TENDER DOCUMENT FOR FOREIGN PURCHASE
DOCKYARD & ENGINEERING WORKS LTD
BANGLADESH NAVY
SONAKANDA, BANDAR, NARAYANGANJ
Web: www.dewbn.gov.bd, E-mail- commercial@dewbn.gov.bd

Price of tender document Tk. 1000.00 (Taka One Thousand only) (Non-refundable)

TENDER DOCUMENTS FOR SUPPLY OF HYDROPHORE SYSTEM WITH PUMPS AND BILGE WATER SEPARATOR (ITEMS SERIAL NO: 01-08), LOT: 04

TENDER ENQUIRY NO- 06.02.6758.165.07.193.25.2844 DATE 29 JUNE 2025

DUE FOR OPENING ON: 21 JULY 2025; AT TIME: 12:30 PM

MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd.
Bangladesh Navy, Narayanganj.

DOCKYARD & ENGINEERING WORKS LTD
BANGLADESH NAVY
SONAKANDA, BANDAR, NARAYANGANJ
Phone: 02-7661480, Fax: 02-7661027
E-mail- commercial@dewltd.gov.bd

IMPORTANT POINTS

1. **TENDER NO:** 06.02.6758.165.07.193.25.2844 Dated 29 June 2025.

2. **DUE FOR OPENING ON:** 21 July 2025; AT Time: 12.30 PM.

3. **PRICE OF TENDER DOCUMENTS:** TK 1000.00 (Taka One Thousand only) non-refundable.

4. **EARNEST MONEY: 1%** (one) of the total quoted total value, either in Bangladesh currency or equivalent US$/ EURO/ GBP etc., favoring Dockyard & Engineering Works Ltd. in the form of Bank Draft/ Pay Order/ Bank Guarantee.

5. **NAME OF THE COMMODITY:** Hydrophore System with Pumps and Bilge Water Separator (Items Serial No: 01-08), Lot: 04

6. **SOURCE OF FINANCE:** Cash.

7. **TERMS OF SUPPLY:** CFR Chattogram/ CPT Hazrat Shahjalal International Airport, Dhaka Bangladesh.

8. **Price:**

   a) Materials and freight should be shown separately.
   b) Freight should be shown/ endorsed on bill of lading.
   c) Freight will be paid at actual against Bill of lading but not exceeding the amount shown in quotation/ offer.

9. **DELIVERY/ SHIPMENT:** 60 (Sixty) days after receiving Irrevocable Letter of Credit (ILOC).

10. **TENDER SHOULD REMAIN VALID**: 60 (Sixty) days from the date of opening.

11. **THE TENDER DOCUMENTS MUST BE WITH SEAL AND SIGN THEREOF ON EACH PAGE:**

The Dockyard & Engineering Works Ltd, BN, Narayanganj invites quotation in duplicate (Marked as "Original" and "Duplicate" from Manufactures/ Principal Suppliers for Supply of the item(s) described in the attached sheet schedule (Annex-B) on firm CFR Chattogram/ Hazrat Shahjalal International Airport, Bangladesh. Quotations will be received by this office up to **12:15** A.M. and will be Opened **12:30** AM in Public on the date specified above.

12. **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 or by cable to all prospective bidders who have purchased 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 QUOTATION

13. **GENERAL:**

a. Offers are to be dropped in the tender box provided for the purpose at the office of DOCKYARD & ENGINEERING WORKS LTD, BNGLADESH NAVY, NARAYANGANJ

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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:

THE MANAGING DIRECTOR
DOCKYARD & ENGINEERING WORKS LTD
BANGLADESH NAVY
SONAKANDA, BANDOR
NARAYANGANJ, BANGLADESH

Tender number 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 tender to THE MANAGING DIRECTOR, DOCKYARD & ENGINEERING WORKS LTD, BANGLADESH NAVY, SONAKANDA, BANDOR, NARAYANGANJ, 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 may quote price for Package or item wise.

g. Tenders should enclose with the quotation the original proforma Invoice of their principal and the proforma should be based on FIRM CFR PRICE.

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.

j. The name of the Manufacturers/ Principal suppliers and country/ countries of origin with port of shipment proposed should invariably be indicated.

k. Tenderers must submit the original proforma Invoice of their principals with the quotation and the proforma Invoice shall clearly indicate detail technical specification, the percentage of commission (if any) included in FOB price for the local agent. Commission is payable to the local agent by the foreign supplier. **Buyers will not pay any extra Commission or otherwise to the local Agent.**

l. 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.

m. Indenting agent should also submit along with the tender valid registration certificate issued by the CCI & E and Bangladesh bank permission. In absence of original certificate photo state copy may serve.

n. Tenderers should quote the price as per schedule given in Annex A to this document.

p. Tenderers should submit a certificate along with the offer to the effect that they have gone through the instructions and terms and conditions stipulated in the tender documents and have accepted them into. **As a token of such acceptance each page of this tender documents must be signed by the supplier with their SEAL**. If the tender documents are not received accordingly, the quotation may not be considered. In case of disagreement on any point this must be stated clearly in a separate sheet. Tenderers must give full and detailed specification of the items they like to offer. Expressing like as per your specifications should be avoided and will be treated as disqualification.

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14. **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 filed in be returned along with **tender.**

15. **BID LANGUAGE**

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

16. **TERMS OF PAYMENT:**

Necessary LC is to be opened in favour of the principal supplier but payment will be made as per following terms:

a. 80% of total value is to be paid on the receiving of necessary original shipping documents.

b. Remaining 20% of LC amount will be paid after received material receiving report (MRR) from our main Store.

c. Following documents are to be provided for payment:

(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) Supplier's Packing list signed in ink,
(4) Authorized inspection agent's certificate (If required)
(5) Manufacturer Certificate/ BV Class certificate
(6) Fax/E-mail/Swift advice for insurance cover,
(7) Country of origin Certificate
(8) Certificate showing that the material has been shipped in a non-Israil vessel,
(9) Undertaking regarding supply/re-placement of short supplied and defective materials on free of cost demanded by the buyer.

d. Bank charges in Bangladesh for opening of LC shall be borne by the buyer. Any Bank Charge for revalidation or amendment of the LC on the request of the supplier shall be exclusively borne by the beneficiaries and not by the DOCKYARD & ENGINEERING WORKS LTD. confirmation of letter of credit by foreign bank will not be entertained.

e. Bank charge for withdrawal against LC established by buyer will be borne by the beneficiary.

f. The beneficiary will have to borne the following foreign bank charge: -

(1) Negotiation commission.
(2) Payment Commission.
(3) Postage and Cable charges.
(4) LC confirmation charges/ additional (ADD) confirmation charges.
(5) LC amendment commission/LC extension commission.
(6) LC Cancellation charges.

17. **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 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,

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(3) Gross and net weight,
(4) Serial number of Bundle and,
(5) Name and address of seller,

18. **QUANTITY:**

a. Check of quality, quantity and condition of goods at the discharging port i.e, Chattogram/ Hazrat Shahjalal International Airport will be carried out by the buyer at their cost.

b. The quotation must be based on firm prices for package. Average prices should not be quoted.

c. Descriptive catalogue/ literature duly stamped should be furnished along with the Quotation.

d. The approximate weight of each Bundle should be shown separately on quotation.

e. The DOCKYARD & ENGINEERING WORKS 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. DOCKYARD AND ENGINEERING WORKS 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.

SPECIALLY CLAUSES:

19. **INSPECTION**: The buyer reserves the right to have the stores inspected before shipment by any agency of their choice. In that case inspection charges will be borne by the buyer. The name of the Inspector will be intimated at the time of placement of purchase order. The supplier will be liable to pay any expenses of rejected stores and also for such inspection, which will become payable to the inspector due to multiple intervention/ visits and or fruitless visits at 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 interference. The provision laid down above does 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.

20. **INSURANCE:** Insurance of the consignment after shipment to destination port/ place (up to the buyers' premises) will be arranged by buyer. Quotation should, therefore, be exclusive of the insurance charges.

21. **LATE DELIVERY AND LIQUIDATED DAMAGES:** Liquidity damage equivalent to half percent per week or part thereof on the value of the undelivered goods may be realized from the supplier/ contractor.

In specific case where delay in delivery is likely to cause dislocation of work and financial loss, a higher rate of liquidity damage, not over one percent per week or part thereof on the value of the undelivered goods may be charged.

In case of delay in delivery beyond one hundred days for importable item(s), purchase order/ contract may be cancelled in which case the performance guarantee shall be forfeited. On genuine reasons/ grounds beyond the control of the suppliers/contractor, extension of delivery period may, however, be granted by the purchase approving authority without realization of any liquidated damage provided validity of their performance guarantee cover such extension.

22. **GENUINENESS OF THE PRINCIPAL SUPPLIERS:**

The principal supplier shall have to submit a certificate from the supplier's bankers regarding the bonafide and standing of the supplier.

AND/OR

Certificate from the chamber of Commerce and Industry from the supplier's country regarding its standing as an exporter/manufacturer along with the proforma invoice.

23. **QUALITY CERTIFICATE:** Tenderers should furnish guarantee from the original Manufacturers/ Suppliers/ Sole Agent to the effect that the goods will be of exact specification as laid down in the tender and in the event of placing order with the tenderers the Manufacturers/ Suppliers or their Sole agents will supply materials to them (Tenderers) for supply of the same against their tender. Tenderers for all purposes shall be responsible for the acts of omission and commission of their principal.

24. **EARNEST MONEY:** All bidders must submit earnest money for an amount equivalent to 01% (one percent) of the actual quoted CFR value of the stores either by Bangladesh currency or equivalent to any International Trading currencies favoring the Dockyard & Engineering Works Ltd, in bank draft/pay order /bank guarantee/ which

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will be issued by any scheduled bank of Bangladesh (Not applicable to enlisted suppliers). In case bank guarantee is submitted, the same should remain valid for 60 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 violets the terms after opening of the tender and before expiry of the validity of the offer, or fails to furnish the required performance bond with in 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.

25. **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/ bank draft/ bank guarantee for the satisfactory execution of the order. The performance bond should be given by any Bangladesh Commercial Bank under their (Bank) full risk in liabilities. If the same is submitted by bank guarantee it must remain valid material receiving report (MRR) from our main Store. Performance bond must be furnished within 10(ten) days 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. A specimen copy of performance bond is enclosed herewith Annex-D.

26. **WARRANTY:** 18 (Eighteen) Months warranty from the date of acceptance is to be provided. Total 05% of contract price is to be cut as security money which will be paid after the end of warranty period or Bank Guarantee against the same amount is to be provided until the end of warranty period.

27. **INDEMNITY:** The supplier has to indemnity 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 accident or damage which may cause 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.

28. **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 who meets specification and other terms and conditions of the tender document.

29. The buyer has the option to place orders either on CFR Chattogram/ CPT Hazrat Shahjalal International Airport Bangladesh.

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

31. **DISQUALIFICATION OF OFFER:**

a. Telex/ E-mail/ Swift/ Fax offer may be considered provided signed copy of proforma invoice is received within 24 (twenty-four) hours from the opening of the tender.

b. Any addition or alternator 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.

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

32. **SPECIFIC EXPERIENCE:** The principal supplier must have experience of supply of similar goods in Bangladesh and understand the Letter of Credit (LC) process of Bangladesh. The supplier must provide at least 2 letter of credit (LC) references of previous supply record to Bangladesh Buyer to prove its business relation and reliability in Bangladesh market.

33. **TAXES AND OTHER CHARGES:**

a. All duties, taxes and other charges 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.

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

34. **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 encasing the performance guarantee.

35. **UNDER TAKING:** The Manufacture/ Suppliers shall issue a certificate to be effect that they have shipped the goods strictly conforming to the quality and quantity stipulated in the purchase order and that they will replace defective materials and replenish the short-supplied quantity free of charge on demand by the buyers. Such certificate shall form and integral part of the original shipping documents required to be submitted to the bank for drawing of payment against letter of credit by the supplier.

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

37. **FORCE MAJEURE:** Should any circumstance arise preventing either of the contracting parties form wholly or partly carrying its obligation under the present contract, namely natural calamities, Strikes, Riots, fire, acts of God, war, Military operation of any Nature, blockades any unforeseen event which is beyond human control, the period stipulated for the performance of this contract shall be extended for as long as the circumstances prevail. Provided that in the even of these circumstances continuing for more than 30(thirty) days, either party shall have the right to refuse to fulfill its obligation under these contracts and in such case neither party shall be entitled to indemnification of any loss it may sustain. The party unable to carry out it obligation under this contract shall immediately advise the other party of the commencement and the termination of the circumstances preventing the performance of the contract. A certificate issued by the Chamber of Commerce of the sellers of the buyer's country shall be sufficient proof of the existence and duration of such circumstances.

38. **ARBITRATION:** In the event 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, falling 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 arbitrators in writing before proceeded on the reference of the decision of the sole arbitrator or of two Arbitrators in the writing before proceeded on the reference of the decision of the sole arbitrator or of two arbitrator or the umpire as the case may be shall final , conclusive and binding upon the parties. The provisions of the arbitration Act 2001 and rules their under and any statutory modification their 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 Dockyard & Engineering works Ltd, Bangladesh Navy, reserves the right to incorporate additional terms and condition, if necessary. The Dockyard Engineering & works 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

MOSTOFA KAMAL
Commander BN
For Managing Director

Enclosures:

A.	Format of price Schedule (Annex – A)	- 03 pages
B.	Technical Specification (Annex-B)	- 02 pages
C.	Design and Drawing	- 06 pages
D.	Format of Bank Guarantee in Lieu of Earnest money (Annex-C)	- 01 page
F.	Format of performance Bank guarantee (Annex-D)	- 01 page

ANNEX- B

TECHNICAL SPECIFICATION OF PUMPS

SL No	Technical Description, Specification and standard required	Unit	Qty	Specification offered by Bidder
01	**Fresh Water Hydrophore System with Pump, Electrical Control Box & necessary accessories.** Brand: To be mentioned Model: To be mentioned Tank volume: Min 500 Ltr, 6 bar Material of Tank: SS 316 No of Pumps: 02 sets (01 standby) Pump Capacity: Min 3.0 m3/hr, 4.0 bar Power: 415 V, 3 phase, 50 Hz Accessories: Pressure switches, Level Gauges, Safety Valves, etc. Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Certification: BV Class certificate	Nos	1	
02	**Sea Water Hydrophore System with Pump, Electrical Control Box & necessary accessories.** Brand: To be mentioned Model: To be mentioned Tank volume: Min 200 Ltr, 6 bar Material of Tank: SS 316 No of Pumps: 02 sets (01 standby) Pump Capacity: Min 2.0 m3/hr, 4.0 bar Power: 415 V, 3 phase, 50 Hz Accessories: Pressure switches, Level Gauges, Safety Valves, etc. Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Certification: BV Class certificate	Nos	1	
03	**Hydrophore Tank, Electrical Control Box & necessary accessories (Without Pumps).** Brand: To be mentioned Model: To be mentioned Tank volume: Min 500 Ltr, 6 bar Material of Tank: SS 316 Accessories: Pressure switches, Level Gauges, Safety Valves, etc. Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Certification: BV Class certificate	Nos	1	
04	**Marine Electric Water Heater** Brand: To be mentioned Model: To be mentioned Capacity: 80 Ltr, 4.0 bar. Type: Electrical heating Maximum temp of water: Min 65° C Material of main parts: SS 316 Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Country of Origin: To be mentioned Certification: Manufacturer certificate	Nos	1	
05	**Service Air Compressor** Brand: To be mentioned Model: To be mentioned Pressure: Min 8 bar	Nos	1	

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	Air flow rate: Min 23 m3/hr Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Certification: BV Class certificate			
06	**Service Air Receiver** Brand: To be mentioned Model: To be mentioned Pressure: Min 8 bar Service Air Volume: Min 270 Ltr Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Certification: BV Class certificate	Nos	1	
07	**Service Air Dryer** Brand: To be mentioned Model: To be mentioned Pressure: Min 8 bar Air flow rate: Min 37 m3/hr Country of Origin & Manufacturer: EU/USA/UK/ Japan/Turkey/ S. Korea Certification: Manufacturer certificate	Nos	1	
08	**Bilge Water Separator with necessary control box and fittings.** Brand: To be mentioned Model: To be mentioned Standard: IMO MEPC 107(49) Capacity: 1.0 m3/hr Oil in water during discharge: <15 ppm Motor Rated Power: To be mentioned Country of origin & Manufacturer: USA/EU/UK/ Japan/Turkey Certificate: BV Approved System: Oily Water & Sludge System	Nos	01	

Compliance Statement: A compliance statement (in a tabular format) fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. Stating mere 'Yes' or 'No' or 'Complied' will not suffice and detailed description/ information as required is to be given. An incomplete compliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered laser guided alignment machine, the deviation has to be spelt out clearly.

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ANNEX-A

Dockyard & Engineering Works Ltd

Bangladesh Navy
Sonakanda, Bandar, Narayanganj

SCHEDULE TO TENDER NO: 06.02.6758.165.07.193.25.2844 DATE 29 JUNE 2025 DUE FOR RETURN BY 21 JULY 2025 AT 12.15 HOURS

SL NO	DESCRIPTION	UNIT	QTY	UNIT PRICE (FOB)	TOTAL PRICE (FOB)
01	**Fresh Water Hydrophore System with Pump, Electrical Control Box & necessary accessories.** Tank volume: Min 500 Ltr, 6 bar Material of Tank: SS 316 No of Pumps: 02 sets (01 standby) (As per technical specification -Annex-B)	Nos	1		
02	**Sea Water Hydrophore System with Pump, Electrical Control Box & necessary accessories.** Tank volume: Min 200 Ltr, 6 bar Material of Tank: SS 316 No of Pumps: 02 sets (01 standby) (As per technical specification -Annex-B)	Nos	1		
03	**Hydrophore Tank, Electrical Control Box & necessary accessories (Without Pumps).** Tank volume: Min 500 Ltr, 6 bar Material of Tank: SS 316 (As per technical specification -Annex-B)	Nos	1		
04	**Marine Electric Water Heater** Capacity: 80 Ltr, 4.0 bar. Type: Electrical heating Maximum temp of water: Min 65° C (As per technical specification -Annex-B)	Nos	1		
05	**Service Air Compressor** Pressure: Min 8 bar Air flow rate: Min 23 m3/hr (As per technical specification -Annex-B)	Nos	1		

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06	**Service Air Receiver** Pressure: Min 8 bar Service Air Volume: Min 270 Ltr (As per technical specification -Annex-B)	Nos	1		
07	**Service Air Dryer** Pressure: Min 8 bar Air flow rate: Min 37 m3/hr (As per technical specification -Annex-B)	Nos	1		
08	**Bilge Water Separator with necessary control box and fittings.** Standard: IMO MEPC 107(49) Capacity: 1.0 m3/hr Oil in water during discharge: <15 ppm (As per technical specification -Annex-B)	Nos	01		
FOB including local agent commission as per manufacture/ principal/ supplier/ quotation/ proforma Invoice Total Price					
Freight Cost					
CFR Chattogram / CPT Hazrat Shahjalal International Airport, Dhaka Total Price					

Inward:

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TERMS OF CONDITIONS:

01	Name and Address of Manufacturer's	To be mentioned	
02	Name and Address of principal	To be mentioned.	
03	Name and Address of Local Agent	To be mentioned.	
04	Authorization Certificate of Manufacturer	To be Provided	
05	Authorization Certificate of Principal	To be Provided	
06	Authorization Certificate of Local Agent	To be Provided	
07	Country of Origin	To be mentioned	
08	Country of Manufacturer	To be mentioned	
09	Offer validity	60 days from the date of opening	
10	Port of shipment	To be mentioned	
11	H S Code	Item-wise H S code to be mentioned in the Proforma Invoice	
12	Part Shipment	Not allowed	
13	Transshipment	Allowed	
14	Shipment / Delivery	60 days after receiving LC.	
15	Original Proforma Invoice	To be provided	
16	Earnest Money	To be provided	
17	Payment	a. 80% of total Letter of Credit (LC) value is to be paid on production of necessary shipping documents. b. Remaining 20% of Letter of Credit (LC) value will be paid after received material receiving report from our main Store.	
18	All other terms and conditions as laid down in tender documents to be followed		

Notes: In order to ensure the quality of the required items as per the above-mentioned specifications, the relevant certificates from the manufacturing organization should be sent to this department before the supply of the items. This department will give final opinion on the supply of the items after necessary coordination with the concerned organization for the said certificate. In this regard, the manufacturing organization will prepare the fabrication drawing of the required items as per the requirement and will take approval from the concerned Classification Society. It is to be noted that all the expenses related to the certificate will be borne by the manufacturing organization.

Your quotation No:
Date:

Signature, name and address

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Dockyard & Engineering Works L
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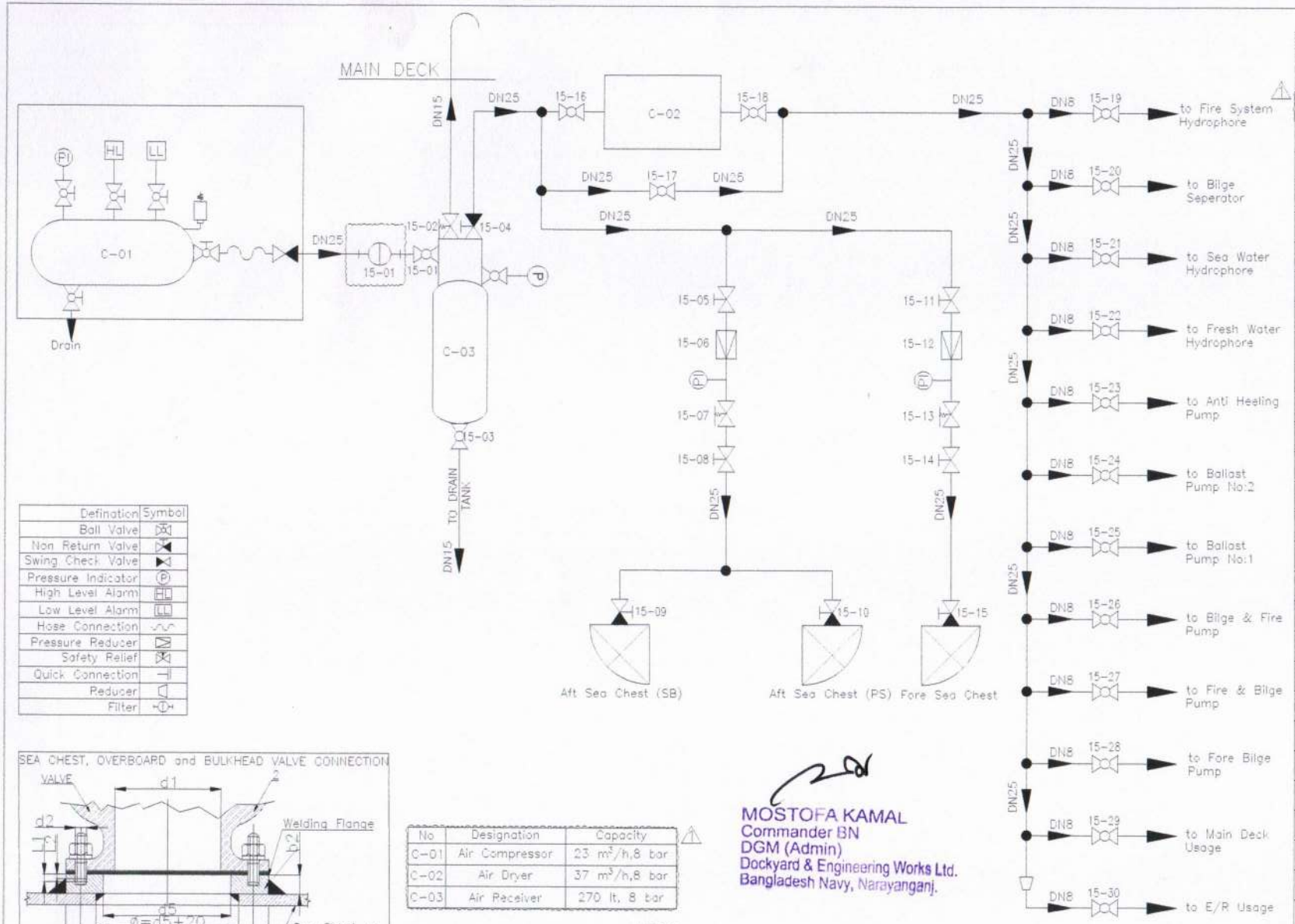
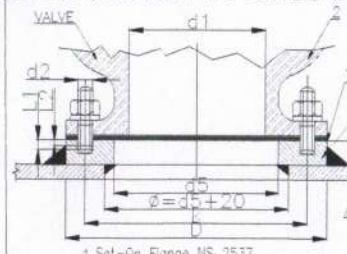


Pos No.	DN	Material	Type	PN (bar)
15-01	DN25	GG25	Ball Valve	16
15-02	DN25	GG25	Safety Valve (set press. 8.8 bar)	16
15-03	DN15	GG25	Ball Valve	16
15-04	DN25	GG25	Non-Return Stop Valve	16
15-05	DN25	GG25	Stop Valve	16
15-06	DN25	GG25	Air Reducing Valve (8bar to 2bar)	16
15-07	DN25	GG25	Relief Valve (set press. 2.2 bar)	16
15-08	DN25	GG25	Stop Valve	16
15-09	DN25	GGG40	Non-Return Stop Valve	16
15-10	DN25	GGG40	Non-Return Stop Valve	16
15-11	DN25	GG25	Stop Valve	16
15-12	DN25	GG25	Air Reducing Valve (8 bar to 2bar)	16
15-13	DN25	GG25	Relief Valve (set press. 2.2 bar)	16
15-14	DN25	GG25	Stop Valve	16
15-15	DN25	GGG40	Non-Return Stop Valve	16
15-16	DN25	GG25	Ball Valve	16
15-17	DN25	GG25	Ball Valve	16
15-18	DN25	GG25	Ball Valve	16
15-19	DN8	GG25	Ball Valve	16
15-20	DN8	GG25	Ball Valve	16
15-21	DN8	GG25	Ball Valve	16
15-22	DN8	GG25	Ball Valve	16
15-23	DN8	GG25	Ball Valve	16
15-24	DN8	GG25	Ball Valve	16
15-25	DN8	GG25	Ball Valve	16
15-26	DN8	GG25	Ball Valve	16
15-27	DN8	GG25	Ball Valve	16
15-28	DN8	GG25	Ball Valve	16
15-29	DN8	GG25	Ball Valve	16
15-30	DN8	GG25	Ball Valve	16
15-31	DN25	GG25	Filter	16

Defination	Symbol
Ball Valve	
Non Return Valve	
Swing Check Valve	
Pressure Indicator	P
High Level Alarm	HL
Low Level Alarm	LL
Hose Connection	
Pressure Reducer	
Safety Relief	
Quick Connection	
Reducer	
Filter	

SEA CHEST, OVERBOARD and BULKHEAD VALVE CONNECTION



1 Set-On Flange NS 2537
1 Valve material cast steel or GGG 40

Nominal Diameter INCH	DN	d1	d5	D	b2	k	Hole Pcs.	Screw	d2	L1	L2
1/2"	DN15	21.3	22	95	25	65	4	M12	14	19	13

No	Designation	Capacity
C-01	Air Compressor	23 m^3/h,8 bar
C-02	Air Dryer	37 m^3/h,8 bar
C-03	Air Receiver	270 lt, 8 bar

PIPE SCANTLING		
NOM. DIA	THICKNESS	MATERIAL
DN8	13.7x1.8	Seamless Steel Pipe
DN15	21.3x2.0	
DN25	33.4x2.0	

Notes:
- This drawing is schematic only.
- Working pressure is 8 bar.
- Design pressure is 8.8 bar.
- Test pressure is 13.2 bar.
- Pipe Class: Class III
- Generators and main engines are start with battery.

MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd.
Bangladesh Navy, Narayanganj.

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TOMAY design engineering consultancy

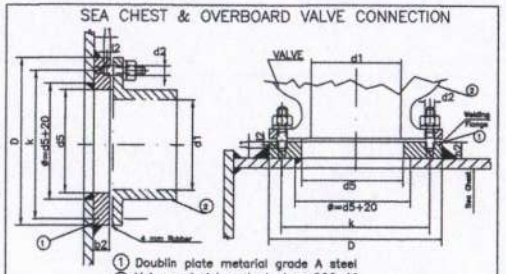
BNFC BOLIYAN

COMPRESSED AIR SYSTEM

Design	Teoman TOMBAK	Shipyard	Class	BV / 48464F	Revision No	01
Drawn	İsmail Can Yılmaz	Dockyard&Engineering Work Ltd.	Hull No	NB 252	Page	1/1
Control	Ahmet Burak KABASAKAL	Owner	Project No	SPCB-04	Issue Date	12.09.2024
Approved		Bangladesh Navy	Drawing No	P-15	Scale	1/75

Notes:
- This drawing is schematic only
- Working pressure is 8 bar
- Design pressure is 8.8 bar
- Test pressure is 13.2 bar
- Pipe class: Class III
- All manual operated valves are to be provided wit local indicators showing whether they are opened or closed
- Ship side valves on the shell plating shall be easily accessible.
- Seawater inlet and outlet valves are to capable of being operated from above the floor plates. The hand wheel of the valves are not to be less than 460mm above the bottom platform.
- Bilge pipes may not be led through tanks for lubricating oil, thermal oil, drinking water or feedwater.
- E.R bilge wells are to be of a capacity not less than 0.2m³
- The emergency bilge suction is to be located at the lowest possible level in the machinery spaces.
- In compartments other than machinery spaces and shaft tunnels, the open ends of bilge suction pipes are to be fitted with strum boxes or strainers having holes not more than 10 mm in diameter. The total area of such holes is to be not less than twice the required cross-sectional area of the suction pipe.
- Fore Void, Void Space 3.PS, and Void Space 3.SB are to be emptied using a hand pump.
- For air vents and sounding please see "Air Vent & Sounding System" dwg no: P-03.
- For tanks locations and volumes see "Tank Capacity Plan" dwg no: R-07.

SEA CHEST & OVERBOARD VALVE CONNECTION



① Doublin plate metarial grade A steel
② Valve material cast steel or GGG 40
"Flange Weld on Pipe PN10 DIN 2576 Type 01"

Nominal Diameter INCH	DN	d1	d5	D	b2	k	Hole Pcs.	Screw	d2	l1	l2
8"	DN80	88.9	90.5	200	31	160	8	M16	18	23	17
8"	DN200	219.1	221.5	340	38	295	8	M20	22	28	21

FLOODING LEVEL CALCULATION

Constant Values:
s1= Person walk speed (m/s)
m1= Distance traveled to reach the valve (m)
t2= The time it takes to close valve (s)
g= gravitational acceleration (m/s²)
v1= The volume below the level of the grating from flooding alarm in engine room (m³)
m2= Distance from water surface to damaged area (m)
d1= pipe outside diameter (mm)
d2= pipe thickness (mm)
(Permeability of the engine room is taken 0.85)

Calculating Values:
t1= The time it takes to get to the valve (s)
t3= Total time it takes to close valve (s)
a1= Cross section of flooding (mm²)
t4= Flooding time (s)
s1= 1.3889 (from MSC/Circ.1033)
m1= 33 (Distance from navigation bridge to valve control)
t2= 15
m2= 1.708−0.456 (Full Load Departure Condition Draft)
g= 9.81
v1= 284.35 (Height of Deck Level (3250mm) − Height of Level Alarm in Bilge Well (50))
d1=267
d2=3

Calculations:
t1= m1/s1
t3= t1+t2+300
a1= ((((d1−d2−d2)^2)/4)*π)*10^−6
t4= (v1*0.80)/(a1*(m2^0.5))*0.275)

t1= 23.76
t3= 338.76
t4= 1044.97

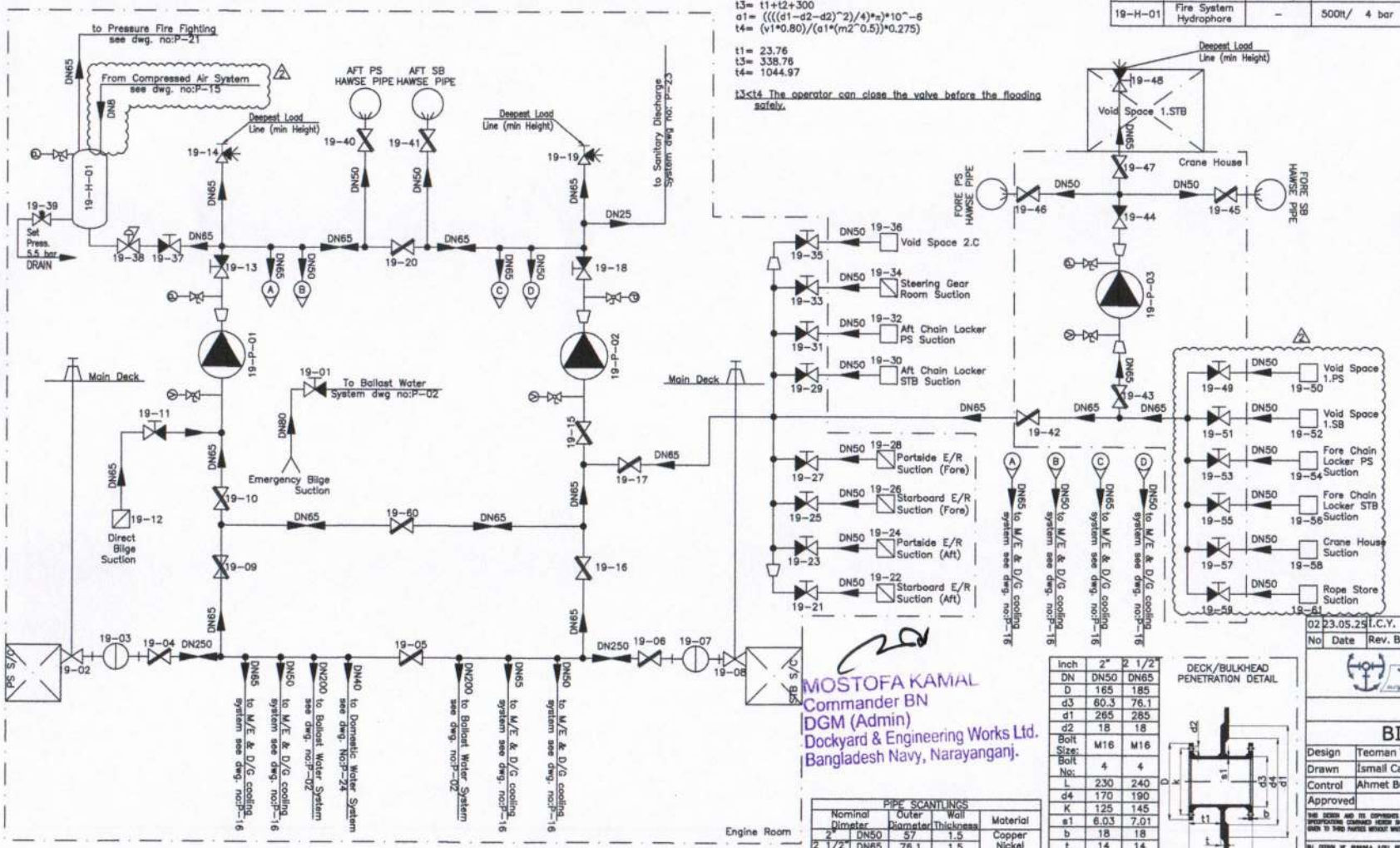
t3<t4 The operator can close the valve before the flooding safely.

Symbol	Description
	Pressure Gauge
	Vacuum Gauge
	Butterfly Valve
	Stop Valve
	Non Return Valve
	Non Return Stop Valve
	Pressure Regulator Valve

Symbol	Description
	Angle Non Return Stop Valve
	Flow Direction
	Pump
	Filter
	Mud Box
	Strum Box
	Suction Bell
	Reducer

No	Designation	Type	Capacity
19−P−01	Fire & Bilge Pump	Self Priming Centrifugal	30 m³/h, 8 bar
19−P−02	Bilge & Fire Pump	Self Priming Centrifugal	30 m³/h, 8 bar
19−P−03	Fore Bilge Pump	Self Priming Centrifugal	30 m³/h, 2 bar
19−H−01	Fire System Hydrophore	−	500lt/ 4 bar

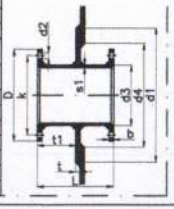
Pos No.	DN	Material	Type	PN (bar)
19−01	DN80	GG25	Non Return Stop Valve	16
19−02	DN250	GGG40	Stop Valve (Type Approved)	16
19−03	DN250	GG25	Filter	16
19−04	DN250	GG25	Butterfly Valve	16
19−05	DN250	GG25	Butterfly Valve	16
19−06	DN250	GG25	Butterfly Valve	16
19−07	DN250	GG25	Filter	16
19−08	DN250	GGG40	Stop Valve (Type Approved)	16
19−09	DN65	GG25	Butterfly Valve	16
19−10				
19−11	DN65	GG25	Non Return Stop Valve	16
19−12	DN65	GG25	Mud Box	16
19−13	DN65	GG25	Non Return Stop Valve	16
19−14	DN65	GGG40	Angle Non Return Stop Valve (Type Approved)	16
19−15	DN65	GG25	Butterfly Valve	16
19−16	DN65	GG25	Butterfly Valve	16
19−17	DN65	GG25	Butterfly Valve	16
19−18	DN65	GG25	Non Return Stop Valve	16
19−19	DN65	GGG40	Angle Non Return Stop Valve (Type Approved)	16
19−20	DN65	GG25	Butterfly Valve	16
19−21	DN50	GG25	Non Return Stop Valve	16
19−22	DN50	GG25	Mud Box	16
19−23	DN50	GG25	Non Return Stop Valve	16
19−24	DN50	GG25	Mud Box	16
19−25	DN50	GG25	Non Return Stop Valve	16
19−26	DN50	GG25	Mud Box	16
19−27	DN50	GG25	Non Return Stop Valve	16
19−28	DN50	GG25	Mud Box	16
19−29	DN50	GG25	Non Return Stop Valve	16
19−30	DN50	Steel	Strum Box	−
19−31	DN50	GG25	Non Return Stop Valve	16
19−32	DN50	Steel	Strum Box	−
19−33	DN50	GG25	Non Return Stop Valve	16
19−34	DN50	GG25	Mud Box	16
19−35	DN50	GG25	Non Return Stop Valve	16
19−36	DN50	Steel	Strum Box	−
19−37	DN65	GG25	Non Return Stop Valve	16
19−38	DN65	GG25	Pressure Regulator Valve (set pressure 5 bar)	16
19−39	DN65	GGG40	Relief Valve (set pressure 4.4 bar)	16
19−40	DN50	GG25	Butterfly Valve	16
19−41	DN50	GG25	Butterfly Valve	16
19−42	DN65	GG25	Butterfly Valve	16
19−43	DN65	GG25	Butterfly Valve	16
19−44	DN65	GG25	Check Valve	16
19−45	DN50	GG25	Butterfly Valve	16
19−46	DN50	GG25	Butterfly Valve	16
19−47	DN65	GG25	Butterfly Valve	16
19−48	DN65	GGG40	Non Return Stop Valve (Type Approved)	16
19−49	DN50	GG25	Non Return Stop Valve	16
19−50	DN50	Steel	Strum Box	−
19−51	DN50	GG25	Non Return Stop Valve	16
19−52	DN50	Steel	Strum Box	−
19−53	DN50	GG25	Non Return Stop Valve	16
19−54	DN50	Steel	Strum Box	−
19−55	DN50	GG25	Non Return Stop Valve	16
19−56	DN50	Steel	Strum Box	−
19−57	DN50	GG25	Non Return Stop Valve	16
19−58	DN50	Steel	Strum Box	−
19−59	DN50	GG25	Non Return Stop Valve	16
19−60	DN65	GG25	Butterfly Valve	16
19−61	DN50	Steel	Strum Box	−



PIPE SCANTLINGS				
Nominal Diameter		Outer Diameter	Wall Thickness	Material
2"	DN50	57	1.5	Copper Nickel 70/30 Pipe
2 1/2"	DN65	76.1	1.5	
10"	DN250	267	3.5	

Inch	2"	2 1/2"
DN	DN50	DN65
D	165	185
d3	60.3	76.1
d1	265	285
d2	18	18
Bolt Size:	M16	M16
Bolt No:	4	4
L	230	240
d4	170	190
K	125	145
s1	6.03	7.01
b	18	18
t	14	14
t1	100	105

DECK/BULKHEAD PENETRATION DETAIL



−Main bilge pipe internal diameter;
d_H=25+1.68x√(Lx(B+D))
L=45.00m, B=15m, D=3m
d_H=72.81mm
DN65 pipe is used

−Branched bilge pipes internal diameter
d_B=25+2.16x√(Lx(B+D)
L=8.4m
d_B=46.50mm
DN50 pipe is used

−Capacity of bilge pumps
Q=5.65x10⁻³xd_H²
Q=29.96m³/h
30m³/h pump is used

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No	Date	Rev. By	Revision Note
02	23.05.25	I.C.Y.	Drawing has been revised according to class comments.

TOMAY

70 ton SELF PROPPELLER CRANE BARGE

TBN-SPCB-04

BILGE & SEA WATER SYSTEM

Design	Teoman TOMBAK	Shipyard	Dockyard&Engineering Work Ltd.
Drawn	Ismail Can YILMAZ	Owner	Bangladesh Navy
Control	Ahmet Burak KABASAKAL		Class/ID BV / 48464F
Approved			Hull No NB 252
			Project No SPCB-04
			Drawing No P-19
			Scale 1/50
			Issue Date 04.07.2024

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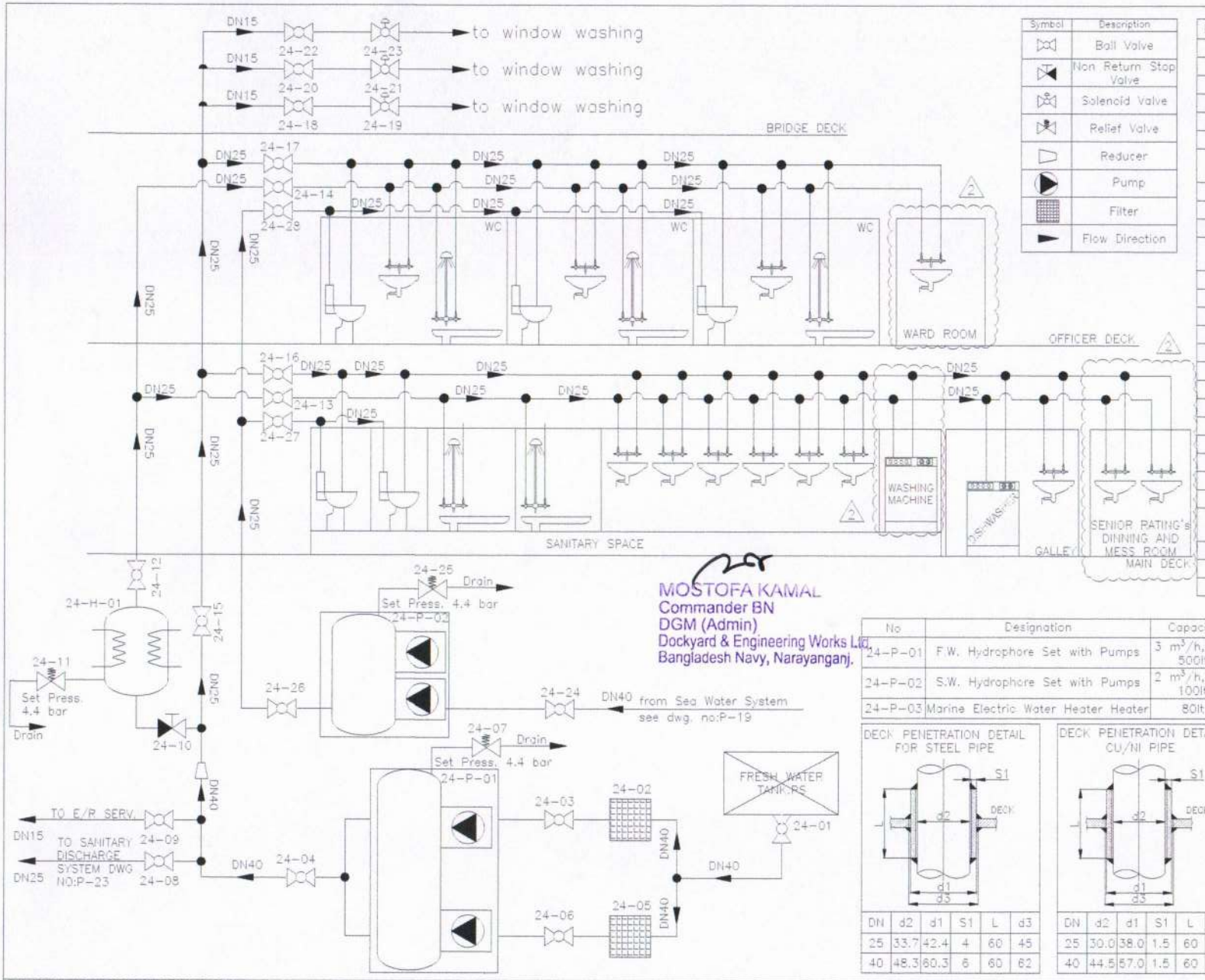


Symbol	Description
	Ball Valve
	Non Return Stop Valve
	Solenoid Valve
	Relief Valve
	Reducer
	Pump
	Filter
	Flow Direction

Pos No.	DN	Material	Type	PN (bar)
24-01	DN40	GG25	Ball Valve	10
24-02	DN40	Steel	Filter	10
24-03	DN40	GG25	Ball Valve	10
24-04	DN40	GG25	Ball Valve	10
24-05	DN40	Steel	Filter	10
24-06	DN40	GG25	Ball Valve	10
24-07	DN25	GG25	Safety Valve (set pressure 4.4 bar)	10
24-08	DN25	GG25	Ball Valve	10
24-09	DN15	GG25	Ball Valve	10
24-10	DN40	GG25	Non-Return Stop Valve	10
24-11	DN25	GG25	Safety Valve (set pressure 4.4 bar)	10
24-12	DN25	GG25	Ball Valve	10
24-13	DN25	GG25	Ball Valve	10
24-14	DN25	GG25	Ball Valve	10
24-15	DN25	GG25	Ball Valve	10
24-16	DN25	GG25	Ball Valve	10
24-17	DN25	GG25	Ball Valve	10
24-18	DN15	GG25	Ball Valve	10
24-19	DN15	GG25	Solenoid Valve	10
24-20	DN15	GG25	Ball Valve	10
24-21	DN15	GG25	Solenoid Valve	10
24-22	DN15	GG25	Ball Valve	10
24-23	DN15	GG25	Solenoid Valve	10
24-24	DN40	GG25	Ball Valve	
24-25	DN25	GG25	Safety Valve (set pressure 4.4 bar)	10
24-26	DN25	GG25	Ball Valve	10
24-27	DN25	GG25	Ball Valve	10
24-28	DN25	GG25	Ball Valve	10

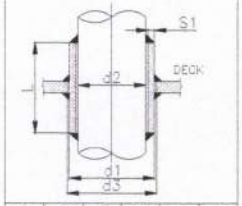
MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd.
Bangladesh Navy, Narayanganj.

No	Designation	Capacity
24-P-01	F.W. Hydrophore Set with Pumps	3 m^3/h,4bar 500lt
24-P-02	S.W. Hydrophore Set with Pumps	2 m^3/h,4bar 100lt
24-P-03	Marine Electric Water Heater Heater	80lt

DECK PENETRATION DETAIL FOR STEEL PIPE

DN	d2	d1	S1	L	d3
25	33.7	42.4	4	60	45
40	48.3	60.3	6	60	62

DECK PENETRATION DETAIL CU/NI PIPE



DN	d2	d1	S1	L	d3
25	30.0	38.0	1.5	60	40
40	44.5	57.0	1.5	60	60

Pipe Scantlings			
For FreshWater			
Nominal Diameter		Outer Dia.& Wall Thickness	Material
1/2"	DN15	21.3x2.0	Seamless Steel Pipe
1"	DN25	33.7x2.0	
1 1/2"	DN40	48.3x2.3	
For SeaWater			
Nominal Diameter		Outer Dia.& Wall Thickness	Material
1"	DN25	33.7x1.2	Copper Nickel 70/30 Pipe
1 1/2"	DN40	48.3x1.5	

Notes:
- This drawing is schematic only.
- Working pressure is 4 bar.
- Design pressure is 4.4 bar.
- Test pressure is 6.6 bar.
- Steel pipes are hot galvanized after fabrication.
- Steel pipe will be used for fresh water.
- Cu/Ni pipe will be used for sea water.
- Hot water line design temperature is 65°C.
- Drinking water pipe lines are not pass through tanks which do not contain drinking water.

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TOMAY design engineering consultancy

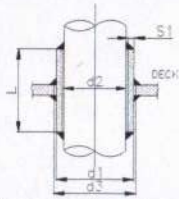
TBN-SPCB-04

DOMESTIC WATER SYSTEM

Design	Teoman TOMBAK	Shipyard		Class	BV / 48464F	Revision No	01
Drawn	İsmail Can YILMAZ	Dockyard&Engineering Work Ltd.		Hull No	NB 252	Page	1/1
Control	Ahmet Burak KABASAKAL	Owner		Project No	SPCB-04	Issue Date	20.09.2024
Approved		Bangladesh Navy		Drawing No	P-24	Scale	1/50

Pos No.	DN	Material	Type	PN (bar)
20-01	DN25	Steel	Strum Box	–
20-02	DN25	GG25	Non-return Stop Valve	6
20-03	DN25	Steel	Strum Box	–
20-04	DN25	GG25	Non-return Stop Valve	6
20-05	DN25	Steel	Strum Box	–
20-06	DN25	GG25	Non-return Stop Valve	6
20-07	DN25	Steel	Strum Box	–
20-08	DN25	GG25	Non-return Stop Valve	6
20-09	DN25	Steel	Strum Box	–
20-10	DN25	GG25	Non-return Stop Valve	6
20-11	DN25	GG25	Non-return Stop Valve	6
20-12	DN25	GG25	Non-return Stop Valve	6
20-13	DN25	GG25	Non-return Stop Valve	6
20-14	DN25	GG25	Non-return Stop Valve	6
20-15	DN25	GG25	Non-return Stop Valve	6
20-16	DN25	GG25	Stop Valve	6
20-17	DN25	GG25	Non-return Stop Valve	6
20-18	DN25	GG25	Non-return Stop Valve	6
20-19	DN25	GG25	Non-return Stop Valve	
20-20	DN40	GG25	Non-return Stop Valve	6
20-21	DN25	GG25	Non-return Stop Valve	
20-22	DN32	GG25	Non-return Stop Valve	

DECK PENETRATION DETAIL FOR STEEL PIPE

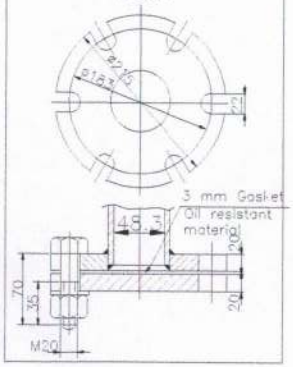


DN	d2	d1	S1	L	d3
25	33.7	42.4	4	60	45
32	42.2	60.3	5	60	62
40	48.3	60.3	6	60	62

Pipe Scantlings			
Nominal Diameter		Outer Dia.& Wall Thickness	Material
1"	DN25	33.7x3.2	Seamless Steel Pipe
1 1/4"	DN32	42.2x3.6	
1 1/2"	DN40	48.3x3.6	

Notes:
- This drawing is schematic only
- Design pressure is 3 bar
- Test pressure is 4.5 bar
- Pipe class: Class III
- All pipes are hot galvanized after fabrication
- For air vent&sounding details please see dwg no: P-05
- For tank locations details please see dwg no: P-07
- Discharge connection will be locate suitable place near the superstructure.

STANDARD DISCHARGE CONNECTION COMPLY WITH MARPOL 73/78 ANNEX I REG.13



BILGE TANK CAPACITY CALCULATION
Required Capacity according to MEPC.1/Circ.642
Above 1000kW up to 20000kW:P/250
P: Main engine rating in kW
P=1004kW
Required Capacity=1004/250 =4.016m³
Actual Capacity:4.75m³

SLUDGE TANK CAPACITY CALCULATION
MARPOL Annex I Reg.12
V =k.C.D
k =0.005
C=6.977m³/day
D=30 days
V =1.046m³
Actual Capacity:4m³

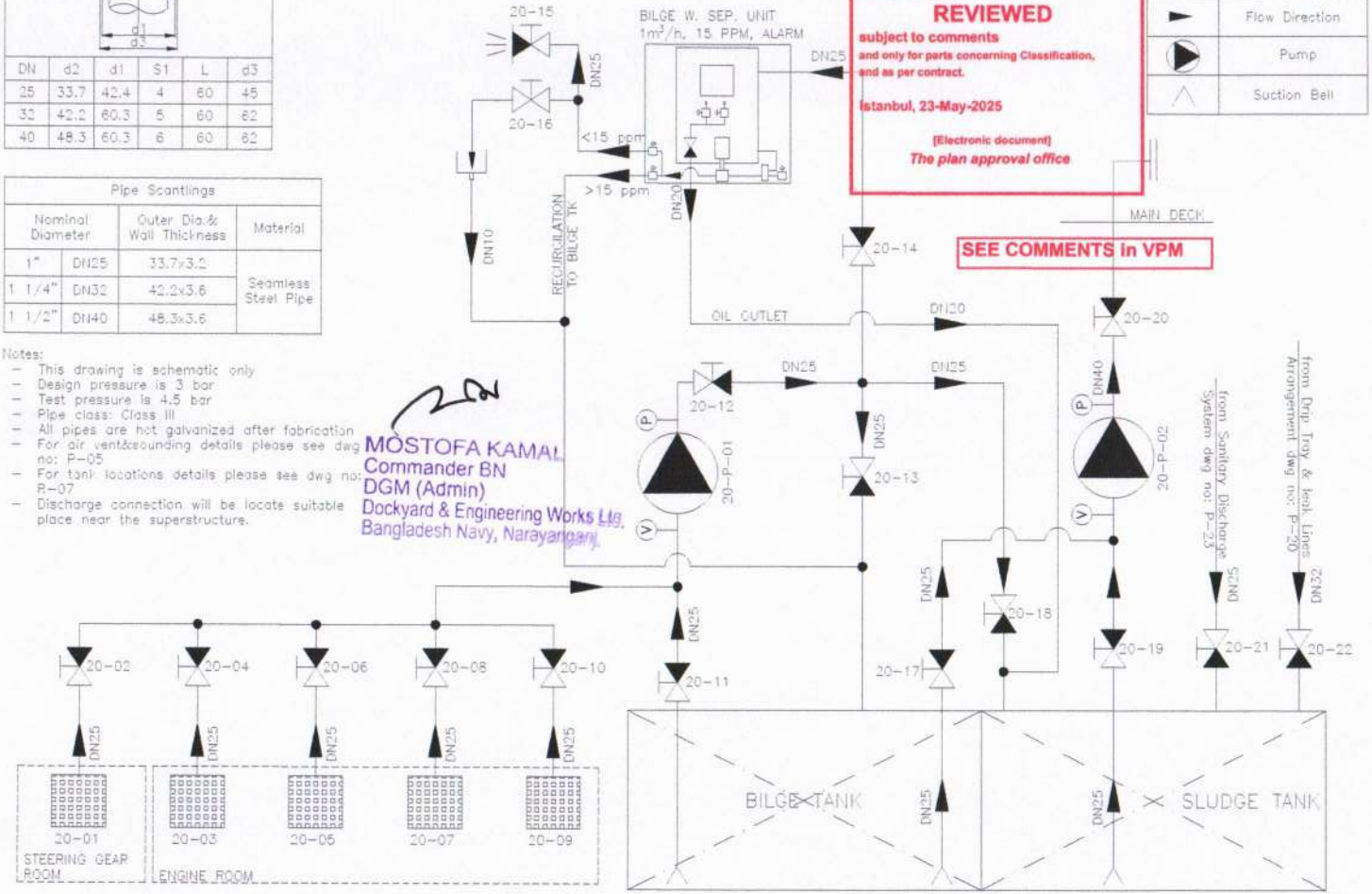
No	Designation	Type	Capacity
20-P-01	Bilge Collection Pump	Gear Type	3 m³/h, 3bar
20-P-02	Sludge Transfer Pump	Gear Type	3 m³/h, 3bar

Symbol	Description
	Non Return Stop Valve
	Stop Valve
	Strum Box
	Shore Connection
	Flow Direction
	Pump
	Suction Bell

Bureau Veritas Marine & Offshore
Section ~~48464F~~.....
REVIEWED
subject to comments
and only for parts concerning Classification, and as per contract.
Istanbul, 23-May-2025
[Electronic document]
The plan approval office

SEE COMMENTS in VPM

MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd.
Bangladesh Navy, Narayanganj



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TOMAY design engineering consultancy

TBN-SPCB-04

OILY WATER & SLUDGE SYSTEM

Design	Teoman TOMBAK	Shipyard	Class	BV / 48464F	Revision No	00
Drawn	İsmail Can YILMAZ	Dockyard&Engineering Work Ltd.	Hull No	NB 252	Page	1/1
Control	Ahmet Burak KABASAKAL	Owner	Project No	SPCB-04	Issue Date	19.09.2024
Approved		Bangladesh Navy	Drawing No	P-20	Scale	1/50

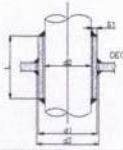
Notes:
- This drawing is schematic only
- Working pressure is 2 bar
- Design pressure is 3 bar
- Test pressure is 4.5 bar
- Design temperature is 50°C
- Pipe class: Class III
- Fuel lines may not pass through tanks containing feedwater, drinking water, lubricating oil or thermal oil
- Fuel lines are not to be laid directly above or in the vicinity of boilers, turbines or equipment with high surface temperatures (over 220 °C) or in way of other sources of ignition
- Flanged and screwed socket connections in fuel oil lines are to be screened or otherwise suitably protected to avoid, as far as practicable, oil spray or oil leakages onto hot surfaces, into machinery air intakes, or other sources of ignition. The number of detachable pipe connections is to be limited. In general, flanged connections according to recognized standards are to be used
- Flanged and screwed socket connections in fuel oil lines which lay directly above hot surfaces or other sources of ignition are to be screened and provided with drainage arrangements.
- Flanged and screwed socket connections in fuel oil lines with a maximum allowable working pressure of more than 0.18 N/mm² and within about 3 meters from hot surfaces or other sources of ignition and direct sight of fire are to be screened. Drainage arrangements need not to be provided
- Flanged and screwed socket connections in fuel oil lines with a maximum allowable working pressure of less than 0.18 N/mm² and within about 3 meters from hot surfaces or other sources of ignition are to be assessed individually taking into account working pressure, type of coupling and possibility of failure.
- Flanged and screwed socket connections in fuel oil lines with a maximum allowable working pressure of more than 1.6 N/mm² need normally to be screened.
- Shut-off valves in fuel lines in the machinery spaces are to be operable from above the floor plates.
- For filling lines entering at the top of a tank and with inside extension towards the bottom, air holes shall be drilled in the pipe near the penetration in order to avoid the siphoning effect.
- The valves on tanks are to be located on the tank itself.
- Fuel oil sampling points to be used should fulfil all of the following conditions:
  - Be easily and safely accessible.
  - Each sampling point should be located in a position shielded from any heated surface or electrical equipment and the shielding device or construction should be sturdy enough to endure leaks, splashes or spray under design pressure of the fuel oil supply line so as to preclude impingement of fuel oil onto such surface or equipment.
  - The sampling arrangement should be provided with suitable drainage to the drain tank or other safe location.

- For air vents and sounding please see "Air Vent & Sounding System" dwg no: P-03.
- For drip tray and leak lines please see "Drip Tray & Leak Lines Arrangement" dwg no: P-26.
- For tanks locations and volumes see "Tank Capacity Plan" dwg no: P-07.
- *: inlets and outlets of the main engines and gensets will be connected according to the supplier's recommendations.

SERVICE TANK CAPACITY CALCULATION
Main Engine: 502kW, 213 g/kWh
2 M/E, 8 hours=2.037m³
Diesel Generators: 84kW, 195 g/kwh
2 D/G, 8 hours=0.317m³
Required service tank capacity:2.326m³
Actual service tank capacity:2.650m³

OVERFLOW TANK CAPACITY
Transfer pump: 3m³/h
Required capacity:0.5m³
Actual capacity:2.380m³

DECK PENETRATION DETAIL FOR STEEL PIPE

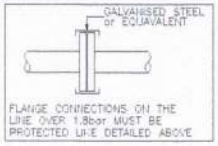


DN	d2	d1	S1	L	d3
25	33.7	42.4	4	60	45
40	48.3	60.3	6	60	62
50	60.3	88.9	8	60	91
65	76.1	101.6	11	60	104
80	88.9	114.3	11	100	116
100	114.3	139.7	11	100	142
125	139.7	168.3	12.5	100	171

Pipe Scantlings		
Nominal Diameter	Outer Dia.& Wall Thickness	Material
1/4" DN8	13.7x1.80	Seamless Steel Pipe
1/2" DN15	21.3x2.00	
3/4" DN20	26.7x2.00	
1" DN25	33.4x2.30	
1 1/2" DN40	48.3x2.30	
2" DN50	60.3x2.30	
2 1/2" DN65	76.1x2.60	
3" DN80	88.9x2.90	
4" DN100	114.3x3.20	
Pipe Scantlings (Overflow Pipes)		
2 1/2" DN65	76.1x4.50	Seamless Steel Pipe
4" DN100	114.3x4.50	

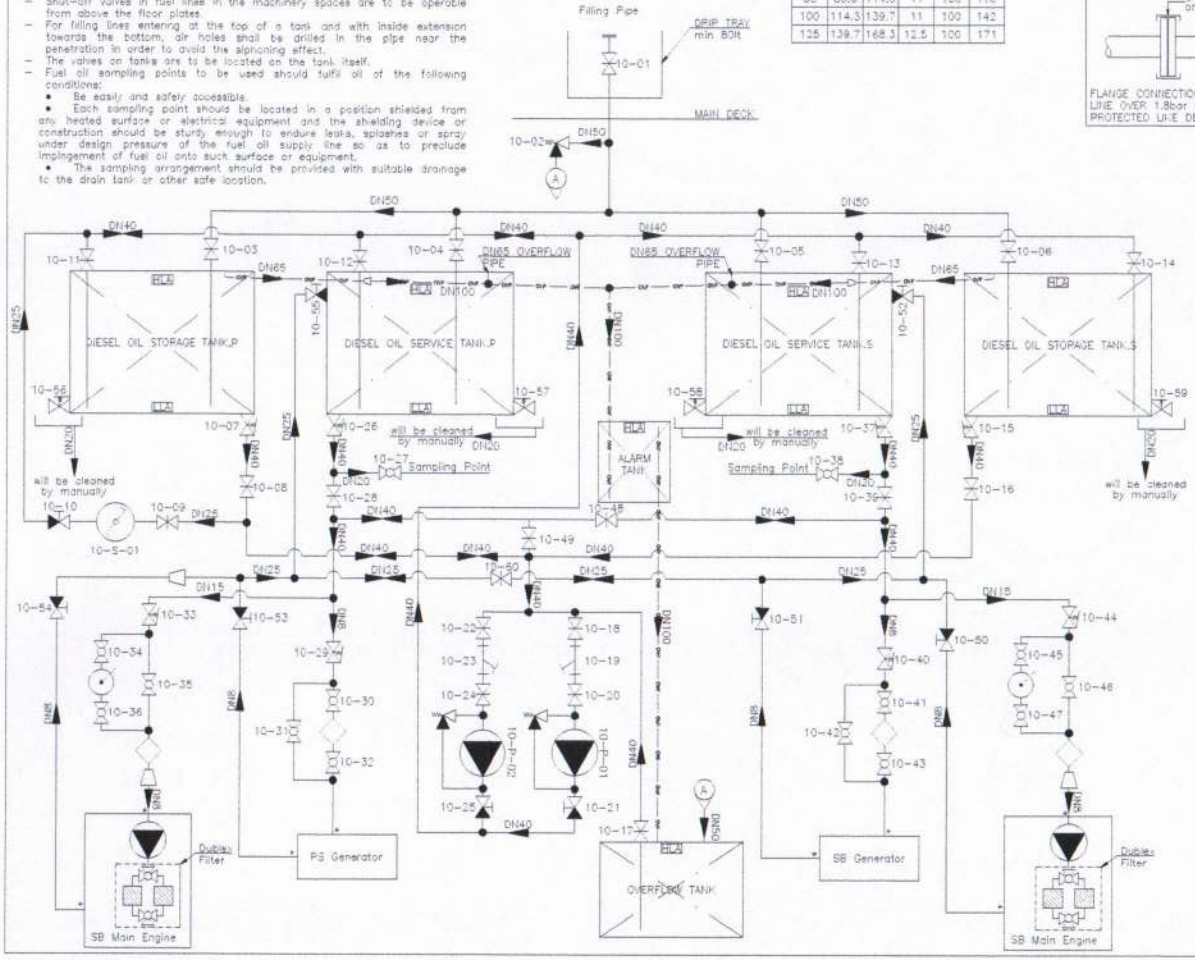
Pipe thickness values given above table are minimum according to BV Rules.

No	Designation	Type	Capacity
10-P-01	D.O. Transfer Pump	Gear Type	3 m³/h,2 bar
10-P-02	D.O. Transfer Pump	Gear Type	3 m³/h,2 bar
10-S-01	D.O. Separator with Pump	Gear Type	0.8 m³

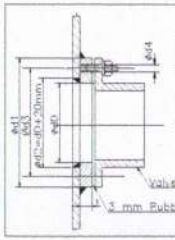


Pos No.	DN	Material	Type	PN (bar)
10-01	DN50	GG25	Gate Valve	6
10-02	DN50	GG25	Pressure Relief Valve (Set 2.2bar)	6
10-03	DN50	GG25	Gate Valve	6
10-04	DN50	GG25	Gate Valve	6
10-05	DN50	GG25	Gate Valve	6
10-06	DN50	GG25	Gate Valve	6
10-07	DN40	GGG40	Quick Closing Valve	6
10-08	DN40	GG25	Gate Valve	6
10-09	DN25	GG25	Gate Valve	6
10-10	DN25	GG25	Non-Return Stop Valve	6
10-11	DN25	GG25	Gate Valve	6
10-12	DN25	GG25	Gate Valve	6
10-13	DN25	GG25	Gate Valve	6
10-14	DN25	GG25	Gate Valve	6
10-15	DN40	GGG40	Quick Closing Valve	6
10-16	DN40	GG25	Gate Valve	6
10-17	DN40	GG25	Gate Valve	6
10-18	DN40	GG25	Gate Valve	6
10-19	DN40	Steel	Y-Filter	6
10-20	DN40	GG25	Gate Valve	6
10-21	DN40	GG25	Non-Return Stop Valve	6
10-22	DN40	GG25	Gate Valve	6
10-23	DN40	Steel	Y-Filter	6
10-24	DN40	GG25	Gate Valve	6
10-25	DN40	GG25	Non-Return Stop Valve	6
10-26	DN40	GGG40	Quick Closing Valve	6
10-27	DN20	GG25	Globe Valve	6
10-28	DN40	GG25	Gate Valve	6

Pos No.	DN	Material	Type	PN (bar)
10-29	DN8	GGG40	Quick Closing Valve	6
10-30	DN8	GG25	Globe Valve	6
10-31	DN8	GG25	Globe Valve	6
10-32	DN8	GG25	Globe Valve	6
10-33	DN15	GGG40	Quick Closing Valve	6
10-34	DN15	GG25	Ball Valve	6
10-35	DN15	GG25	Ball Valve	6
10-36	DN15	GG25	Ball Valve	6
10-37	DN40	GGG40	Quick Closing Valve	6
10-38	DN20	GG25	Globe Valve	6
10-39	DN40	GG25	Gate Valve	6
10-40	DN8	GGG40	Quick Closing Valve	6
10-41	DN8	GG25	Globe Valve	6
10-42	DN8	GG25	Globe Valve	6
10-43	DN8	GG25	Globe Valve	6
10-44	DN15	GGG40	Quick Closing Valve	6
10-45	DN15	GG25	Ball Valve	6
10-46	DN15	GG25	Ball Valve	6
10-47	DN15	GG25	Ball Valve	6
10-48	DN40	GG25	Gate Valve	6
10-49	DN40	GG25	Gate Valve	6
10-50	DN8	GG25	Non-Return Stop Valve	6
10-51	DN8	GG25	Non-Return Stop Valve	6
10-52	DN25	GG25	Non-Return Stop Valve	6
10-53	DN8	GG25	Non-Return Stop Valve	6
10-54	DN8	GG25	Non-Return Stop Valve	6
10-55	DN25	GG25	Non-Return Stop Valve	6
10-56	DN20	GGG40	Self-Closing Valve	6
10-57	DN20	GGG40	Self-Closing Valve	6
10-58	DN20	GGG40	Self-Closing Valve	6
10-59	DN20	GGG40	Self-Closing Valve	6



Symbol	Description
	Gate Valve
	Non Return Stop Valve
	Quick Closing Valve
	Self Closing Valve
	Ball Valve
	Pressure Relief Valve
	Flow Direction
	Pump
	Fuel / Water Filter
HLA	High Level Alarm
LLA	Low Level Alarm
	Reducer
	Hand Pump



FUEL VALVES TANK CONNECTION DETAILS
VALVE FITTING DIMENSIONS (mm)PN10

d0	d1	d2	d3	d4	t
15	65	35	85	4xM12	16
20	105	40	75	4xM12	16
25	115	45	85	4xM12	16
40	150	60	110	4xM18	20

Threaded sleeve joints with parallel thread not allowed for:
pipes with outside diameter of more than 60.3 mm
pipes inside tanks
piping systems conveying flammable media or services where fatigue, severe erosion or crevice corrosion is expected to occur.
FLANGE STANDARD IS DIN2576

No	Date	Rev. By.	Revision Note
02	27.05.25	I.C.Y	Drawing has been revised according to eq. inlets\ outlets.

TOMAY

70 ton SELF PROPPELLER CRANE BARGE

TBN-SPCB-04

MDO TRANSFER & FILLING & OVERFLOW SYSTEM

Design	Teoman TOMBAK	Shipyard	Dockyard&Engineering Work Ltd.
Drawn	İsmail Can YILMAZ	Owner	Bangladesh Navy
Control	Ahmet Burak KABASAKAL		Class/ID BV / 48464F
Approved			Hull No NB 252
			Project No SPCB-04
			Drawing No P-10
			Scale 1/50
			Issue Date 01.07.2024

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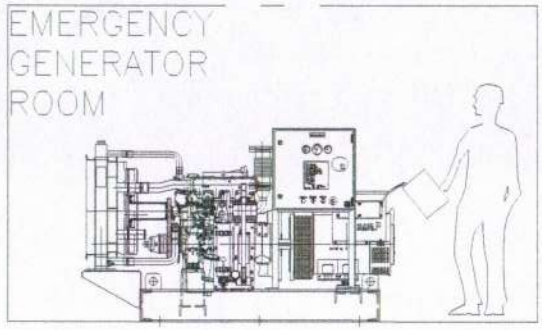
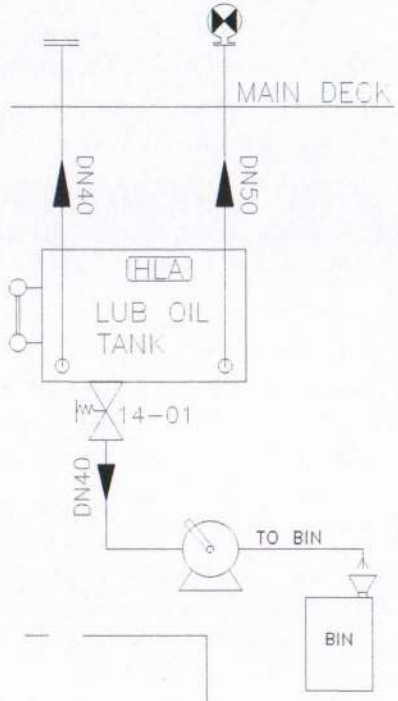
MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd.
Bangladesh Navy, Narayanganj.

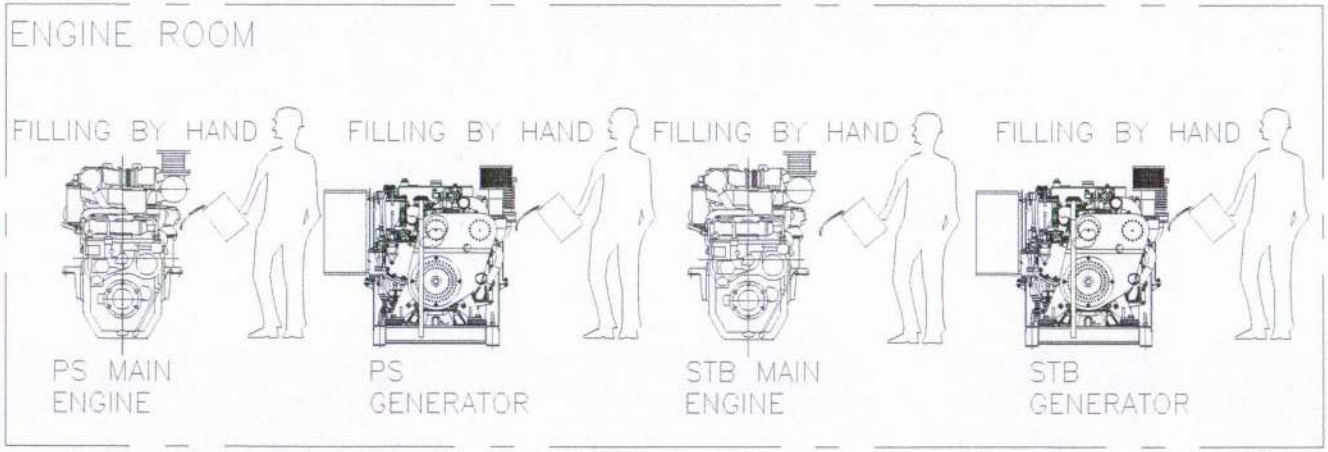
Pos No.	DN	Material	Type
14-01	DN40	GGG40	Self Closing Valve
14-02	DN50	STEEL	Air Pipe Head with Flame Arrester (Type Approved)

Pipe Scantlings		
Nominal Diameter	Outer Dia.& Wall Thickness	Material
1 1/2" DN40	48.3x2.3	Seamless Steel
2" DN50	60.3x4.5	

DESCRIPTION	SYMBOL
HAND PUMP	
HIGH LEVEL ALARM	HLA
SELF CLOSING VALVE	
AIR PIPE HEAD WITH FLAME ARRESTER	
LEVEL TUBE	







SEE COMMENTS in VPM

Bureau Veritas Marine & Offshore
Section 48464F.....
REVIEWED
subject to comments
and only for parts concerning Classification,
and as per contract.
Istanbul, 23-May-2025
[Electronic document]
The plan approval office

MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd.
Bangladesh Navy, Narayanganj.

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TOMAY design engineering consultancy

TBN-SPCB-04

LUBRICATION OIL SYSTEM

Design	Teoman TOMBAK	Shipyard	Class	BV / 48464F	Revision No	00
Drawn	İsmail Can YILMAZ	Dockyard&Engineering Work Ltd.	Hull No	NB 252	Page	1/1
Control	Ahmet Burak KABASAKAL	Owner	Project No	SPCB-04	Issue Date	23.01.2025
Approved		Bangladesh Navy	Drawing No	P-12	Scale	1/50

ANNEX-C

BANK GUARANTEE IN LIEU OF EARNEST MONEY

Guarantee No _____
Dated _____
For (mention amount) _____

Dear Sir,

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$/ £/ Tk----------being 1%(One percent) of the value of supplies as earnest money by the tender for making in accordance with the terms and conditions of the tenderer and the tenderer shall provide a bank guarantee for payment for the said amount .
And whereas the tenderer M/S,---------- of ----------has requested us (name of bank) of ----------to issue a guarantee for payment of the amount of US$/ £/ Tk----------when called upon.

In consideration of the aforesaid, we (name of bank) of ---------- hereby undertake and guarantee due performance of the tender by 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 direct by the organization immediately on receipt of demand from the said , organization in writing , in the event be tenderer fail to perform the tender , it is expressly understood that the organization shall be the sole judge for deciding whether the tender has performed the tender and fulfill the terms and condition 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 and amount of US$/ £/ Tk----------(----------) only.

4. The guarantee will remain valid up to ----------

Yours faithfully

(Seal of the bank) ----------Bank

MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd
Bangladesh Navy, Narayanganj.

ANNEX-D

PERFORMANCE BANK GUARANTEE

Managing Director
Dockyard& Engineering works Ltd
Bangladesh Navy
Sonakanda, Bandor, Narayanganj

Bank Guarantee, no _____
Dated _____
For (Mention amount) _____

Dear Sir,

Whereas Dockyard & Engineering works Ltd, Bangladesh Navy, Sonakanda, Bandor, Narayanganj, hereinafter referred to as the buyers proposed to enter in to a contract through a letter of intent/Purchase Order No _____ dated _____ 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 terms and conditions of the contract. And whereas the sellers have requested us (name of the bank) to issue a guarantee for an amount of **US$/ £/ EURO/ Tk. _____** Being 5% of the CFR value of the supplies.

In Consideration aforesaid (name of bank) _____ here by undertake and guarantee due observance and performance of the terms and condition of the contract by the sellers and we 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 of fulfill the terms and conditions thereof.

To keep guarantee valid and in force for 4 (four) months beyond the date 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 of 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 the guarantee.

our commitment under this guarantee is limited to an amount of US$/£/EURO/Tk. _____ only.

Yours faithfully

(Seal of the bank)

----------Bank

MOSTOFA KAMAL
Commander BN
DGM (Admin)
Dockyard & Engineering Works Ltd
Bangladesh Navy, Narayanganj.