Seamless System: FO Overflow, Black & Grey water. Manufacturer Certificate	324 m
30	Size: DN 125, OD=139.7mm Thickness: SCH.80/ 4.5mm Class of pipe: III, Material: Carbon Steel, SeamlessCertificate: Manufacturer Certificate System: Vents and sounding.	126 m
31	Size: Out Dia 22mm Thickness: 2mm Class of pipe: I Material: Carbon Steel Standard: DIN 2391/ C ST35 Certificate: LR (Material) Certificate System: Hydraulic Schematic & Pipe connections for steering gear.	324 m
c. Stainless Steel Pipe		
32	Size: DN 50, OD=60.5mm Thickness: SCH.STD/ 2.0mm Class of pipe: III Material: Stainless Steel (316L) Certificate: Manufacturer Certificate System: Exhaust gas.	36 m
33	Size: DN 50, OD=60.5mm Thickness: SCH.STD/ 2.0mm Class of pipe: III Material: Stainless Steel (321) Certificate: Manufacturer Certificate System: Exhaust gas.	36 m
34	Size: DN 65, OD=76.1mm Thickness: SCH.80/ 2.0mm Class: III Material: Stainless Steel (304L) Certificate: Manufacturer Certificate System: Vents and sounding.	54 m
35	Size: DN 100, OD=114.3mm Thickness: SCH.STD/ 2.3mm Class of pipe: III Material: Stainless Steel (316L) Certificate: Manufacturer CertificateSystem: Exhaust gas.	3 m

Ser	Item Name	Total Quantity for 3 vessels
36	Size: DN 150, OD=168.3mm Thickness: SCH.STD/ 2.3mm Class of pipe: III Material: Stainless Steel (316L) Certificate: Manufacturer Certificate System: Exhaust gas.	21 m
37	Size: DN 200, OD=219.1mm Thickness: SCH.10S/ 2.6mm Class of pipe: III Certificate: Manufacturer Certificate Material: Stainless Steel (316L)	132 m
38	Size: DN 250, OD=273mm Thickness: SCH.10S/ 2.9mm Class of pipe: III Material: Stainless Steel (321) Certificate: Manufacturer Certificate System: Exhaust gas.	3 m
39	Size: DN 500, OD=508mm Thickness: SCH.10S/ 4mm Class of pipe: III Material: Stainless Steel (321) Certificate: Manufacturer Certificate System: Exhaust gas.	108 m
Technical Specification of Valve		
40	Name: Ball Valve Size: DN 15 Standard: Threaded Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Fireman and wash down, Magazine spraying, Chilled water, FW generation & domestic FW, ME & AE SW cooling, Vehicle Deck Sprinkle.	435 Pcs
41	Name: Ball Valve Size: DN 15 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air.	51 Pcs
42	Name: Ball Valve with 2 in number SS flanges having same PCD and gasket Size: DN 15 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air.	18 Pcs
43	Name: Globe Valve Stop Check with 2 in number SS flanges having same PCD and gasket Size: DN 15 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air, ME & AE SW cooling	39 Pcs
44	Name: Globe Valve Stop Check (Overboard valve) with 2 in number Bronze flanges having same PCD and gasket DN: 15 Standard: Flanged Body Material: Bronze Trim: Bronze Certificate: LR Cert. System: ME & AE SW cooling.	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
45	Name: Valve With Hose Connection Size: DN 15 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Compressed & control air.	93 Pcs
46	Name: Back flow preventer with check valve Size: DN 15 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	9 Pcs
47	Name: Moving Pillar cock DN:15 Type: Marine Type Body Material: Chrome coated brass Trim: Chrome coated brass Certificate: Manufacturer test Cert. System: FW generation & domestic FW	15 Pcs
48	Name: Bib Cock DN:15 Type: Marine Type Body Material: Chrome coated brass Trim: Chrome coated brass Certificate: Manufacturer test Cert. System: FW generation & domestic FW	75 Pcs
49	Name: Shower Mixture (Hot & Cold) DN:15 Type: Marine Body Material: Chrome coated brass Trim: Chrome coated brass Certificate: Manufacturer test Cert. System: FW generation & domestic FW	24 Pcs
50	Name: Pillar Cock DN: 15 Type: Marine Body Material: Chrome coated brass Trim: Chrome coated brass Certificate: Manufacturer test Cert. System: FW generation & domestic FW	69 Pcs
51	Name: Angle Stop Cock DN: 15 Type: Marine Body Material: Chrome coated brass Trim: Chrome coated brass Certificate: Manufacturer test Cert. System: FW generation & domestic FW	450 Pcs
52	Name: Gate Valve Size: DN 15 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water.	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
53	Name: Ball Valve Size: DN 20 Standard: Threaded Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Magazine spraying, Chilled water.	6 Pcs
54	Name: Ball Valve Size: DN 20 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air.	36 Pcs
55	Name: Ball Valve Size: DN 20 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Fuel oil service	96 Pcs
56	Name: Globe Valve Stop Check with 2 in number flanges having same PCD and gasket Size: DN 20 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air.	6 Pcs
57	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 20 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Fuel oil service	9 Pcs
58	Name: Check Valve Swing with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 20 Standard: Flanged Bronze Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	9 Pcs
59	Name: Valve quick closing remote with 2 in number MS flanges having same PCD and gasket Size: DN 20 Pressure Rating - Class 150 Body Material: Stainless Steel Trim: Stainless Steel Type - Straight / Angle Stem - AISI304 Disc - AISI304 Seat - AISI304 Certificate: Manufacturer test Cert. System: Fuel oil service	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
60	Name: Pressure relief valve angled self-actuated with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 20 (Set point: 1.65 bar) Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water	3 Pcs
61	Name: Three-way valve two position electric motor operated Size: DN 20 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water	3 Pcs
62	Name: Air vent valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 20 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	3 Pcs
63	Name: Automatic air vent valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 20 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	3 Pcs
64	Name: Self-closing valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 20 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	21 Pcs
65	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket Size: DN 25 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Fuel oil service, FO fill & transfer.	147 Pcs
66	Name: Ball Valve Size: DN 25 Standard: Threaded Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water, FW generation & domestic FW	12 Pcs
67	Name: Globe Valve Stop Check with 2 in number MS flanges having same PCD and gasket Size: DN 25 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air, Oily water.	12 Pcs

Ser	Item Name	Total Quantity for 3 vessels
68	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 25 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Fuel oil service	6 Pcs
69	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 25 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water.	15 Pcs
70	Name: Gate valve with 2 in number MS flanges having same PCD and gasket Size: DN 25 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water.	42 Pcs
71	Name: Solenoid operated valve Size: DN 25 Pressure Rating - Class 150 Body - DI ASTM A395 Type - Straight / Angle Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Fuel oil service	6 Pcs
72	Name: Self-closing valve with 2 in number MS flanges having same PCD and gasket Size: DN 25 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Oily water, FO fill & transfer.	15 Pcs
73	Name: Pressure relief valve self-actuated globe with 2 in number MS flanges having same PCD and gasket Size: DN 25 (Set Point 3.3 BAR) Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Oily water.	9 Pcs
74	Name: Valve quick closing remote with 2 in number MS flanges having same PCD and gasket Size: DN 25 Pressure Rating - Class 150 Body Material: Stainless steel Type - Straight / Angle Trim: Stainless Steel Certificate: Manufacturer test Cert. System: FO fill & transfer.	9 Pcs
75	Name: Ball Valve Size: DN 32 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air	15 Pcs

Ser	Item Name	Total Quantity for 3 vessels
76	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket Size: DN 32 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air	6 Pcs
77	Name: Globe Valve Stop Check with 2 in number MS flanges having same PCD and gasket Size: DN 32 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air.	3 Pcs
78	Name: Globe Valve Stop Check with 2 in number MS flanges having same PCD and gasket Size: DN 32 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air	6 Pcs
79	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 32 Standard: Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	9 Pcs
80	Name: Check valve swing with 2 in number MS flanges having same PCD and gasket Size: DN 32 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water	27 Pcs
81	Name: Gate valve with 2 in number MS flanges having same PCD and gasket Size: DN 32 Standard: Flanged. Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water	42 Pcs
82	Balancing valve static DN: 32 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	3 Pcs
83	Name: Back flow preventer with check valve Size: DN 32 Standard: ASME F1508, Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
84	Name: Ball Valve Size: DN 40 Standard: Threaded Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Magazine spraying.	12 Pcs
85	Name: Ball Valve Size: DN 40 Standard: Threaded Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air.	6 Pcs
86	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket Size: DN 40 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Black & grey water, Lube oil.	39 Pcs
87	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket DN: 40 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Lube oil.	39 Pcs
88	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 40 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Black & grey water.	6 Pcs
89	Name: Check Valve Swing with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 40 Standard: Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	18 Pcs
90	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 40 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Lube oil.	12 Pcs
91	Name: Gate valve with 2 in number MS flanges having same PCD and gasket Size: DN 40 Standard: Flanged. Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water	12 Pcs

Ser	Item Name	Total Quantity for 3 vessels
92	Name: Short sounding with self-closing valve, test Fitting, cap, and chain Size: DN 40 Type: Threaded Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Vents & Sounding	42 Pcs
93	Name: Globe Valve Stop Check with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 40 Standard: Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Magazine spraying	12 Pcs
94	Name: Globe Valve Stop Check with 2 in number MS flanges having same PCD and gasket Size: DN 40 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air	3 Pcs
95	Name: Wafer Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Vehicle deck sprinkler	9 Pcs
96	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket DN: 50 Standard: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Compressed & control air	18 Pcs
97	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket DN: 50 Standard: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Black & grey water	33 Pcs
98	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket Size: DN 50 Standard: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Exhaust gas, Fuel oil service, Lube oil.	66 Pcs
99	Name: Globe Valve with 2 in number Cu-Ni flanges having same PCD and gasket DN: 50 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: ME & AE SW cooling.	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
100	Name: Butterfly Valve(Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: LR Cert. System: Fire main and wash down, Vehicle deck sprinkler.	15 Pcs
101	Name: Check Valve Swing with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	9 Pcs
102	Name: Gate valve(Overboard) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: LR Cert. System: FW generation & domestic FW	6 Pcs
103	Name: Gate valve (Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: LR Cert. System: ME & AE SW cooling.	6 Pcs
104	Name: Pressure Relief Valve Size: DN 50 Standard: ASME F1508, Threaded Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Fire main and wash down.	6 Pcs
105	Name: Relief Valve Size: DN: 50 Standard: ASME F1508, Threaded Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Vehicle deck sprinkler.	3 Pcs
106	Name: Valve quick closing remote Size: DN 50 Pressure Rating - Class 150 Type - Straight / Angle Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Fuel oil service.	6 Pcs
107	Name: Balancing valve static with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: ASME F1508, Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: FW generation & domestic FW	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
108	Name: Three-way valve two position electric motor operated with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 50 Standard: ASME F1508, Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water.	6 Pcs
109	Name: Wafer Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket DN: 50 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: ME & AE SW cooling.	6 Pcs
110	Name: Wafer Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Bilge	60 Pcs
111	Name: Ball Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water.	51 Pcs
112	Name: Globe Stop Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Fire main and wash down.	9 Pcs
113	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: WAFER Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Fire main and wash down.	15 Pcs
114	Name: Butterfly Valve (Sea chest) with 2 in number MS flanges having same PCD and gasket Size: DN 65 Type: LUG Body Material: Cast Iron Trim: Bronze Certificate: LR Cert. System: Vents & Sounding.	36 Pcs
115	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: WAFER/LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Bilge, FW generation & domestic FW.	15 Pcs

Ser	Item Name	Total Quantity for 3 vessels
116	Name: Butterfly Valve with 2 in number MS flanges having same PCD and gasket Size: DN 65 Standard: Wafer/LUG Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: FO fill & transfer.	36 Pcs
117	Name: Check Valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 65 Standard: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: FO fill & transfer.	6 Pcs
118	Name: Non return swing check valve (Overboard valve) with 2 in number MS flanges having same PCD and gasket Size: DN 65 Type: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Cert. System: Deck scuppers & internal drains.	3 Pcs
119	Name: Balancing valve static with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: ASME F1508, Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water.	6 Pcs
120	Name: Tank vent terminal with check feature and flame screen with 2 in number MS flanges having same PCD and gasket Size: DN 65 (Oil System) Type: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Type Approved cert. System: Vents & Sounding.	3 Pcs
121	Name: Tank vent terminal with check feature with 2 in number Carbon steel MS flanges having same PCD and gasket Size: DN 65 (Water System) Type: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Type Approved cert. System: Vents & Sounding.	51 Pcs
122	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: Wafer/ Lug Body Material: Cast Iron Trim: Alum. Bronze with NBR Seat. Certificate: Manufacturer test Cert. System: ME & AE SW cooling.	87 Pcs
123	Name: Butterfly Valve (Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Type: LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR Seat. Certificate: LR cert. System: ME & AE SW cooling.	12 Pcs

Ser	Item Name	Total Quantity for 3 vessels
124	Name: Check valve swing with 2 in number MS flanges having same PCD and gasket Size: DN 65 Standard: Wafer Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Black & grey water.	15 Pcs
125	Name: Gate Valve with 2 in number MS flanges having same PCD and gasket Size: DN 65 Standard: Flanged Body Material: Stainless Steel Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Oily water.	3 Pcs
126	Name: Wafer Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 80 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Bilge, Chilled water.	24 Pcs
127	Name: Ball Valve with 2 in number MS flanges having same PCD and gasket Size: DN 80 Standard: Wafer Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Black & grey water.	30 Pcs
128	Name: Globe Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 80 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Chilled water.	6 Pcs
129	Name: Globe Stop Check Valve (Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 80 (Overboard) Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: LR cert. System: Bilge.	9 Pcs
130	Name: Globe Stop Check Valve With valve spindle set and necessary accessories which to be extended so that the hand wheel is not less than 460 mm above the bottom platform with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 80 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Bilge.	6 Pcs
131	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 80 Standard: WAFER Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Fire main and wash down.	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
132	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 80 Standard: Wafer/LUG Body Material: Cast Iron Trim: Alum. Bronze NBR Seat. Certificate: Manufacturer test Cert. System: Bilge, Chilled water.	54 Pcs
133	Name: Butterfly Valve with 2 in number MS flanges having same PCD and gasket Size: DN 80 Standard: Wafer/LUG Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: FO fill & transfer.	27 Pcs
134	Name: Valve quick closing remote with 2 in number MS flanges having same PCD and gasket DN: 80 Pressure Rating - Class 150 Body Material: Cast Iron Type - Straight / Angle Trim: Stainless Steel Certificate: Manufacturer test Cert. System: FO fill & transfer.	12 Pcs
135	Name: Tank Vent Terminal with Check Feature and Flame Screen with 2 in number MS flanges having same PCD and gasket DN: 80 (oil System) Type: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Type Approved cert. System: Vents & Sounding.	6 Pcs
136	Name: Tank Vent Terminal with Check Feature and Flame Screen with 2 in number MS flanges having same PCD and gasket DN: 100 (oil System) Type: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Type Approved cert. System: Vents & Sounding, Fuel oil Overflow.	9 Pcs
137	Name: Wafer Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Fire main and wash down, Vehicle deck sprinkler, Ballast.	33 Pcs
138	Name: Ball Valve (Overboard valve) with 2 in number MS flanges having same PCD and gasket Size: DN 100 Standard: Flanged Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Cert. System: Black & grey water.	18 Pcs

Ser	Item Name	Total Quantity for 3 vessels
139	Name: Globe Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Fire main and wash down.	3 Pcs
140	Name: Globe Stop Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Bilge, Vehicle deck sprinkler, ME & AE SW cooling.	18 Pcs
141	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: Wafer Body Material: Cast Iron Trim: Alum. Bronze with NBR Seat Certificate: Manufacturer test Cert. System: Fire main and wash down.	21 Pcs
142	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: Wafer/LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Vehicle deck sprinkler, Ballast, Fire main and wash down.	39 Pcs
143	Name: Butterfly Valve (Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: LR Cert. System: Bilge, Ballast.	30 Pcs
144	Name: Check valve Swing with 2 in number MS flanges having same PCD and gasket Size: DN 100 Standard: Wafer Body Material: Cast Iron Trim: Stainless Steel Certificate: Manufacturer test Cert. System: Black & grey water.	6 Pcs
145	Name: Gate valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 100 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: Ballast.	24 Pcs
146	Name: Glove Valve stop check (Overboard valve) with 2 in number MS flanges having same PCD and gasket Size: DN 125 Standard: LUG Body Material: Cast Iron Trim: Bronze Certificate: LR Cert. System: Vents & Sounding.	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
147	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 125 Standard: Wafer Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Fire main and wash down.	6 Pcs
148	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 125 Standard: Wafer/ LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Vehicle deck sprinkler.	3 Pcs
149	Name: Gate valve (Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 125 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: LR Cert. System: ME & AE SW cooling.	6 Pcs
150	Name: Tank Vent Terminal with Check Feature with 2 in number MS flanges having same PCD and gasket Size: DN 125 (Water System) Type: Steel, Flanged, Water systems, vertical, w/insect, inverted w screens, Type approval required Body Material: Cast Iron Trim: Stainless Steel Certificate: LR Type Approved cert. System: Vents & Sounding.	30 Pcs
151	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 125 Standard: Wafer/ Lug Body Material: Cast Iron Trim: Alum. Bronze with NBR Seat. Certificate: Manufacturer test Cert. System: ME & AE SW cooling.	24 Pcs
152	Name: Butterfly Valve (Overboard valve) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 125 Standard: LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR Seat. Certificate: LR (Mat) Cert. System: ME & AE SW cooling.	12 Pcs
153	Name: Wafer Check Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 125 Standard: Flanged Body Material: Cast Iron Trim: Bronze Certificate: Manufacturer test Cert. System: ME & AE SW cooling.	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
154	Name: Butterfly Valve (Sea Chest) (Overboard) with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 150 Standard: LUG Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: LR (Mat) Cert. System: Fire main and wash down.	6 Pcs
155	Name: Butterfly Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 150 Standard: WAFER Body Material: Cast Iron Trim: Alum. Bronze with NBR SEAT Certificate: Manufacturer test Cert. System: Fire main and wash down.	6 Pcs
156	Name: Pressure relief valve with 2 in number MS flanges having same PCD and gasket Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Lube oil.	12 Pcs
157	Name: Pressure relief valve angled self-actuated with 2 in number MS flanges having same PCD and gasket (Set Point 8.8 BAR) Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Compressed & control air.	15 Pcs
158	Name: Pressure relief valve angled self-actuated with 2 in number MS flanges having same PCD and gasket (Set Point 44 BAR) Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Compressed & control air.	12 Pcs
159	Name: Pressure Relief Valve Self-Actuated Globe with 2 in number MS flanges having same PCD and gasket Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: FO fill & transfer.	6 Pcs
160	Name: Motor Operated Valve with 2 in number MS flanges having same PCD and gasket Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: CO2 system	15 Pcs



Ser	Item Name	Total Quantity for 3 vessels
161	Name: Purging cock Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: Vehicle deck sprinkler.	30 Pcs
162	Name: Purging Cock Valve For Pressure Gauge with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 15 Standard: ASME F1508, Flanged Body Material: Bronze Trim: Bronze Certificate: Manufacturer test Cert. System: ME & AE SW cooling.	78 Pcs
163	Name: High Pressure Block Type Ball Valve. Size: DN 32, SS Certificate: LR (Mat) Cert. System: Steering Gear.	6 Pcs
164	Name: High Pressure Block Type Ball Valve Size: Ø 1/2 inch, SS Type Certificate: LR (Mat) Cert. System: Steering Gear.	12 Pcs
Technical Specification of Elbow		
a. Elbow for Copper Nickel:		
165	Size: DN 15 Type: Butt Weld Thickness: 1.6 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW, ME & AE Sea Water Cooling	150 Pcs
166	Size: DN 20 Type: Butt Weld Thickness: 1.6 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic, Chilled Water	285 Pcs
167	Size: DN 25 Type: Butt Weld Thickness: 1.7 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying Arrangement, FW Generation & Domestic, Chilled Water	120 Pcs
168	Size: DN 32 Type: Butt Weld Thickness: 1.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water, Fresh water generation system	609 Pcs






Ser	Item Name	Total Quantity for 3 vessels
169	Size: DN 40 Type: Butt Weld Thickness: 1.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying Arrangement, Chilled Water	678 Pcs
170	Size: DN 50 Type: Butt Weld Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying Arrangement, Chilled Water, FW Generation & Domestic, ME & AE Sea Water Cooling, Vehicle deck sprinkler system	495 Pcs
171	Size: DN 65 Type: Butt Weld Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown, Magazine Spraying Arrangement, Bilge, Chilled Water, FW Generation & Domestic, ME & AE Sea Water Cooling, Vehicle deck sprinkler system	966 Pcs
172	Size: DN 80 Type: Butt Weld Thickness: 2.4 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown, Magazine Spraying Arrangement, Bilge, Chilled Water, Vehicle deck sprinkler system	420 Pcs
173	Size: DN 100 Type: Butt Weld Thickness: 2.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown, Magazine Spraying Arrangement, Vents & Sounding, Bilge, Ballast, Vehicle deck sprinkler system	549 Pcs
174	Size: DN 125 Type: Butt Weld Thickness: 3.2 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown, Magazine Spraying Arrangement, ME & AE Sea Water Cooling, Vehicle deck sprinkler system	168 Pcs






Ser	Item Name	Total Quantity for 3 vessels
175	Size: DN 150 Type: Butt Weld Thickness: 3.4 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown, Magazine Spraying Arrangement, ME & AE Sea Water Cooling	30 Pcs
176	Size: DN 40 Thickness: 1.8 mm Material: Copper Alloy Standard: Seam System Name: Voice pipe	180 Pcs
b. Elbow for Galvanized Carbon Steel		
177	Size: DN15 Type: Butt Weld Materials: Carbon Steel Thickness: 2 mm Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water, Compressed & Control Air	150 Pcs
178	Size: DN 20 Type: Socket Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air, Fuel Oil Service	135 Pcs
179	Size: DN 25 Type: Butt Weld Materials: Carbon Steel Thickness: 2 mm Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water, Fuel Oil Service, FO Fill & Transfer	279 Pcs
180	Size: DN 25 Type: Socket Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	30 Pcs
181	Size: DN 32 Type: Butt Weld Materials: Carbon Steel Thickness: 2 mm Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water, Black & Grey water	570 Pcs
182	Size: DN 32 Type: Socket Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	30 Pcs






Ser	Item Name	Total Quantity for 3 vessels
183	Size: DN 40 Type: Butt Weld Materials: Carbon Steel Thickness: 2.3 mm Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water, Compressed & Control Air, Black & Grey water, Deck Scuppers & Internal Drains, Lub-oil	912 Pcs
184	Size: DN 40 Type: Socket Weld Material: Carbon Steel Thickness: 2.3 mm Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	24 Pcs
185	Size: DN 50 Type: Butt Weld Materials: Carbon Steel Thickness: 2.3 mm Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water, Compressed & Control Air, Fuel Oil Service, Deck Scuppers & Internal Drains, Black & Grey water, Lub-oil	627 Pcs
186	Size: DN 50 Type: Socket Weld Material: Carbon Steel Thickness: 2.3 mm Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	120 Pcs
187	Size: DN 65 Type: Butt Weld Materials: Carbon Steel Thickness: 4.5 mm Class: III Certificate: Manufacturer Test Certificate System Name: Vents & Sounding,	459 Pcs
188	Size: DN 65 Type: Butt Weld Materials: Carbon Steel Thickness: 2.6 mm Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water, Fuel Oil Overflow, Deck Scuppers & Internal Drains, FO Fill & Transfer, Black & Grey water	408 Pcs
189	Size: DN 80 Type: Butt Weld Material: Carbon Steel Thickness: 4.5 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Vents & Sounding,	111 Pcs






Ser	Item Name	Total Quantity for 3 vessels
190	Size: DN 80 Type: Butt Weld Material: Carbon Steel Thickness: 2.9 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Fuel oil & Transfer system, Black & Grey water, FO Fill & Transfer	246 Pcs
191	Size: DN 100 Type: Butt Weld Material: Carbon Steel Thickness: 3.2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Overflow, Black & Grey water	144 Pcs
192	Size: DN 125 Type: Butt Weld Material: Carbon Steel Thickness: 4.5 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Vents & Sounding	69 Pcs
c. Elbow for Stainless Steel		
193	Size: DN 15 Type: Inner Threaded Material: Stainless Steel Thickness: 1.6 mm Grade: 304L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	1020 Pcs
194	Size: DN 50 Type: Butt Weld Material: Stainless Steel Thickness: 2 mm Grade: 316L & 321L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	54 Pcs
195	Size: DN 65 Type: Butt Weld Material: Stainers Steel Thickness: 2 mm Grade: 304L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Vents & Sounding	72 Pcs
196	Size: DN 100 Type: Butt Weld Material: Stainless Steel Thickness: 2.3 mm Grade: 316L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	6 Pcs







Ser	Item Name	Total Quantity for 3 vessels
197	Size: DN 150 Type: Butt Weld Material: Stainless Steel Thickness: 2.3 mm Grade: 316L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas System	9 Pcs
198	Size: DN 200 Type: Butt Weld Material: Stainless Steel Thickness: 2.6 mm Grade: 316L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	624 Pcs
199	Size: DN 250 Type: Butt Weld Material: Stainless Steel Thickness: 2.9 mm Grade: 321L Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	6 Pcs
200	Size: DN 500 Type: Butt Weld Material: Stainless Steel Grade: 321L Thickness: 4 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	24 Pcs
Technical Specification of Flange		
a. Copper Nickel Flange:		
201	Size: DN 15 Type: Composite weld neck Flange Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange) b. Galvanized Carbon Steel (outer flange) Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned) Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW, ME & AE Sea Water Cooling Photo: 	1368 Pcs
202	Size: DN 20 Type: Composite weld neck Flange Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange) b. Galvanized Carbon Steel (outer flange) Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned) Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW, Chilled Water Photo: 	420 Pcs







Ser	Item Name	Total Quantity for 3 vessels
203	<p>Size: DN 25</p> <p>Type: Composite weld neck Flange</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Magazine Spraying Arrangement, FW Generation & Domestic, Chilled Water</p> <p>Photo: </p>	246 Pcs
204	<p>Size: DN 32</p> <p>Type: Composite weld neck Flange</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: FW Generation & Domestic</p> <p>Photo: </p>	162 Pcs
205	<p>Size: DN 40</p> <p>Type: Composite weld neck Flange</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Magazine Spraying Arrangement, FW Generation & Domestic, Chilled Water</p> <p>Photo: </p>	324 Pcs
206	<p>Size: DN 50</p> <p>Type: Composite weld neck Flange,</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Vehicle Deck Sprinkler, Chilled Water, W Generation & Domestic, ME & AE Sea Water Cooling</p> <p>Photo: </p>	348 Pcs
207	<p>Size: DN 65</p> <p>Type: Composite weld neck Flange,</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Firemain and Washdown, Bilge, FW Generation & Domestic, Chilled Water, ME & AE Sea Water Cooling.</p> <p>Photo: </p>	2772 Pcs




Ser	Item Name	Total Quantity for 3 vessels
208	<p>Size: DN 80</p> <p>Type: Composite weld neck Flange,</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Firemain and Washdown, Bilge, Chilled Water</p> <p>Photo: </p>	678 Pcs
209	<p>Size: DN 100</p> <p>Type: Composite weld neck Flange,</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Firemain and Washdown, Vents & Sounding, Bilge, Ballast</p> <p>Photo: </p>	1770 Pcs
210	<p>Size: DN 100</p> <p>Type: Blind Flange</p> <p>Material: Galvanized Carbon Steel</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Ballast</p> <p>Photo: </p>	12 Pcs
211	<p>Size: DN 125</p> <p>Type: Composite weld neck Flange,</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Firemain and Washdown, ME & AE Sea Water Cooling</p> <p>Photo: </p>	318 Pcs
212	<p>Size: DN 150</p> <p>Type: Composite weld neck Flange,</p> <p>Material: a. Cu-Ni 90-10 or Cu-Ni 70-30 (inner flange)</p> <p>b. Galvanized Carbon Steel (outer flange)</p> <p>Standard: CLASS 150, ASME B16.5 or equivalent (To be mentioned)</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Firemain and Washdown, ME & AE Sea Water Cooling</p> <p>Photo: </p>	36 Pcs

Ser	Item Name	Total Quantity for 3 vessels
b. Carbon Steel Flange:		
213	<p>Size: DN 15 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air, Oily Water</p> <p>Photo: </p>	1116 Pcs
214	<p>Size: DN 20 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, Compressed & Control Air</p> <p>Photo: </p>	780 Pcs
215	<p>Size: DN 25 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer, Compressed & Control Air, Oily Water.</p> <p>Photo: </p>	672 Pcs
216	<p>Size: DN 25 (International Shore Connection) Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer, Compressed & Control Air, Oily Water.</p> <p>Photo: </p>	6 Pcs
217	<p>Size: DN 32 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Black & Grey water, Compressed & Control Air, Oily Water.</p> <p>Photo: </p>	1458 Pcs

Ser	Item Name	Total Quantity for 3 vessels
218	<p>Size: DN 40</p> <p>Type: Raised Face (RF) Slip On (SO) Flange</p> <p>Material: Carbon Steel</p> <p>Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Black & Grey water, Lub-oil, Compressed & Control Air, Oily Water, Deck Scuppers & Internal Drains.</p> <p>Photo: </p>	1869 Pcs
219	<p>Size: DN 50</p> <p>Type: Raised Face (RF) Slip On (SO) Flange</p> <p>Material: Carbon Steel</p> <p>Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Fuel Oil Service, Black & Grey water, Lub-oil, Compressed & Control Air, Oily Water, Deck Scuppers & Internal Drains</p> <p>Photo: </p>	1692 Pcs
220	<p>Size: DN 50 (Blind Flange)</p> <p>Type: Raised Face (RF) Slip On (SO) Flange</p> <p>Material: Carbon Steel</p> <p>Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Fuel Oil Service, Black & Grey water, Lub-oil, Compressed & Control Air, Oily Water, Deck Scuppers & Internal Drains</p> <p>Photo: </p>	18 Pcs
221	<p>Size: DN 65</p> <p>Type: Raised Face (RF) Slip On (SO) Flange</p> <p>Material: Carbon Steel</p> <p>Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Vents & Sounding, Black & Grey water, FO Fill & Transfer, Oily Water, Deck Scuppers & Internal Drains</p> <p>Photo: </p>	1470 Pcs
222	<p>Size: DN 65 (Blind Flange)</p> <p>Type: Raised Face (RF) Slip On (SO) Flange</p> <p>Material: Carbon Steel</p> <p>Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent</p> <p>Certificate: Manufacturer Test Certificate</p> <p>System Name: Vents & Sounding, Black & Grey water, FO Fill & Transfer, Oily Water, Deck Scuppers & Internal Drains</p> <p>Photo: </p>	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
223	<p>Size: DN 80 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Vents & Sounding, Black & Grey water, FO Fill & Transfer.</p> <p>Photo: </p>	750 Pcs
224	<p>Size: DN 80 (Blind Flange) Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Vents & Sounding, Black & Grey water, FO Fill & Transfer.</p> <p>Photo: </p>	6 Pcs
225	<p>Size: DN 100 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Fuel Oil Overflow, Black & Grey water</p> <p>Photo: </p>	270 Pcs
226	<p>Size: DN 100 (for Air Vent Head) Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Fuel Oil Overflow, Black & Grey water</p> <p>Photo: </p>	9 Pcs
227	<p>Size: DN 125 Type: Raised Face (RF) Slip On (SO) Flange Material: Carbon Steel Standard: ASTM A105 CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Vents & Sounding</p> <p>Photo: </p>	120 Pcs
c. Stainless Steel Flange:		
228	<p>Size: DN 50 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (316L) Standard: Class 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas</p> <p>Photo: </p>	66 Pcs

Ser	Item Name	Total Quantity for 3 vessels
229	<p>Size: DN 65 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (F304L) Standard: CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Vents & Sounding</p> <p>Photo: </p>	180 Pcs
230	<p>Size: DN 100 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (316L) Standard: CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas</p> <p>Photo: </p>	6 Pcs
231	<p>Size: DN 150 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (316L) Standard: CLASS 150, ASME B16.5 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas</p> <p>Photo: </p>	36 Pcs
232	<p>Size: DN 200 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (316L) Standard: CLASS 125, ASME B16.1 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas</p> <p>Photo: </p>	84 Pcs
233	<p>Size: DN 250 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (321L) Standard: CLASS 125, ASME B16.1 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas</p> <p>Photo: </p>	6 Pcs
234	<p>Size: DN 300 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (321L) Standard: CLASS 125, ASME B16.1 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas</p> <p>Photo: </p>	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
235	Size: DN 500 Type: Raised Face (RF) Slip On (SO) Flange Material: Stainless Steel (321L) Standard: CLASS 125, ASME B16.1 or equivalent Certificate: Manufacturer Test Certificate System Name: Exhaust Gas Photo: 	84 Pcs
236	Name: Flange Size: DN 65 Type: International Shore Connection. Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown Photo: 	12 Pcs
237	Name: Flange Size: 10:1 Taper Type: Companion Flange Certificate: Manufacturer Test Certificate System Name: Shafting Arrangement Photo: 	6 Pcs
Gasket Specification		
a. Gasket Suitable for Sea Water Pipe Line		
238	Size: DN 15 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Vehicle Deck Sprinkler System	96 Pcs
239	Size: DN 25 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Vehicle Deck Sprinkler System	30 Pcs
240	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Vehicle Deck Sprinkler System	36 Pcs
241	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Vehicle Deck Sprinkler System	126 Pcs

Ser	Item Name	Total Quantity for 3 vessels
242	Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Firemain And Washdown System, Vehicle Deck Sprinkler	1818 Pcs
243	Size: DN 80 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Firemain And Washdown System, Vehicle Deck Sprinkler	498 Pcs
244	Size: DN 100 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Firemain And Washdown System, Vehicle Deck Sprinkler, Ballast System	543 Pcs
245	Size: DN 125 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Firemain And Washdown System, Vehicle Deck Sprinkler	150 Pcs
b. Gasket for Compressed Air Pipe Line:		
246	Size: DN 15 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: LR (Material) Certificate System Name: Compressed & Control Air	279 Pcs
247	Size: DN 20 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-II Certificate: LR (Material) Certificate System Name: Compressed & Control Air System	378 Pcs
248	Size: DN 25 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-II Certificate: LR (Material) Certificate System Name: Compressed & Control Air System	21 Pcs
249	Size: DN 32 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-II Certificate: LR (Material) Certificate System Name: Compressed & Control Air System	114 Pcs

Ser	Item Name	Total Quantity for 3 vessels
250	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-II Certificate: LR (Material) Certificate System Name: Compressed & Control Air System	90 Pcs
251	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-II Certificate: LR (Material) Certificate System Name: Compressed & Control Air System	90 Pcs
c. Gasket for Exhaust Pipe Line		
252	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material Grade: 304L SST Spiral Wound Metal Strip With Graphite Filler And With Centering Ring. Standard: Class-II Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	42 Pcs
253	Size: DN 100 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material Grade: 304L SST Spiral Wound Metal Strip With Graphite Filler And With Centering Ring. Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	6 Pcs
254	Size: DN 150 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material Grade: 304L SST Spiral Wound Metal Strip With Graphite Filler And With Centering Ring. Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	36 Pcs
255	Size: DN 200 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material Grade: 304L SST Spiral Wound Metal Strip With Graphite Filler And With Centering Ring. Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	84 Pcs
256	Size: DN 250 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material Grade: 304L SST Spiral Wound Metal Strip With Graphite Filler And With Centering Ring. Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
257	Size: DN 500 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material Grade: 304L SST Spiral Wound Metal Strip With Graphite Filler And With Centering Ring. Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	84 Pcs
d. Gasket for Fuel (Diesel) Pipe Line:		
258	Size: DN 20 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service	72 Pcs
259	Size: DN 25 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer	108 Pcs
260	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service	120 Pcs
261	Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FO Fill & Transfer	90 Pcs
262	Size: DN 80 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FO Fill & Transfer	150 Pcs
263	Size: DN 100 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Overflow	210 Pcs
e. Gasket for Chilled Water Pipe Line:		
264	Name: Gasket for chilled water pipe line Size: DN 20 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Chilled Water	81 Pcs

Ser	Item Name	Total Quantity for 3 vessels
265	Name: Gasket for chilled water pipe line Size: DN 25 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Chilled Water	18 Pcs
266	Name: Gasket for chilled water pipe line Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Chilled Water	99 Pcs
267	Name: Gasket for chilled water pipe line Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Chilled Water	234 Pcs
f. Gasket suitable for deck drain pipe line:		
269	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	75 Pcs
270	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	75 Pcs
271	Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	24 Pcs
g. Gasket for black & grey water pipe line:		
272	Name: Gasket for black & grey water pipe line Size: DN 32 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	180 Pcs
273	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	210 Pcs

Ser	Item Name	Total Quantity for 3 vessels
274	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	234 Pcs
275	Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	51 Pcs
276	Size: DN 80 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	120 Pcs
277	Size: DN 100 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Aramid Rubber Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	42 Pcs
i. Gasket for fresh water pipe line:		
278	Size: DN 15 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	270 Pcs
279	Size: DN 20 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	180 Pcs
280	Size: DN 25 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	90 Pcs
281	Size: DN 32 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	210 Pcs

Ser	Item Name	Total Quantity for 3 vessels
282	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	108 Pcs
283	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	120 Pcs
284	Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Silicon Rubber Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic	72 Pcs
j. Gasket for Lub-Oil Pipe Line:		
285	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Lub-oil	36 Pcs
286	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: Teflon Metallic Wound Gasket Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Lub-oil	96 Pcs
k. Gasket for oily water pipe line:		
287	Size: DN 15 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Oily Water	120 Pcs
288	Size: DN 25 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Oily Water	120 Pcs
289	Size: DN 32 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Oily Water	138 Pcs

Ser	Item Name	Total Quantity for 3 vessels
290	Size: DN 40 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Oily Water	66 Pcs
291	Size: DN 50 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Oily Water	18 Pcs
292	Size: DN 65 Outer dia of Gasket: The dia of the gasket will be the dia of raised face (RF) of the flange. Material: NBR Gasket (with Brass Net, Oil Proof Rubber) Standard: Class-III Certificate: Manufacturer Test Certificate System Name: Oily Water	9 Pcs
Technical Specification of Pressure Indicator		
a. Compound Pressure Indicator:		
293	Name: Complete Compound Pressure Indicator set with Suitable Valve and it's fittings Type: Dial Type-Elastic Element Range: 0 to 20 bar	81 Pcs
b. Pressure Indicator:		
294	Name: Complete Pressure Indicator Set with Suitable Valve and it's fittings Type: Dial Type-Elastic Element Range: 0 to 20 bar	120 Pcs
c. Differential Pressure Indicator:		
295	Name: Complete Differential Pressure Indicator Set with Suitable Valve and it's fittings Type: Dial Type-Elastic Element Range: 0 to 20 bar	99 Pcs
d. Pressure Reducing Station:		
296	Name: Complete Pressure Reducing Station Set with Suitable Valve and it's fittings Size: DN: 50 (40 x 10 Bar) Type: Dial Type-Elastic Element System Name: Compressed & Control Air	3 Pcs
297	Name: Complete Pressure Reducing Station Set with Suitable Valve and it's fittings Size: DN 40 x 32 Type: Dial Type-Elastic Element System Name: Compressed & Control Air	3 Pcs
e. Pressure Gauge Local Reading		
298	Name: Complete Pressure Gauge Local Reading Set with Suitable Valve and it's fittings Size: As per Standard Type: Dial Type-Elastic Element Range: 0 to 70 bar	33 Pcs
f. Vacuum and Pressure Gauge Local Reading:		
299	Name: Complete Vacuum and Pressure Gauge Local Reading Set with Suitable Valve and it's fittings Type: Dial Type-Elastic Element Range: 0 to 20 bar	27 Pcs
g. Torsion Meter:		
300	Name: Complete Torsion Meter Set Type: Electric System Name: Shafting Arrangement	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
	h. Flow Meter:	
301	Name: Complete Flow Meter Set and it's fittings Size: DN 20 Type: Dial Type-Elastic Element System Name: Fuel Oil Service	6 Pcs
302	Name: Complete Flow Meter Set and it's fittings Size: DN 25 Type: Dial Type-Elastic Element System Name: Fuel Oil Service	6 Pcs
303	Name: Complete Flow Meter Set and it's fittings Size: DN 65 Type: Dial Type-Elastic Element System Name: FO Fill & Transfer	3 Pcs
	Technical Specification of 'U' Clamp with spring Washer& Nut	
	a. 'U' Clamp With spring Washer & Nut:	
304	Size: DN 08 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Oily Water	36 Pcs
305	Size: DN 15 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Oily Water, Compressed & Control Air	750 Pcs
306	Size: DN 20 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer, Compressed & Control Air	690 Pcs
307	Size: DN 25 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer, Oily Water, Compressed & Control Air	645 Pcs
308	Size: DN 32 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Black & Grey water, Oily Water, Compressed & Control Air	645 Pcs

Ser	Item Name	Total Quantity for 3 vessels
309	Size: DN 40 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Black & Grey water, Lub-oil, Oily Water, Compressed & Control Air	1899 Pcs
310	Size: DN 50 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer, Lub-oil, Oily Water, Compressed & Control Air	933 Pcs
311	Size: DN 65 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Vents & Sounding, Black & Grey water, Oily Water	2538 Pcs
312	Size: DN 80 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Vents & Sounding, Black & Grey water	993 Pcs
313	Size: DN 100 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Fuel oil overflow, Black & Grey water	1635 Pcs
314	Size: DN 125 Material of U Clamp : Galvanized Carbon Steel Standard of U Clamp: A307 GR A. ASME B18.2.1 or equivalent. Material of Nut: Galvanized Carbon Steel Standard of Nut: A563 GR A. ASME B18.2.2 or equivalent. Material of Spring Washer: Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name: Vents & Sounding	369 Pcs
b. 'U' Clamp With spring Washer & Nut:		
314	Size: DN 50 Material of U Clamp : Stainless Steel Standard of U Clamp: 316 SST ASTM F593, ASME B18.2.1 or equivalent. Material of Nut: Stainless Steel Standard of Nut: 316 SST ASTM F594, CONDITION CW, ASME B18.2.2. or equivalent. Material of Spring Washer: Stainless Steel Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	42 Pcs

Ser	Item Name	Total Quantity for 3 vessels
	c. Single tube hydraulic clamp:	
315	Size : Out dia 22 mm Material: Polypropylene body with zinc plated Certificate: Manufacturer Test Certificate System Name: Steering Gear	105 Pcs
	Technical Specification of Reducer	
	a. Copper Nickel Reducer:	
316	Size: DN 20 X 15 Reducer Thickness: 1.6 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW	15 Pcs
317	Size: DN 32 X 25 Reducer Thickness: 1.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW	6 Pcs
318	Size: DN 40 X 25 Reducer Thickness: 1.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying Arrangement	6 Pcs
319	Size: DN 48 X 42 Reducer Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW	15 Pcs
320	Size: DN 60 X 42 Reducer Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW	18 Pcs
321	Size: DN 60 X 48 Reducer Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW	15 Pcs
322	Size: DN 65 X 20 Reducer Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
323	Size: DN 65 X 25 Reducer Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	6 Pcs
324	Size: DN 65 X 50 Reducer Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying Arrangement, Chilled Water, Vehicle Deck Sprinkler	3 Pcs
325	Size: DN 80 X 65 Reducer Thickness: 2.4 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying Arrangement, Chilled Water, Vehicle Deck Sprinkler	15 Pcs
326	Size: DN 80X125 Reducer Thickness: 3.2 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	3 Pcs
327	Size: DN 100X65 Reducer Thickness: 2.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	15 Pcs
328	Size: DN 100X80 Reducer Thickness: 2.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown, Magazine Spraying Arrangement, Vehicle Deck Sprinkler	9 Pcs
329	Size: DN 100X125 Reducer Thickness: 3.2 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	12 Pcs
	b. Carbon Steel Reducer:	
330	Size: DN 40 X 65 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Hot dip galvanized Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	42 Pcs

Ser	Item Name	Total Quantity for 3 vessels
331	Size: DN 50 X 80 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Hot dip galvanized Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	48 Pcs
332	Size: DN 65 X 100 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Hot dip galvanized Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	36 Pcs
c. Carbon Steel Reducer:		
333	Size: DN 20 X 15 Reducer Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
334	Size: DN 25 X 20 Reducer Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
335	Size: DN 32 X 20 Reducer Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	15 Pcs
336	Size: DN 32 X 25 Reducer Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	9 Pcs
337	Size: DN 32 X 25 Reducer Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
338	Size: DN 40 X 32 Reducer Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
339	Size: DN 50 X 32 Reducer Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
340	Size: DN 50 X 40 Reducer Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
341	Size: DN 50 X 40 Reducer Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	6 Pcs
342	Size: DN 65 X 50 Reducer Thickness: 2.6 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	12 Pcs
343	Size: DN 80 X 65 Reducer Thickness: 4.5 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	18 Pcs
344	Size: DN 100 X 50 Reducer Thickness: 3.2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	12 Pcs

Ser	Item Name	Total Quantity for 3 vessels
345	Size: DN 100 X 80 Reducer Thickness: 3.2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	9 Pcs
346	Size: DN 15 X 25 Reducer Thickness: 2 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	12 Pcs
347	Size: DN 32 X 25 Reducer Thickness: 2 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	3 Pcs
348	Size: DN 40 X 32 Reducer Thickness: 2.3 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	3 Pcs
349	Size: DN 40 X 50 Reducer Thickness: 2.3 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	30 Pcs
350	Size: DN 40 X 65 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	15 Pcs
351	Size: DN 50 X 40 Reducer Thickness: 2.3 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Lub-oil	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
352	Size: DN 50 X 40 Reducer Thickness: 2.3 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	3 Pcs
353	Size: DN 50 X 65 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	30 Pcs
354	Size: DN 65 X 15 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	3 Pcs
355	Size: DN 65 X 50 Reducer Thickness: 2.3 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	3 Pcs
356	Size: DN 65 X 80 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Deck Scuppers & Internal Drains	12 Pcs
357	Size: DN 80 X 65 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FO Fill & Transfer	21 Pcs
	d. Stainless Steel Reducer:	
358	Size: DN 150 X 125 Reducer Thickness: 2.3 mm Type: Butt Weld Material: Stainless Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
359	Size: DN 200 X 150 Reducer Thickness: 2.6 mm Type: Butt Weld Material: Stainless Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	6 Pcs
360	Size: DN 500 X 300 Reducer Thickness: 4 mm Type: Butt Weld Material: Stainless Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Exhaust Gas	6 Pcs
Technical Specification of Reducing Tee		
a. Reducing Tee for Carbon Steel:		
361	Size: DN 20X15X20 Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	60 Pcs
362	Size: DN 25X20X25 Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
363	Size: DN 32X15X32 Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FW Generation & Domestic FW	105 Pcs
364	Size: DN 32X25X32 Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs
365	Size: DN 32X32X32 Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
366	Size: DN 32X32X32 Thickness: 2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	6 Pcs
367	Size: DN 40X15X40 Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Compressed & Control Air	42 Pcs
368	Size: DN 40X20X40 Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Magazine Spraying	6 Pcs
369	Size: DN 40X40X40 Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	6 Pcs
370	Size: DN 50X32X50 Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	6 Pcs
371	Size: DN 50X50X50 Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: II Certificate: LR (Material) Certificate System Name: Compressed & Control Air	9 Pcs
372	Size: DN 50X25X50 Thickness: 2.3 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: Fuel Oil Service	24 Pcs

Ser	Item Name	Total Quantity for 3 vessels
373	Size: DN 65X25X65 Thickness: 2.6 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: FO Fill & Transfer	30 Pcs
374	Size: DN 65X50X65 Thickness: 2.6 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: Vehicle Deck Sprinkler	9 Pcs
375	Size: DN 80X25X80 Thickness: 2.9 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: FO Fill & Transfer	9 Pcs
376	Size: DN 80X50X80 Thickness: 2.9 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: Vehicle Deck Sprinkler	9 Pcs
377	Size: DN 100X50X100 Thickness: 3.2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: Vehicle Deck Sprinkler	9 Pcs
378	Size: DN 100X40X100 Thickness: 3.2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: Vehicle Deck Sprinkler	9 Pcs
379	Size: DN 100X65X100 Thickness: 3.2 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: Fuel Oil Overflow	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
380	Size: DN 125X65X125 Thickness: 3.6 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: ME & AE SW cooling	6 Pcs
381	Size: DN 125X100X125 Thickness: 3.6 mm Type: Socket Weld Material: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Certificate System Name: ME & AE SW cooling	6 Pcs
b. Reducing Tee for Galvanized Carbon Steel:		
382	Size: DN 15 X 25 Thickness: 2 mm Type: Butt Weld Materials: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	3 Pcs
383	Size: DN 32 X 15 Thickness: 2 mm Type: Butt Weld Materials: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	12 Pcs
384	Size: DN 40X15 Thickness: 2.3 mm Type: Butt Weld Materials: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	15 Pcs
385	Size: DN 50 X 15 Thickness: 2.3 mm Type: Butt Weld Materials: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	18 Pcs
386	Size: DN 65 X 15 Thickness: 2.6 mm Type: Butt Weld Materials: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	18 Pcs

Ser	Item Name	Total Quantity for 3 vessels
387	Size: DN 65 X 50 Thickness: 2.6 mm Type: Butt Weld Materials: Carbon Steel Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	12 Pcs
c. Reducing Tee for Cupper Nickel:		
388	Size: DN 65X20X65 Thickness: 2.1 mm Materials: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	6 Pcs
389	Size: DN 80X25X80 Thickness: 2.4 mm Materials: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	6 Pcs
390	Size: DN 80X65X80 Thickness: 2.4 mm Materials: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	6 Pcs
391	Size: DN 89X76X89 Thickness: 2.4 mm Materials: Cu-Ni 90-10 or Cu-Ni 70-30 Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Bilge	63 Pcs
Technical Specification of Strainer		
a. Strainer Y-Type Basket:		
392	Size: DN 65 Type: Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze or equivalent. Thickness: Not less than 1.6 mm Standard: To be mentioned System Name: Chilled Water	6 Pcs
b. Strainer Simplex Basket Type:		
393	Size: DN 32 Type: Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze or equivalent. Thickness: Not less than 1.6 mm Standard: To be mentioned System Name: FW Generation & Domestic FW	6 Pcs
394	Size: DN 40 Type: Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze or equivalent. Thickness: Not less than 1.6 mm Standard: To be mentioned System Name: FW Generation & Domestic FW	3 Pcs

Ser	Item Name	Total Quantity for 3 vessels
395	Size: DN 80 Type: Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze or equivalent. Thickness: Not less than 1.6 mm Standard: To be mentioned System Name: Chilled Water	6 Pcs
c. Simplex Basket Type Strainer:		
396	Size: DN 150 Type: Flange type Connections complete with differential pressure gauge. Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze or equivalent Thickness: Not less than 2.5 mm Standard: ANSI B16.5, class 150 or Equivalent Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	6 Pcs
d. Sea chest Strainer- ME and AE:		
397	Name: Sea chest Strainer- ME Size: DN 125 Type: Duplex Basket, 1.6 mm Mesh size. Flanged Connection Type II, Class 2. Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze or equivalent Thickness: Not less than 2.5 mm Standard: Class 2 or Equivalent Certificate: LR (Material) Certificate System Name: ME & AE Sea Water Cooling	12 Pcs
398	Size: DN 65 Type: Duplex Basket 1.6 mm Mesh size. Flanged Connection Type II, Class 2. Strainer can be cleaned without interruption to the cooling water supply. Material: Bronze Standard: Class 2 or Equivalent Certificate: LR (Material) Certificate System Name: ME & AE Sea Water Cooling	12 Pcs
e. Stainless steel strainer plate of Deck:		
399	Size: DN 40 Type: Perforated (10 mm Mesh Size) Material: Stainless Steel System Name: Deck Scuppers & Internal Drains	42 Pcs
400	Size: DN 50 Type: Perforated (10 mm Mesh Size) Material: Stainless Steel System Name: Deck Scuppers & Internal Drains	48 Pcs
401	Size: DN 65 Type: Perforated (10 mm Mesh Size) Material: Stainless Steel System Name: Deck Scuppers & Internal Drains	36 Pcs
f. Bilge Rose Box Strainer:		
402	Size: DN 32 Type: Bilge rose with box galvanized. Material: Steel Standard: MIL-S-16293 or Equivalent System Name: Oily Water	21 Pcs
403	Size: DN: 40 Type: Bilge rose with box galvanized. Material: Steel Standard: MIL-S-16293 or Equivalent System Name: Oily Water	12 Pcs
404	Size: DN: 65 Type: Bilge rose with box galvanized. Material: Carbon Steel Standard: MIL-S-16293 or Equivalent System Name: Bilge	48 Pcs

Ser	Item Name	Total Quantity for 3 vessels
405	Size: DN: 80 Type: Bilge rose with box galvanized. Material: Carbon Steel Standard: MIL-S-16293 or Equivalent System Name: Bilge	6 Pcs
Technical Specification of Tee & Equal Tee Adaptor		
a. Tee for Copper Nickel:		
406	Size: DN 25 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 1.7 mm Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	3 Pcs
407	Size: DN 65 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 2.1 mm Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	18 Pcs
408	Size: DN 80 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 2.4 mm Class: III Certificate: Manufacturer Test Certificate System Name: Chilled Water	21 Pcs
409	Size: DN125X125X100 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 3.2 mm Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	24 Pcs
410	Size: DN150X125X150 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 3.4 mm Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	6 Pcs
411	Size: DN100X50X100 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 2.8 mm Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	6 Pcs
412	Size: DN100X65X100 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 2.8 mm Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	21 Pcs

Ser	Item Name	Total Quantity for 3 vessels
413	Size: DN80×65×80 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 2.4 mm Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	21 Pcs
414	Size: DN125×65×125 Material: Cu-Ni 90-10 or Cu-Ni 70-30. Standard: Seamless Thickness: 3.2 mm Class: III Certificate: Manufacturer Test Certificate System Name: Firemain and Washdown	27 Pcs
b. Tee for Carbon Steel:		
415	Size: DN 20 Type: Butt Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service	60 Pcs
416	Size: DN 25 Type: Butt Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Service, FO Fill & Transfer	69 Pcs
417	Size: DN 40 Type: Butt Weld Material: Carbon Steel Thickness: 2.3 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Lub-oil	18 Pcs
418	Size: DN 50 Type: Butt Weld Material: Carbon Steel Thickness: 2.3 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Lub-oil, Fuel Oil Service	27 Pcs
419	Size: DN 65 Type: Butt Weld Material: Carbon Steel Thickness: 2.6 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FO Fill & Transfer	33 Pcs

Ser	Item Name	Total Quantity for 3 vessels
420	Size: DN 80 Type: Butt Weld Material: Carbon Steel Thickness: 4.5 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: FO Fill & Transfer	33 Pcs
421	Size: DN 100 Type: Butt Weld Material: Carbon Steel Thickness: 3.2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Overflow	9 Pcs
422	Size: DN 25 Type: Butt Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	27 Pcs
423	Size: DN 32 Type: Butt Weld Material: Carbon Steel Thickness: 2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	33 Pcs
424	Size: DN 40 Type: Butt Weld Material: Carbon Steel Thickness: 2.3 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Oily Water	9 Pcs
425	Size: DN 100 Type: Socket Weld Material: Carbon Steel Thickness: 3.2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	12 Pcs
426	Size: DN 100 Type: Buttweld Material: Carbon Steel Thickness: 3.2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Fuel Oil Overflow	9 Pcs

Ser	Item Name	Total Quantity for 3 vessels
427	Size: DN 100 X 65 Type: Socket Weld Material: Carbon Steel Thickness: 3.2 mm Standard: Seamless Class: III Certificate: Manufacturer Test Certificate System Name: Black & Grey water	15 Pcs
c. Equal Tee & Straight adaptor for MS/ SS (As Pipe Material):		
428	Name: Equal Tee Size : DN 15x15x15 Thickness: 1.6mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: FW Generation & Domestic FW	120 Pcs
429	Name: Equal Tee Size : DN 20x20x20 Thickness: 1.6 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: FW Generation & Domestic FW	90 Pcs
430	Name: Equal Tee Size : DN 32x32x32 Thickness: 1.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: FW Generation & Domestic FW	36 Pcs
431	Name: Equal Tee Size : DN 40x40x40 Thickness: 1.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: FW Generation & Domestic FW, Magazine Spraying	36 Pcs
432	Name: Equal Tee Size : DN 50x50x50 Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: FW Generation & Domestic FW	30 Pcs
433	Name: Equal Tee Size : DN 65x65x65 Thickness: 2.1 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: Firemain and Washdown, ME & AE SW cooling	9 Pcs
434	Name: Equal Tee Size : DN 89x89x89 Thickness: 2.4 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: Bilge System	24 Pcs

Ser	Item Name	Total Quantity for 3 vessels
435	Name: Equal Tee Size : DN 100×100×100 Thickness: 2.8 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: Ballast System, Vehicle Deck Sprinkler	150 Pcs
436	Name: Equal Tee Size : DN 125×125×125 Thickness: 3.2 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 Class: III Certificate: LR Type Approved Certificate System Name: Ballast System	6 Pcs
437	Name: Equal Tee adaptor Size : Out dia 22 mm Thickness: 2 mm Material: Carbon Steel Class: I Certificate: LR (material) Certificate System Name: Steering Gear	30 Pcs
438	Name: Straight adaptor Tee Size : Out dia 22 mm Thickness: 2 mm Material: Carbon Steel Class: I Certificate: LR (material) Certificate System Name: Steering Gear	90 Pcs
Technical Specification of Thermometer/ Pyrometer		
439	Name: Complete Thermometer Set Type: Local Reading/ Direct Reading Range: 0 to 150 degree celcius Standard: Marine Use. System Name: Compressed & Control Air, Chilled Water Diagram for Air-Condition, ME & AE Sea Water Cooling (All System except Exhaust System)	51 Pcs
440	Name: Complete Pyrometer Set Type: Local Reading/ Direct Reading Range: 0 to 700 degree celcius Standard: Marine Use System Name: Exhaust Gas	15 Pcs
Technical Specification of Carbon Steel and Stainless Steel Nut- Bolt with Spring Washer		
a. Carbon Steel Nut- Bolt with Spring Washer		
441	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Bolt Size: M10 X 45 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : FW generation & Domestic FW	3600 Pcs
442	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M10 X 50 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Compressed and control air system for services	1368 Pcs

Ser	Item Name	Total Quantity for 3 vessels
443	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M10 X 65 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fuel oil, Oily water	1950 Pcs
444	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M12 X 50 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : FW generation, Domestic FW & CO2 System	900 Pcs
445	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M12 X 60 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Compressed and control air, Black and grey water	6699 Pcs
446	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M12 X 65 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Magazine Spraying, Fuel oil, Chilled water, FO Fill & Transfer, Lube oil, Oily water.	4536 Pcs
447	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M12 X 100 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : FO Fill & Transfer.	300 Pcs
448	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 55 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : FW generation & Domestic FW.	960 Pcs

Ser	Item Name	Total Quantity for 3 vessels
449	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 60 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Compressed and control air, Black and grey water.	7410 Pcs
450	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 65 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fireman and wash- down, Vehicle Deck Sprinkler, Deck scuppers and Internal Drains, Bilge, ME & AE SW Cooling.	3510 Pcs
451	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 70 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Chilled water.	1650 Pcs
452	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 75 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Firemain And Washdown	2940 Pcs
453	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 80 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Ballast	10350 Pcs
454	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M14 X 120 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fire main and wash down, Vehicle Deck Sprinkler, Bilge, ME & AE SW Cooling	1788 Pcs

Ser	Item Name	Total Quantity for 3 vessels
455	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M16 X 65 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fire main and wash down, Vehicle Deck Sprinkler, Vents and sounding, Fuel Oil Overflow, Ballast, FW generation & Domestic FW, FO Fill & Transfer, Black and grey water, Bilge, ME & AE SW Cooling	23034 Pcs
456	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M16 X 75 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Ballast	8106 Pcs
457	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M16 X 120 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fire main and wash down, Vehicle Deck Sprinkler, Ballast, FO Fill & Transfer, Bilge, ME & AE SW Cooling	1836 Pcs
458	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M18 X 75 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Vents & Sounding System	240 Pcs
459	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M18 X 65 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fire main and wash down, Vehicle Deck Sprinkler	1044 Pcs
460	Name: Galvanized Carbon Steel Nut- Bolt with Spring Washer Size: M18 X 120 mm Material of Bolt : Galvanized Carbon Steel Grade of Bolt : A307 GR A. ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Galvanized Carbon Steel Grade of Nut : A563 GR A. ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Galvanized Carbon Steel Certificate: Manufacturer Test Certificate System Name : Fire main and wash down, Vehicle Deck Sprinkler	1692 Pcs

Ser	Item Name	Total Quantity for 3 vessels
b. Stainless Steel Nut- Bolt with Spring Washer		
461	Name: Stainless Steel Nut- Bolt with Spring Washer Size: M14 X 60 mm Material of Bolt : Stainless Steel Grade of Bolt : 316 SST ASTM F593, ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Stainless Steel Grade of Nut : 316 SST ASTM F594, Condition CW, ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Stainless Steel Certificate: Manufacturer Test Certificate System Name : Exhaust gas	90 Pcs
462	Name: Stainless Steel Nut- Bolt with Spring Washer Size: M20 X 90 mm Material of Bolt : Stainless Steel Grade of Bolt : 316 SST ASTM F593, ASME B18.2.1 or equivalent (To be mentioned) Material of Nut : Stainless Steel Grade of Nut : 316 SST ASTM F594, Condition CW, ASME B18.2.2 or equivalent (To be mentioned) Material of Spring Washer : Stainless Steel Certificate: Manufacturer Test Certificate System Name : Exhaust gas	450 Pcs
Technical Specification of Bell mouth		
463	Name: Bell mouth DN:100X150 Thickness: 3.4 mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 System: Ballast	24 Pcs
464	Name: Bell mouth DN 50X100 Thickness: 3.2 mm Material: Carbon Steel System: Black & Grey water	12 Pcs
465	Bell Mouth DN: 25X40 Thickness: 2.3 mm Material: Carbon Steel System: FO Fill & Transfer	6 Pcs
466	Bell Mouth DN: 80X100 Thickness: 3.2 mm Material: Carbon Steel System: FO Fill & Transfer	18 Pcs
467	Name: Bell mouth DN: 50 X80 Thickness: 2.9 mm Material: Carbon Steel System: Fuel Oil Service	6 Pcs
468	Name: Bell mouth DN: 20 X40 Thickness: 2.3 mm Material: Carbon Steel System: Fuel Oil Service	3 Pcs
469	Name: Bell mouth DN: 100 X 50 Thickness: 3.2 mm Material: Carbon Steel System: FW Generation & Domestic FW	6 Pcs
470	Name: Bell mouth DN: 50X65 Thickness: 2.6 mm Material: Carbon Steel System: Lub-oil	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
471	Name: Bell mouth DN: 25X50 Thickness: 2.3 mm Material: Carbon Steel System: Oily Water	6 Pcs
472	Name: Bell mouth DN: 32X50 Thickness: 2.3 mm Material: Carbon Steel System: Oily Water	12 Pcs
Tank alarm		
473	High level alarm Type: Bulb System: Ballast, Bilge, Black & Grey water, FO Fill & Transfer, FW Generation & Domestic FW, Oily Water .	159 Pcs
474	Low level alarm Type: Bulb System: FO Fill & Transfer, FW Generation & Domestic FW	15 Pcs
475	Tank level indicator Tank Height: 1090 mm System: Lub oil	6 Pcs
476	Tank level indicator Tank Height: 1170 mm System: Black & Grey water	12 Pcs
477	Level Transducer/ Tank level indicator Tank Height: 4670 mm System: FO Fill & Transfer System	6 Pcs
478	Level Transducer/ Tank level indicator Tank Height: 1170 mm System: FO Fill & Transfer System	3 Pcs
479	Level Transducer/ Tank level indicator Tank Height: 3520 mm System: FO Fill & Transfer System	3 Pcs
480	Level Transducer/ Tank level indicator Tank Height: 4650 mm System: FO Fill & Transfer System	3 Pcs
481	Level Transducer/ Tank level indicator Tank Height: 2770 mm System: FO Fill & Transfer System	3 Pcs
482	Level Transducer/ Tank level indicator Tank Height: 4670 mm System: FW Generation & Domestic FW	6 Pcs
483	Flow alarm complete set System: Fuel oil overflow	6 Pcs
484	Sensor mounted level gauge with rotameter, Pipe DN: 10, Clamp, Pipe DN: 25. System: Vents & Sounding	9 Pcs
Duplex Filter		
485	Name: Duplex filter Size: DN 20	9 Pcs
486	Name: Duplex filter Size: DN 25	6 Pcs
Equal Bilge Eductor		
487	BILGE EDUCTOR (Fire Pump driven) -Fwd & Aft Engine room DN : 100x80x100 (Inlet x Suction x Discharge) Thickness: 2.8mm Capacity: 38 m3/hr Material: Bronze System: Bilge	6 Pcs

Ser	Item Name	Total Quantity for 3 vessels
488	BILGE EDUCTOR (Fire Pump driven) -Chain lockers DN : 80x50x80 (Inlet x Suction x Discharge) Thickness: 2.8mm Capacity: 18 m ³ /hr Material: Bronze System: Bilge	9 Pcs
	Pipe Nipple	
489	Name: Pipe Nipple DN: 25 Class-III Thickness: 2mm Material: Carbon Steel System: FO Fill & Transfer	78 Pcs
490	Name: Pipe Nipple DN: 15 Class-III Thickness: 1.7mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 System: FW Generation & Domestic FW	2100 Pcs
491	Name: Pipe Nipple DN: 20 Class-III Thickness: 1.7mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 System: FW Generation & Domestic FW	570 Pcs
492	Name:Short nipple DN: 15 Class-III Thickness: 1.7mm Material: Stainless steel System: FW Generation & Domestic FW	900 Pcs
493	Name:Flexible hose with nipple DN: 40 Class-III Thickness: 2.3mm Material: Carbon steel System: Lub-oil	18 Pcs
494	Name: Pipe Nipple (Seam) DN: 40 Class-III Thickness: 1.5mm Material: Cu-Ni 90-10 or Cu-Ni 70-30 System: Voice pipe	276 Pcs
	Hand pump, Fire Hydrant Valve & Fire hose	
495	Name: Hand pump for Lub oil DN: 50 Suction head: 3m Capacity: 0.25 m ³ / hr System: Lub Oil, Fuel Oil	15 Pcs
496	Name: Hand pump for Steering DN: 22 Suction head: 1.5m Capacity: 0.25 m ³ / hr System: Steering	3 Pcs
497	Name: Fire Hydrant Valve with 2 in number Cu-Ni flanges having same PCD and gasket Size: DN 65 Standard: Flanged Body Material: Cast Iron Trim: Alum. Bronze NBR Seat Certificate: Manufacturer test Cert. System: Fire main and wash down.	69 Pcs

Ser	Item Name	Total Quantity for 3 vessels
498	20 m Fire hose with both end coupling & spray-jet Nozzle for DN 65 hydrant incorporating with shutoff system, System: Fire main and wash down.	51 Pcs
499	15 m Fire hose with both end coupling & spray-jet Nozzle for DN 65 hydrant incorporating with shutoff system, System: Fire main and wash down.	18 Pcs
Portable Diesel Engine driven Fire pump		
500	Name: Portable Diesel Engine driven Fire pump Capacity: 33 m3/ hr @ 2.75 bar(g). Type: To be mentioned. Country of Origin: To be mentioned. Country of Manufacturer: To be mentioned. Manufacturer Name: To be mentioned. Engine power: To be mentioned. Engine RPM: To be mentioned. Suction dia & Discharge dia: To be mentioned. Suction lift: Minimum 6m STATIC SUCTION LIFT. ACCESSORIES: 01 in no. suction hose of required length 6m, 1 in no. coupling hose joint with sleeve (male & female coupling), 01 in no. suction hose 6m with strainer and no, 06 pcs hose clamp, 01 suction blanking cap and 01 protective cover. System: Fire main and wash down.	3 Pcs

BANK GUARANTEE IN LIEU OF EARNEST MONEY

No.....

.....

Guarantee

Dated:

For (mention amount).

Dear Sirs,

Whereas (Name of tender floating organization) under tender No.
 dated inviting tenders for supplies of (described
 supplies) has agreed to waive the requirement of Cash deposit / Call deposit of US\$ / £ /
 Tk..... being 02% (Two percent) of the value of supplies as earnest
 money by the tenderer for making the supplies in accordance with the terms and
 conditions of the tenderer and the tenderer shall provide a bank guarantee for payment
 for the said amount.

And whereas the tenderer M/S.ofhas requested us
 (name of bank) of to issue as guarantee for payment of the amount of
 US\$/£/Tk when called upon.

In consideration of the aforesaid, we (name of bank) of hereby
 undertake and guarantee due performance of the tender by the tenderer M/S.
 of and unconditionally and absolutely
 bind ourselves:

1. To make payment without any question whatsoever of US\$/£/Tk
 to.....(Name of organization) or as directed by the
 organization immediately on receipt of demand from the said, organization in writing, in
 the event the tenderer fail to perform the tender. It is expressly understood that the
 organization shall be the sole judge for-deciding whether the tenderer has performed the
 tender and fulfilled the terms and conditions of the tender.

2. It is specially stipulated and understood by the bank that any grant of time or
 indulgence to the tenderer without reference to the bank shall not in any manner tent to
 absolve the bank from its liability to make the payment stipulated above under this
 guarantee.

3. The Bank's commitment under this guarantee is limited to an amount of
 US\$/£/Taka(.....) only.

4. The guarantee will remain valid upto

Yours faithfully

..... Bank

(Seal of the Bank)

PERFORMANCE BANK GUARANTEE

Managing Director
Khulna Shipyard Limited
Bangladesh Navy
Khulna, Bangladesh

Bank Guarantee No.....
Dated:
For (Mention amount)

Dear Sirs,

Whereas Khulna Shipyard Ltd., Bangladesh Navy, Khulna hereinafter referred to as the buyers proposed to enter into a contract through a Letter of Intent hereinafter called the contract with (name of the sellers) of hereinafter referred to as the sellers for the supply of (described supplies) in accordance with the terms and conditions of the contract. And whereas the sellers have requested us (name of bank) to issue a guarantee for an amount of US\$ / £ / EURO / TK..... being 05 % of the CFR value of the supplies.

In consideration aforesaid (name of bank) hereby undertake and guarantee due observance and performance of the terms and conditions of the contract by the sellers and us unconditionally and absolutely bind ourselves.

To make payment on demand, without demur and without reference to the sellers, of US\$ / £ / EURO / TK..... to the buyers or as directed by the buyers in writing, if the sellers shall fail to perform the contract or fulfill the terms and conditions thereof.

To keep guarantee valid and in force for 06 (Six) months beyond the day of shipment but extendable if so required by the buyers.

The guarantee is unconditional and it is expressly understood that the buyers shall be sole judge for deciding whether the sellers have performed the contract and fulfilled the terms and conditions thereof.

It is specifically stipulated and understood by us (name of bank) that any grant of time or indulgence to the sellers without reference to us shall not in any manner tend to absolve us from our liability to make payment as stipulated above under this guarantee.

Our commitment under this guarantee is limited to an amount of US\$ / £ / EURO / TK..... only.

Yours faithfully

..... Bank

(Seal of the Bank)