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 MOORING MATERIALS (SERIAL: 1-12)

TENDER ENQUIRY NO- 06.02.6758.165.07.193.25.1793 DATE 13 FEBRUARY 2025

DUE FOR OPENING ON: 27 FEBRUARY 2025; AT TIME: 12:30 PM

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:** 06.02.6758.165.07.193.25.1793 Dated 13 February 2025.

2. **DUE FOR OPENING ON:** 27 February 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:** Mooring Materials (Serial: 1-12)

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

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.

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 Letter of Credit (LC)/ CFR value is to be paid on production of necessary shipping documents.

b. Remaining 20% of Letter of Credit (LC) amount will be paid after received material receiving report 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
(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,
(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 percents 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 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 have 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 foreign supplier must provide at least 5 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 buyers 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 country shall be borne by the seller's.

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 party 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 contract 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)	- 04 pages
B.	Technical Specification (Annex-B)	- 02 Pages
C.	Drawing	- 03 Pages
D.	ISO Standard	- 20 Pages
E.	Norsk Standard	- 04 pages
F.	Format of Bank Guarantee in Lieu of Earnest money (Annex-C)	- 01 page
G.	Format of performance Bank guarantee (Annex-D)	- 01 page

ANNEX-A

DOCKYARD & ENGINEERING WORKS LTD
BANGLADESH NAVY
SONAKANDA, BANDAR, NARAYANGANJ

SCHEDULE TO TENDER ENQUIRY NO: 06.02.6758.165.07.193.25.1793 DATED 13 FEBRUARY 2025 DUE FOR RETURN BY 27 FEBRUARY 2025 AT 12.15 HOURS

SL No	DESCRIPTION OF GOODS	Unit	QTY	Unit Price	TOTAL PRICE
1.	Main Stockless Anchor (As per technical specification -Annex-B)	Nos	4		
2.	Stud Link Chain Cable (As per technical specification -Annex-B)	Mtr	770		
3.	Enlarged Link (As per technical specification -Annex-B)	Nos	08		
4.	End Link (As per technical specification -Annex-B)	Nos	16		
5.	Swivel (As per technical specification -Annex-B)	Nos	08		
6.	Kenter Shakle (As per technical specification -Annex-B)	Nos	28		
7.	End Shackle (As per technical specification -Annex-B)	Nos	08		
8.	Towing rope (As per technical specification -Annex-B)	Mtr	180		
9.	Mooring rope (As per technical specification -Annex-B)	Mtr	560		
10.	Mooring Chock (As per technical specification -Annex-B)	Nos	12		

11.	Mooring Chock (As per technical specification -Annex-B)	Nos	10		
12.	Pedestal Fairlead (As per technical specification -Annex-B)	Nos	4		
FOB including local agent commission as per manufacture/ principal/ supplier/ quotation/ profarma in voice					
Freight Cost					
TOTAL PRICE CFR (CTG)/ CPT (HAZRAT SHAHJALAL INTERNATIONAL AIRPORT)					

Inward:

Terms of conditions:

01	Name and Address of Manufacturer's	To be mentioned	
02	Country of Manufacture	To be mentioned	
03	Authorization of Manufacturer	To be mentioned	
04	Name and Address of Principal	To be mentioned	
05	Authorization of Principal	To be mentioned	
06	Name and Address of Local Agent	To be mentioned	
07	Port of shipment	To be mentioned	
08	Destination Port	To be mentioned	
09	Country of origin	To be mentioned	
10	Offer validity	60 days from the date of opening	
11	Warranty	18 (Eighteen) Months	
12	H S Code	To be mentioned	
13	Transshipment	Allowed	
14	Partial Shipment	Not Allowed	
15	Original Proforma Invoice	To be provided	
16	Earnest Money	To be provided	

17	Shipment / Delivery	60 days after receiving Irrevocable Letter of Credit (ILOC)	
18	Certificate	To be provided as per Technical Specification	
19	Payment	a. 80% of total Letter of Credit (LC)/ CFR value is to be paid on production of necessary shipping documents. b. Remaining 20% of Letter of Credit (LC) amount will be paid after received material receiving report from our main Store.	
20	All other terms and conditions as laid down in tender documents to be followed.		

Your quotation No:

the tenderer:

Date:

Signature, name and address

ANNEX- B

TECHNICAL SPECIFICATION OF MOORING MATERIALS

SL No	Technical Description, Specification and standard required	Specification offered by Bidder
1.	**Main Stockless Anchor** Type: High Holding Power (HHP) Weight: 967.5 kg Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
2.	**Stud Link Chain Cable** Diameter: 32 mm Grade: Q2 (Special Quality) Minimum Breaking Load: 583 kN Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate.	
3.	**Enlarged Link** Size: Suitable for 32 mm Common stud link Chain. Grade: Q2 (Special Quality) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
4.	**End Link** Size: Suitable for 32 mm Common stud link Chain. Grade: Q2 (Special Quality) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
5.	**Swivel** Size: Suitable for 32 mm Common stud link Chain. Grade: Q2 (Special Quality) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
6.	**Kenter Shakle** Size: Suitable for 32 mm Common stud link Chain. Grade: Q2 (Special Quality) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	

7.	**End Shackle** Size: Suitable the 32 mm Common stud link Chain. Grade: Q2 (Special Quality) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
8.	**Towing rope** Material: Steel Wire Diameter: To be mentioned Minimum Breaking load: 250 kN Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: Manufacturer certificate	
9.	**Mooring rope** Material: Nylon/ Polyester Diameter: To be mentioned Minimum Breaking load: 107 kN Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: Manufacturer certificate	
10.	**Mooring Chock** Size: 300 × 200 Type B Standard: Norsk (NS 2587) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
11.	**Mooring Chock** Size: 300 × 200 Type B Standard: Norsk (NS 2588) Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	
12.	**Pedestal Fairlead** Size: DN 150 Height: 500 mm Standard: ISO 13766, Type A Country of Origin: To be mentioned Country of Manufacturer: To be mentioned H S Code: To be mentioned Certificate: BV Product Certificate	

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.

Bureau Veritas Marine & Offshore
Section 48464F
REVIEWED
subject to comments
and only for parts concerning Classification, and as per contract.
Istanbul, 08-Nov-2024
(Electronic document)
The plan approval office
See comments on VPM

Main Stockless Anchors	Number of Anchors	2
	Mass of each anchor (kg)	
	for standard anchor (kg)	1290
	for HHP anchor (kg)	967.5
	for VHHP anchor (kg)	645
Stud Chain Cables	Q1 Diameter (mm)	36.0
	Q2 Diameter (mm)	32.0
	Q3 Diameter (mm)	28.0
	Total Length (m)	385
Tow Line	Minimum Length (m)	180
	Breaking Load (kN)	250
Mooring Lines	Length of each rope (m)	140
	Number	4
	Breaking Load (kN)	107

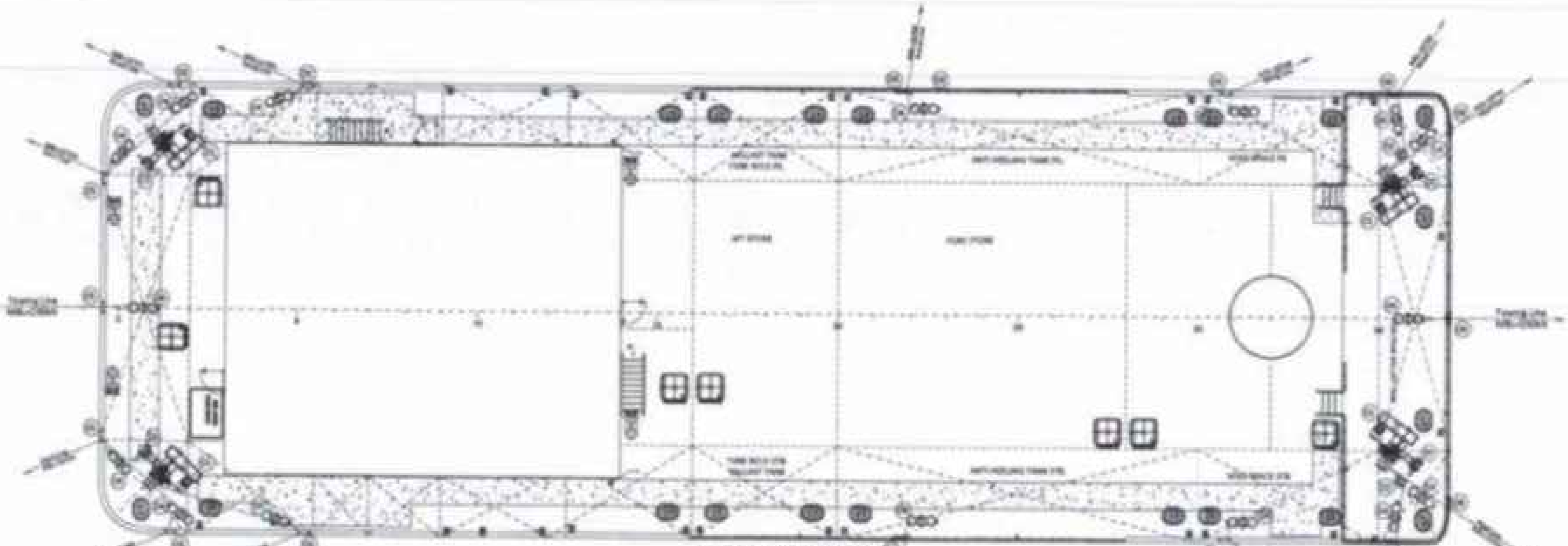
MAIN DIMENSIONS

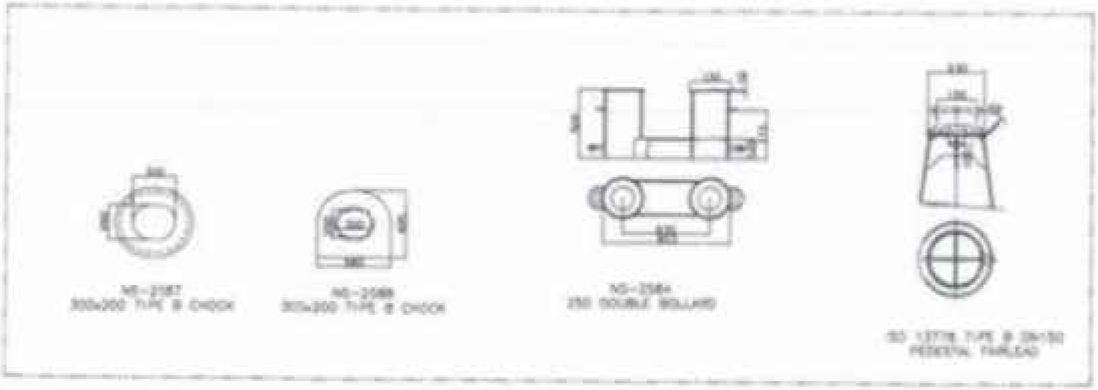
Length O.A	45.000m
Length W.L	44.836m
Length P.P	44.036m
Breadth	15.000m
Depth	3.000m
Scantling Draught	1.800m

$EN = \Delta^{2/3} + 2 \cdot (h \cdot B + S_{fun}) + 0.1 \cdot A$
$\Delta = 1142.69$ t
$h = 9.438$m
$B = 15$m
$S_{fun} = 0$
$A = 149.72m^2$
$E.N. = 407$

CPO2365302 (Note): Equipment number calculation has been performed according to "BV Rules NR467 Pt B, Ch 12, Sec 4"
CPO2365312 (To be re-submitted): Selected anchor and chains to be used onboard are to be specified

TOMAY	TBN-SPCB-04 EQUIPMENT NUMBER CALCULATION	Design	Teoman TOMBAK	Shipyard	Class	BV / 48464F	Revision No	01
		Drawn	Mert KARATAŞ	Dockyard&Engineering Work Ltd.	Hull No	NB 252	Page	1/1
		Control	Ahmet Burak KABASAKAL	Owner	Project No	SPCB-04	Issue Date	01.07.2024
		Approved		Bangladesh Navy	Drawing No	R-12	Scale	1/125


MAIN DECK PLAN VIEW



NO	PCS	NAME	SWL
1	4	ANCHOR&MOORING WINCH	
2	2	SO 13775 TYPE A DN150 PEDESTAL FAIRLEAD	127kN
3	4	CHAIN STOPPER	
4	16	NS-2584 DN250 DOUBLE BOLLARD	
5	8	NS-2587 300x200 TYPE B CHOCK	
6	7	NS-2588 300x200 TYPE B CHOCK	

No. | Date | Rev. By | Revision Note

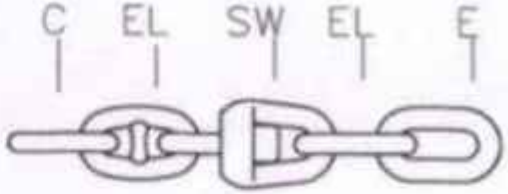
Tommy

70 ton SELF PROPPELLER CRANE BARGE

TBN-SPCB-04

MOORING ARRANGEMENT

Sample Drawing



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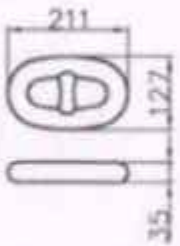
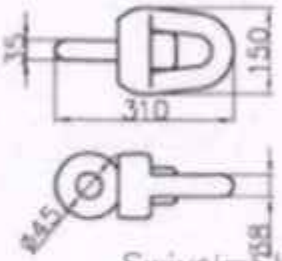


Enlarged Link=EL

End Link=E



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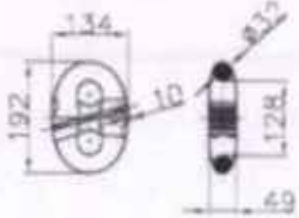

③ Kenter Shackle
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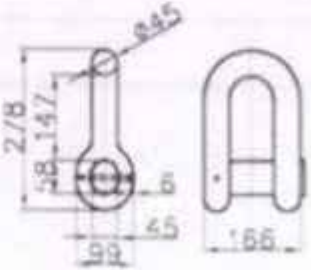

④ End
Shackle=ES2-32

BS ISO 13776:2012

BSI Standards Publication

Ships and marine technology — Ship's mooring and towing fittings — Pedestal fairleads

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Ships and marine technology — Ship's mooring and towing fittings — Pedestal fairleads

1 Scope

This International Standard specifies the design, size and technical requirements for pedestal fairleads installed to lead the mooring rope of a ship.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13795, *Ships and marine technology — Ship's mooring and towing fittings — Steel rollers*

IMO Circular MSC/Circ.1175, *Guidance on shipboard towing and mooring equipment*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
safe working load
SWL
maximum load in kN on the rope that should normally be applied in service conditions

4 Nominal sizes

The nominal sizes, D_n, of pedestal fairleads are denoted by reference to the outside diameter of the roller in millimetres from a basic series of preferred numbers.

The nominal sizes are: 150, 200, 250, 300, 350, 400, 450 and 500.

5 Dimensions

Pedestal fairleads have dimensions and particulars in accordance with Table 1, and Figures 1 and 2.

6 Materials

The following material shall be used for manufacturing the pedestal fairleads:

— Pedestal: weldable steel plates having a yield point of not less than 235 N/mm^2.

7 Manufacturing and inspection

7.1 All surfaces of the pedestal fairleads, including welding, shall be free from any visible flaws or imperfections.

7.2 All surfaces in contact with the ropes shall be free from surface roughness or irregularities likely to cause damage to the ropes by abrasion.

7.3 The pedestal fairleads shall be coated externally with an anti-corrosion protective finish.

8 Marking

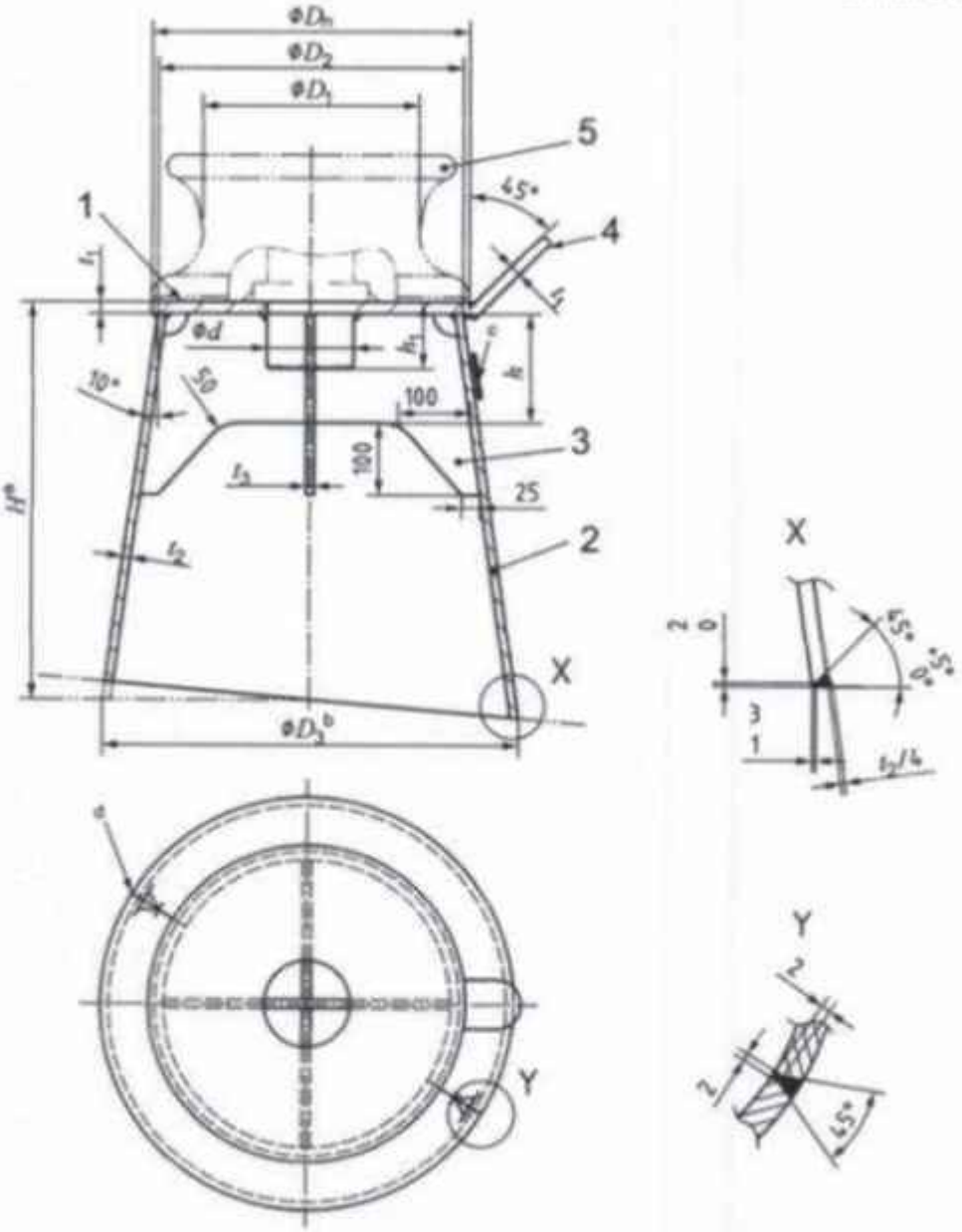
8.1 The safe working load (SWL) intended for the use of the pedestal fairleads shall be noted in the towing and mooring plan available on board for the guidance of the shipmaster as specified in MSC/Circ.1175.

8.2 The actual SWL on board shall be determined by considering the under deck reinforcement, and shall be marked on the towing and mooring plan. The actual SWL shall not be over the SWL indicated in this International Standard.

8.3 The pedestal fairleads shall be clearly marked with their SWL by weld bead or equivalent. The SWL shall be expressed in tonnes (letter 't') and be placed so that it is not obscured during operation of the fitting.

EXAMPLE SWL XXX t

Dimensions in millimetres



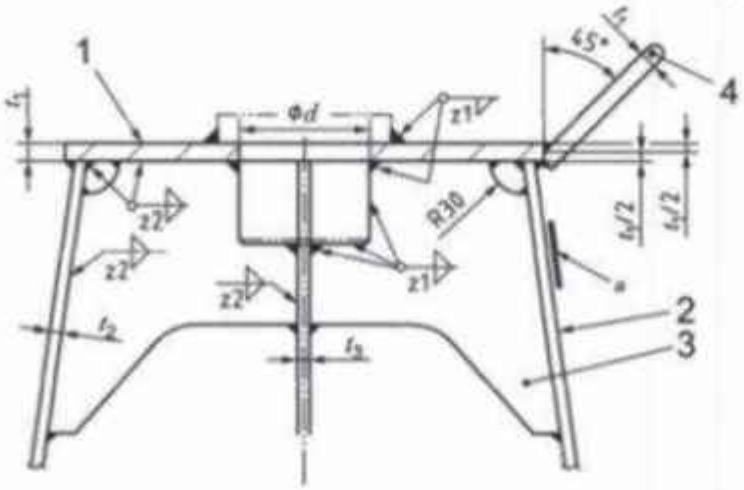
Key

1 top plate
2 body
3 reinforcement
4 rope guide
5 steel roller (ISO 13755 steel rollers)

[a] Height is to be determined in accordance with actual mooring rope height through the pedestal fairlead.
[b] Diameter Ø D_3 is to be calculated depending on the height of the pedestal , H [$D_3 = D_2 + 2 \times (H - t_1)$ x tan 10°].
[c] SWL marking.
[d] Seam.

Figure 1 — Assembly of pedestal fairleads

Dimensions in millimetres



Key
1 top plate
2 body
3 reinforcement
4 rope guide
* SWL marking

Figure 2 — Detail of pedestal fairleads

Table 1 — Dimensions and SWL of pedestal fairleads

Dimensions in millimetres

Nominal size D_n	D_1	D_2	d^e		h	h_1	r_1	r_2	r_3	Welding leg length[a]	
			Type A and B	Type C						z_1	z_2
150	220	230	71,5	81,5	200	100	16	10	16	8	5
200	288	300	93,5	102,5	200	100	20	12	20	10	6
250	357	370	113,5	119,5	200	100	22	12,5	22	11	6
300	417	430	128,5	130,5	225	125	24	13	24	12	6,5
350	472	490	145,5	152,5	225	125	26	17	26	15	8,5
400	540	560	154,5	164,5	250	150	28	18	28	17	9
450	600	620	167,5	179,5	250	150	30	20	30	20	10
500	655	680	178,5	195,5	250	150	32	22	34	23	11

Nominal size D_n	SWL[c]				Calculated weight[d] (kg) (for reference only)		
	θ[b] = 90°		θ = 0°				
	(kN)	(t)	(kN)	(t)	H = 500	H = 1 000	H = 1 500
150	265	27	186	19	55	115	198
200	441	45	314	32	86	169	278
250	579	59	412	42	113	210	335
300	726	74	510	52	145	256	395
350	1 040	106	736	75	201	358	552
400	1 246	127	883	90	255	436	657
450	1 599	163	1 128	115	314	530	791
500	1 942	198	1 373	140	383	636	938

[a] Welding with chamfering is available based on the same welding volume/strength.

[b] θ is the relative angle of ropes on the pedestal fairlead (refer to Annex A).

[c] The SWL is the maximum applicable rope tension based 90° (θ = 90°) and 180° (θ = 0°) deflection of rope direction by the pedestal fairlead.

The SWLs shown in this table are for reference only. These are based on the loadings as mentioned in Annex A.

The "SWL" may be adjusted depending on the actual loading conditions, and the actual marking shall be agreed between the user and the manufacturer.

[d] The calculated weight is for reference excluding the steel roller on the pedestal fairlead.

[e] d shall be decided depending on the type of steel roller (Type A and B or Type C), as specified in ISO 13754.

Annex A
(informative)

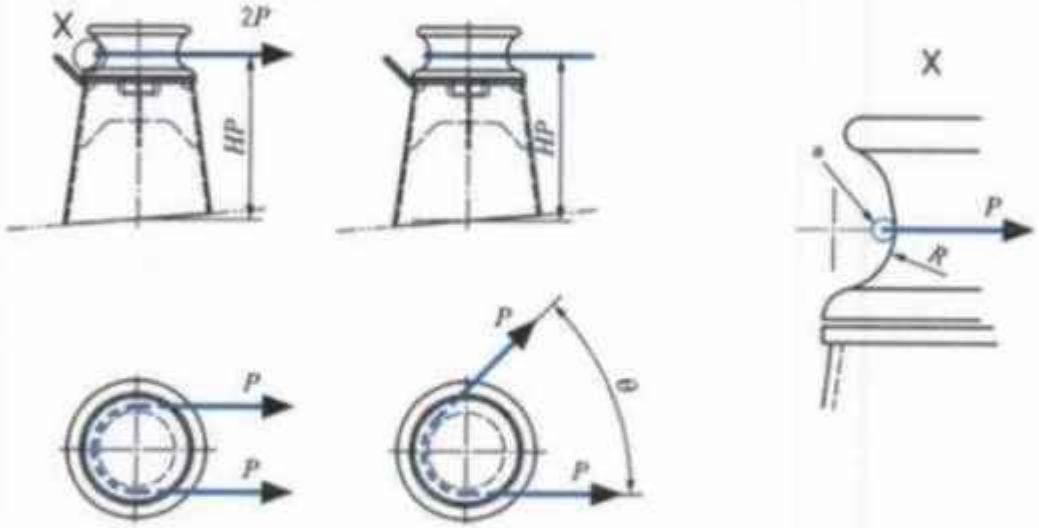
Basis for strength assessment of pedestal fairleads

A.1 General

The strength of the pedestal fairleads was evaluated by finite element model analysis and simple beam theory calculation, and determined based on the following design criteria.

A.2 Loading

The pedestal fairleads are to be designed to withstand the following load cases.



Key

P mooring force and towing force at the conical part of the throat of the roller

[a] Conical part of throat.

NOTE 1 The loads were considered with rope deflected 180° through the pedestal fairlead as shown in this figure.

NOTE 2 The loads can be increased in accordance with the deflecting angle of the rope smaller than 180°.

Figure A.1 — Loading on pedestal fairleads

A.3 Load and stress criteria

Under the SWL, the following stress criteria were adopted:

— The bending stress is limited to 85 % of the yield stress of the material.

— The shear stress is limited to 60 % of the yield stress of the material.

A.4 Wear-down allowances and corrosion additions

The wear-down margin and corrosion margin were already included in the safety factor.

Ships and marine technology — Ship's mooring and towing fittings — Steel rollers

1 Scope

This International Standard specifies the design, size and technical requirements for steel rollers installed to lead the mooring rope of a ship.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13767, *Ships and marine technology — Ship's mooring and towing fittings — Shipside roller fairleads*

ISO 13776, *Ships and marine technology — Ship's mooring and towing fittings — Pedestal fairleads*

IMO Circular MSC/Circ.1175, *Guidance on shipboard towing and mooring equipment*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

safe working load
SWL
maximum load in kN on the rope that should normally be applied in service conditions

4 Classification

4.1 Type

Depending on the construction, steel rollers shall be classified as the following three types:

— type A: made of steel casting without upper dust cover;

— type B: made of steel casting with upper dust cover;

— type C: made of steel plate with dust cover.

4.2 Nominal sizes

The nominal sizes, D_n, of steel rollers are denoted by reference to the outside diameter of the roller in millimetres from a basic series of preferred numbers.

The nominal sizes are: 150, 200, 250, 300, 350, 400, 450 and 500.

5 Dimensions

Steel rollers have dimensions and particulars in accordance with Tables 1, 2, 3 and 4, and Figures 1, 2, 3, 4, 5, 6, 7 and 8.

6 Materials

The materials of the following components shall be used for manufacturing the steel rollers:

— Roller: steel casting having a yield point of not less than 205 N/mm^2 or steel plates having a yield point of not less than 235 N/mm^2.

— Axle: weldable steel casting having a yield point of not less than 350 N/mm^2 or equivalent.

— Bush: brass, bronze or equivalent.

7 Construction

7.1 The rollers of the steel rollers (Type C) shall be constructed from steel tubes or formed from plate.

7.2 The foundation of the steel rollers shall be determined by the manufacturer in accordance with ISO 13767 and ISO 13776. The foundation and welding connections shall be guaranteed reliable transmission of the maximum loading of the steel rollers to hull construction without any plastic deformation or cracks.

8 Manufacturing and inspection

8.1 All surfaces of the steel rollers, including welding, shall be free from any visible flaws or imperfections.

8.2 All surfaces in contact with the ropes shall be free from surface roughness or irregularities likely to cause damage to the ropes by abrasion.

8.3 The steel rollers shall be coated externally with an anti-corrosion protective finish.

8.4 All rotating parts are to be provided with greasing.

9 Marking

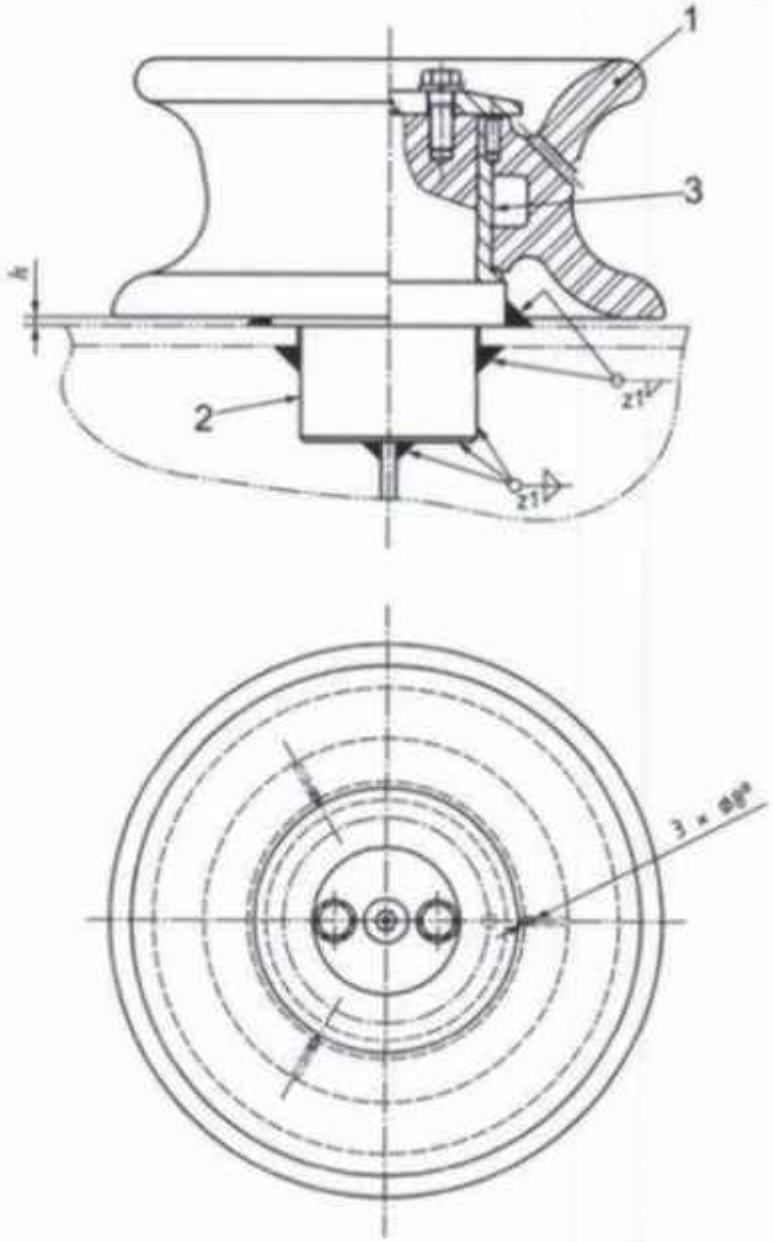
9.1 The safe working load (SWL) for the intended use for the steel rollers shall be noted in the towing and mooring plan available on board for the guidance of the shipmaster as specified in MSC/Circ.1175.

9.2 The actual SWL on board shall be determined by considering the foundation and under deck reinforcement, and it shall be marked on the towing and mooring plan. The actual SWL shall not be over the SWL indicated in this International Standard.

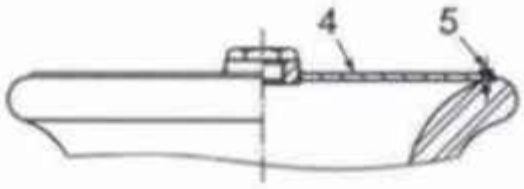
9.3 The steel rollers shall be clearly marked on their seat or foundation with their SWL by weld bead or equivalent. The SWL shall be expressed in tonnes (letter 't') and be placed so that it is not obscured during operation of the fitting.

EXAMPLE SWL XXX t

Dimensions in millimetres



a) Type A



b) Type B

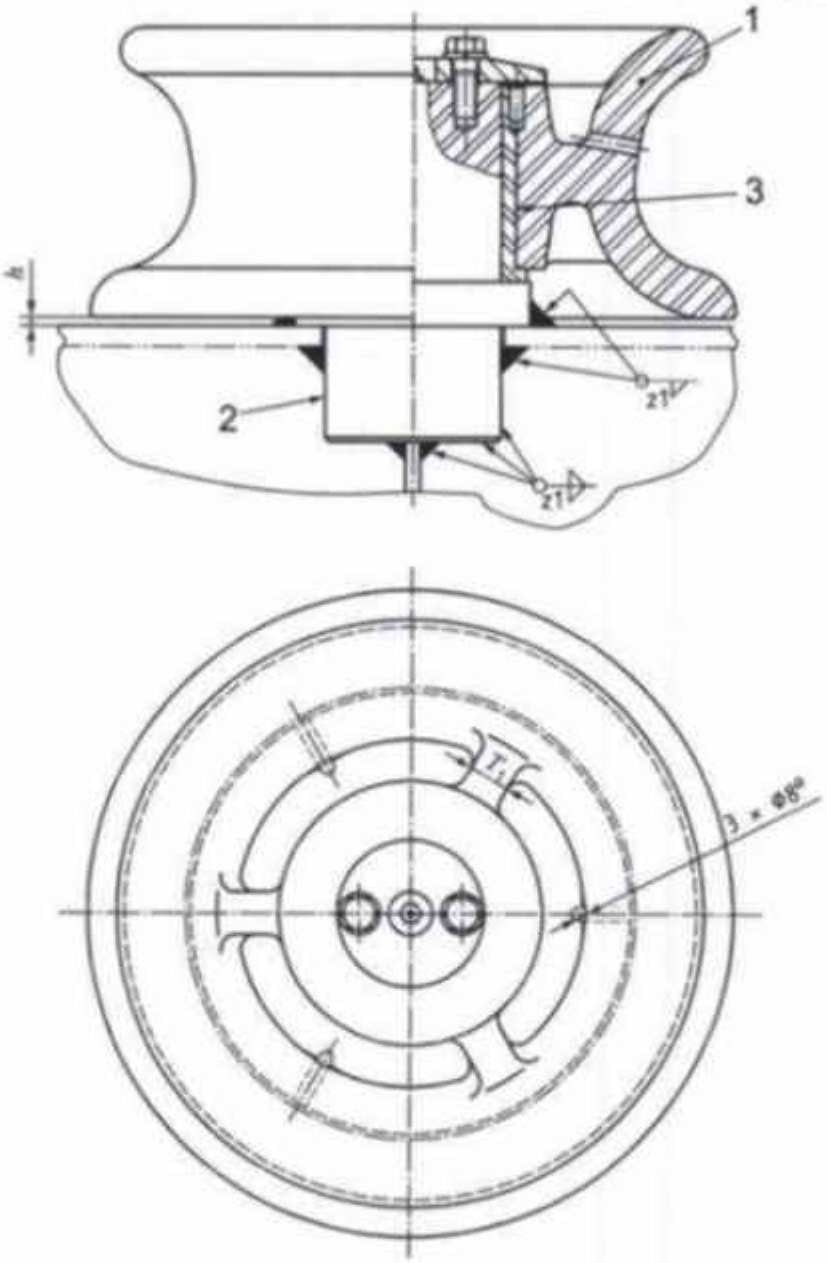
Key

1 roller
2 axle
3 bush
4 dust cover to apply on type B only
5 N-M6 bolt

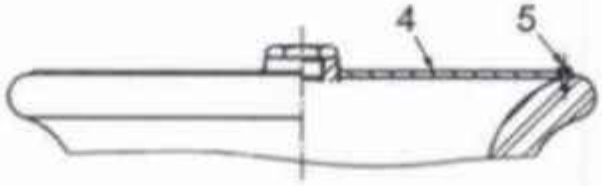
[a] Drain hole.

Figure 1 — Assembly of steel rollers for nominal sizes 150, 200 and 250 (type A and type B)

Dimensions in millimetres



a) Type A



b) Type B

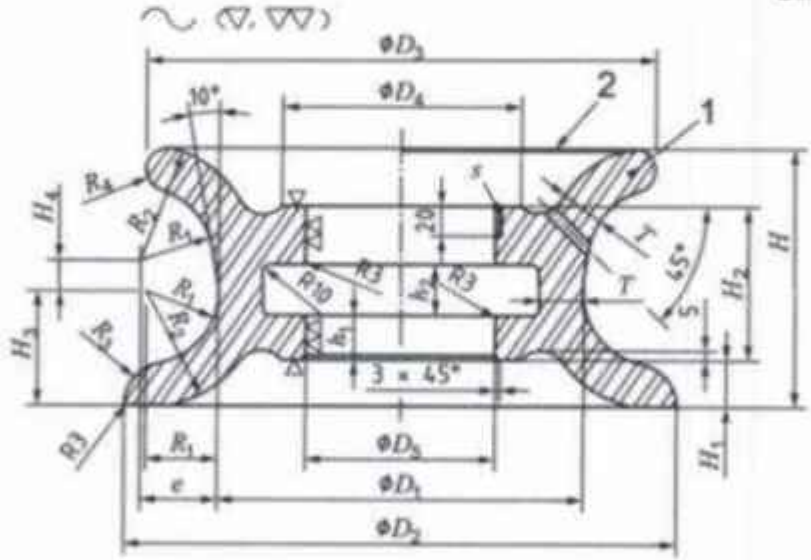
Key

1 roller
2 axle
3 bush
4 dust cover to apply on type B only
5 N-M6 bolt

a Drain hole.

Figure 2 — Assembly of steel rollers for nominal sizes 300 and above (type A and type B)

Dimensions in millimetres

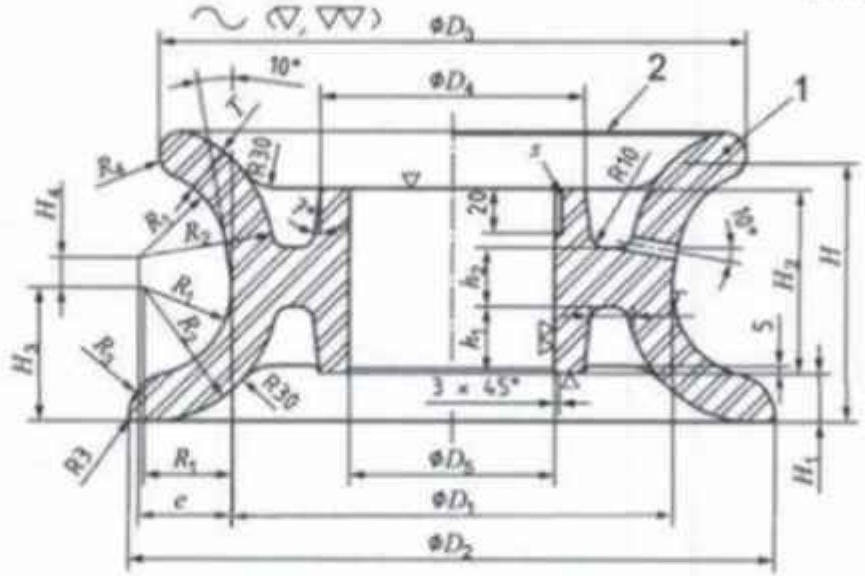


Key

1 roller
2 dust cover to apply on type B only

Figure 3 — Detail of steel rollers for nominal sizes 150, 200 and 250 (type A and type B)

Dimensions in millimetres



Key

1 roller

2 dust cover to apply on type B only

Figure 4 — Detail of steel rollers for nominal sizes 300 and above (type A and type B)

Table 1 — Dimensions and SWL of steel rollers for type A and type B

Dimensions in millimetres

Nominal size D_n	D_1	D_2 +2/0	D_3 +2/0	D_4	D_5 H7	R_1	R_2	R_3	R_4	H	H_1	H_2	H_3	H_4	e
150	150	230	216	110	90	30	52	15	11	137	25	84	44,7	43,38	37,7
200	200	300	280	145	115	40	66	20	13	157	30	99	59,2	35,46	46,3
250	250	370	340	165	135	50	80	25	15	177	32	105	73,5	28,33	55,0
300	300	430	400	190	150	55	87	30	16	197	33	125	82,6	32,62	60,8
350	350	490	460	210	167	55	89	30	17	217	33	140	83,7	49,06	63,7
400	400	560	520	225	177	63	99	30	18	237	43	150	91,8	52,0	72,2
450	450	620	590	245	190	63	101	30	19	257	43	162	92,5	67,07	74,8
500	500	680	660	260	205	63	103	30	20	277	43	180	93,0	82,94	77,6

Nominal size D_n	k	h_1	h_2	Set screw s	T	T_1	N	Welding leg length z_1	SWL[b] $\theta = 90°$[a] (kN)	SWL[b] $\theta = 90°$[a] (t)	SWL[b] $\theta = 0°$ (kN)	SWL[b] $\theta = 0°$ (t)	Calculated weight[c] (kg/set) Type A	Calculated weight[c] (kg/set) Type B
150	5	35	25	M6	22	-	6	8	265	27	186	19	23	24
200	5	38	35	M6	26	-	6	10	441	45	314	32	42	43
250	6	40	35	M8	30	-	6	11	579	59	412	42	77	80

[a] θ is the relative angle of ropes on the steel roller (refer to Annex A).

[b] The SWL is the maximum applicable rope tension based on 90° ($\theta = 90°$) and 180° ($\theta = 0°$) deflection of rope direction by steel roller.

The SWLs shown in this table are for reference only. These are based on the loadings as mentioned in Annex A.

The "SWL" may be adjusted depending on the actual loading conditions, and the actual marking shall be as agreed between the user and the manufacturer.

[c] The calculated weight is for reference only.

Table 1 *(continued)*

Nominal size D_n	D_1	D_2 +2/0	D_3 +2/0	D_4	D_5 H7	R_1	R_2	R_3	R_4	H	H_1	H_2	H_3	H_4	t
300	7	45	40	M8	32	29	8	12	726	74	510	52	109	112	
350	7	50	45	M8	34	29	8	15	1 040	106	736	75	154	160	
400	7	53	49	M8	36	30	12	17	1 246	127	883	90	207	215	
450	7	57	53	M8	38	32	12	20	1 599	163	1 128	115	275	286	
500	7	65	60	M8	40	34	12	23	1 942	198	1 373	140	360	374	

[a] θ is the relative angle of ropes on the steel roller (refer to Annex A).

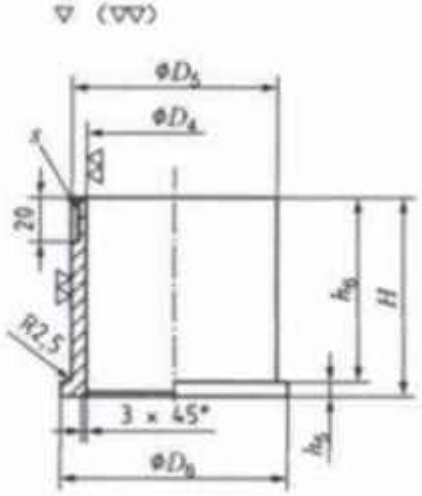
[b] The SWL is the maximum applicable rope tension based on 90° ($\theta = 90°$) and 180° ($\theta = 0°$) deflection of rope direction by steel roller.

The SWLs shown in this table are for reference only. These are based on the loadings as mentioned in Annex A.

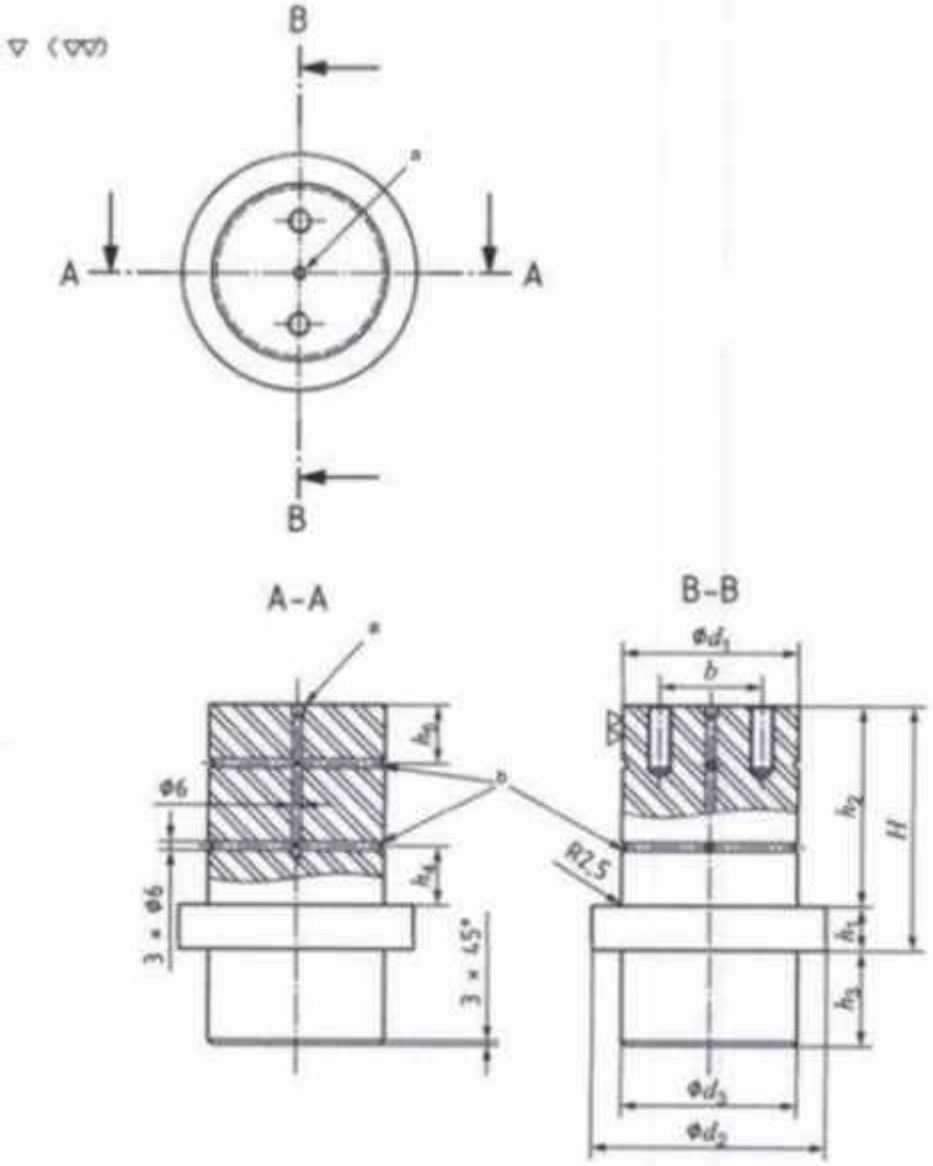
The "SWL" may be adjusted depending on the actual loading conditions, and the actual marking shall be as agreed between the user and the manufacturer.

[c] The calculated weight is for reference only.

Dimensions in millimetres



a) Bush



b) Axle

a Thread for grease nipple.

b Grease way.

Figure 5 — Detail of axle and bush for steel rollers (type A and type B)

Table 2 — Dimensions of axle and bush for steel rollers (type A and type B)

Dimensions in millimetres

Nominal size D_N	Axle											Bush						
	d_1 f8	d_2	d_3	H	h_1	h_2	h_3	h_4	h_5	h	$m \times d$	D_4 H7	D_5 m6	D_6	H	h_5	h_6	r
150	71	105	71	115	22	93	100	25	7	50	M10 × 20	71	90	105	92,5	8	84,5	M8
200	93	135	93	135	27	108		27	7	55		93	115	135	107,5	8	99,5	
250	113	155	113	144	30	114	125	28	9	65	M16 × 30	113	135	155	113,5	8	105,5	M8
300	128	175	128	166		136		30	12	75		128	150	175	135,5	10	125,5	
350	145	190	145	181		151		35	13	85	M20 × 40	145	167	190	150,5	10	140,5	
400	154	200	154	201	40	161	150	37	14	90		154	177	200	160,5	10	150,5	
450	167	220	167	213		173		40	15	105	M24 × 50	167	190	220	172,5	10	162,5	
500	178	235	178	232		191		45	16	110		178	205	235	190,5	10	180,5	

Annex A
(informative)

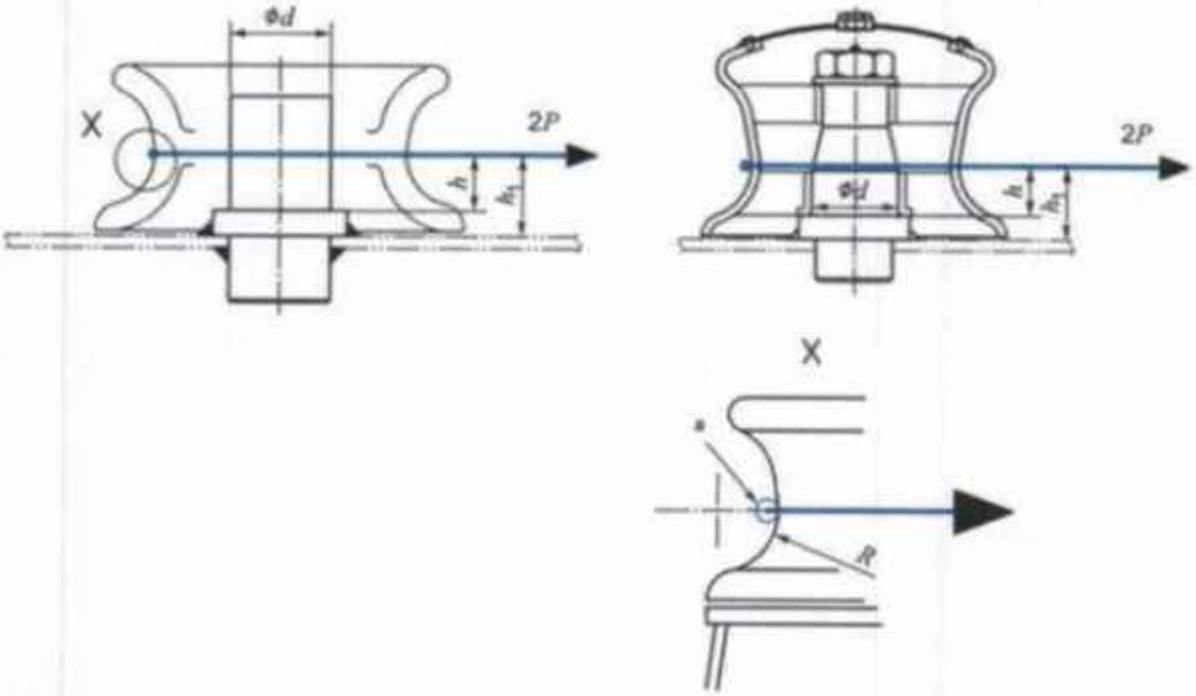
Basis for strength assessment of steel rollers

A.1 General

The strength of the steel rollers was evaluated by simple beam theory calculation and determined based on the following design criteria.

A.2 Loading

The steel rollers are to be designed to withstand the following load cases.



Key

P mooring force and towing force at the conical part of the throat

a Conical part of throat.

NOTE The loads were considered with a rope deflected 180° through the steel roller as shown in this figure.

Figure A.1 — Loading on steel roller

A.3 Load and stress criteria

Under the SWL, the following stress criteria were adopted:

— The bending stress is limited to 85 % of the yield stress of the material.

— The shear stress is limited to 60 % of the yield stress of the material.

— The combined stress is limited to 100 % of the yield stress of the material.

A.4 Wear-down allowances and corrosion additions

The wear-down margin and corrosion margin were already included in the safety factor.

NORSK STANDARD

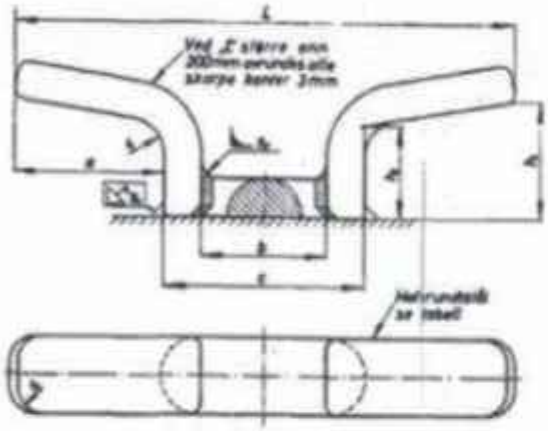
Utarbeidet av
HORSK VERKSTEDSINDUSTRIS STANDARDISERINGSSENTRAL (NVS)

NS 2586
1. utg. nov. 1964
UDK 629.12.014.24

Gjelder for fibre ropes

Skipsbygging

Kryssholt for fibertau



Betegnelse for et kryssholt med L-kka. lengde l = 300 mm:

Kryssholt 300 NS 2586

Mål i mm

Lengde L	Halvrundstål etter DIN 1018 Ω	a	b	c	h_1	h_2	r_1	r_2	Δh_1	h_3	Utfeldet lengde av ett horn	Beregnet vekt kg	Fiberlina, veiledende dimensjoner Diam. Omkr.	Kode nr.
150	20	45	40	60	35	26	10	10	3,5	2,5	80	0,24	9 : 28,5	
200	30	45	50	80	47	37	15	10	4	3	110	0,76	12 : 38	
300	40	67,5	65	135	67	52	20	13	4	3,5	156	2,0	18 : 57	
400	50	120	110	160	92	72	25	15	5	4	215	4,3	22 : 70	
500	60	150	140	200	115	90	30	15	6	5	267	7,5	28 : 90	

Materiale: St 37-2 iht TN.
Utførelse: Sveising og etterbehandling utføres slik at lasset ikke kan skades.

Fastsatt av NORGES STANDARDISERINGSFORBUND (NSF)

NORSK STANDARD

Utarbeidet av
Norsk Verkstedindustris Standardiseringssentral (NVS)

NS 2587
3. utg. nov. 1982
UDK 629.12.014.24

Erstatter NS 2587, 2. utg. 1968. Type B utgått.

Supersedes NS 2587, 2nd edition 1968. Type B added.

Skipsteknikk

Klyss for skansekledning

Vanlig type

Skipsteknikk

Chocks for bulwark

Ordinary type

Oppstår det tvil om forståelsen av denne standard, er det den norske teksten som gjelder.

In the event of any differences in the interpretation of this standard the Norwegian version shall take precedence.

1 Orientering

Klyss etter denne standard brukes som fortøyningsklyss.

Klyssene tilfredsstiller ikke kravene til Panama Canal Commission (PCC).

1 Introduction

Chocks according to this standard are used as mooring chocks.

The chocks do not satisfy the requirements of Panama Canal Commission (PCC).

2 Referanser

NS 472	Sveising. Fugeformer for konstruksjonsstål
NS 12 132	Almenngelige konstruksjonsstål. RSt 42-2
NS 11 640	Støpestål 11 640. Type Sn 400
SIS 05 59 00-1967	Rostgrader hos stålytor och anggrasbetsgrader vid stålytors förberedning för rostskyddsmålning

2 References

NS 472	Welding. Grooves for structural steels
NS 12 132	Structural steel grade RSt 42-2
NS 11 640	Steel casting, grade 11 640
SIS 05 59 00-1967	Pictorial surface preparation standards for painting steel surfaces

3 Typer og dimensjoner

3.1 Type A Sveist

3 Types and dimensions

3.1 Type A Welded

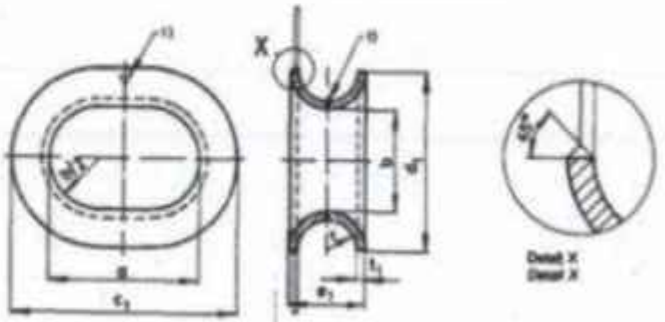


Fig. 1 Type A

1) Klyssene kan etter produsentens valg sammensveises som vist i oppriss eller snitt.
Som alternativ til V-sveis kan X-sveis benyttes. For sveisefuger, se NS 472.

1) At the manufacturer's option the chocks can be welded as shown in view or section.
Double-V butt weld can be used as an alternative to single-V butt weld. Welding grooves, see NS 472.

Fastsatt av Norges Standardiseringsforbund (NSF)

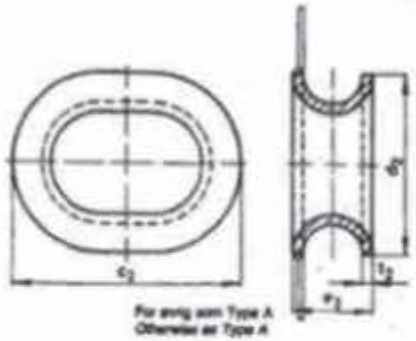
Tabell 1 Type A Sveist
Table 1 Type A Welded

Mål i mm
Dimensions in mm

Nominell størrelse *Nominal size*	a	b	b_1	d_1	e_1	f	t_1	Masse *Mass* kg	Kodenr. *Code No.*
200 x 150	200	150	330	280	130	48	16	18,0	
300 x 200	300	200	450	350	150	59	16	36,0	
400 x 250	400	250	590	440	190	75	20	80,0	

3.2 Type B Støpt

3.2 Type B Cast



For øvrig som Type A
Otherwise as Type A

Fig. 2 Type B

Tabell 2 Type B Støpt
Table 2 Type B Cast

Mål i mm
Dimensions in mm

Nominell størrelse *Nominal size*	c_1	d_1	e_1	t_2	Masse *Mass* kg	Kodenr. *Code No.*
200 x 150	330	280	130	16	14,8	
300 x 200	458	358	158	20	47,0	
400 x 250	600	450	200	25	98,0	

4 Materiale

Type A Sveist: Stål NS 12 132 (Rst 42-2)
Type B Støpt: Støpestål NS 11 640 (Sst 400)

5 Utførelse

Flater som kommer i kontakt med fortøyningstauet, skal være glatte. For øvrig skal grader eller skarpe kanter ikke forekomme.

6 Overflatebehandling

Klysene renses til Sa 2½ etter Svensk Standard SIS 05 59 00 og påføres ett vanlig korrosjonshindrende grunnmaling.

4 Material

Type A Welded: Steel NS 12 132 (Rst 42-2)
Type B Cast: Cast steel NS 11 640 (Sst 400)

5 Quality of manufacture

Surfaces coming into contact with the mooring line shall be smooth. Furthermore burrs or sharp edges shall not occur.

6 Surface treatment

The chocks shall be cleaned to Sa 2½ in accordance with Swedish Standard SIS 05 59 00 and painted with an anti-corrosive primer.

7 Betegnelse

Klyse etter denne standard betegnes ved i rekkefølge å angi

- klyse
- denne standards nummer
- nominell størrelse
- type (A eller B)

Eksempel

Klyse NS 2587-200x150-A

7 Designation

Chocks conforming to this standard shall be designated as follows

- chock
- the number of this standard
- nominal size
- type (A or B)

Example

Chock NS 2587-200x150-A

NORSK STANDARD

Utarbeidet av
Norsk Verkstedsindustri's Standardiseringssentral (NVS)

NS 2588
3. utg. nov. 1982

Erstatter NS 2588, 2. utg. 1968. Type B tilføyd.
Supersedes NS 2588, 2nd edition 1968. Type B added.

Skipsteknikk
Klyss, frittstående
Vanlig type

Marine industry
Chocks, free-standing
Ordinary type

Oppstår det tvil om fortolkningen av denne standard, er det den norske teksten som gjelder.

In the event of any differences in the interpretation of this standard the Norwegian version shall take precedence.

1 Orientering
Klyss etter denne standard brukes som fortøyningsklyss.

Klyssene tilfredsstiller ikke kravene til Panama Canal Commision (PCC).

1 Introduction
Chocks according to this standard are used as mooring chocks.

The chocks do not satisfy the requirements of Panama Canal Commission (PCC).

2 Referanser

NS 472	Sveising. Fugeformer for konstruksjonsstål
NS 12 132	Alminnelige konstruksjonsstål. RSt 42-2
NS 11 640	Støpestål 11 640. Type Sst 400
SIS 05 59 00-1967	Rostgrader hos stålytor och rengöringsgrader vid stålytors förbehandling för rostskyddsmålning

2 References

NS 472	Welding. Grooves for structural steels
NS 12 132	Structural steel grade RSt 42-2
NS 11 640	Steel casting, grade 11 640
SIS 05 59 00-1967	Pictorial surface preparation standards for painting steel surfaces

3 Typer og dimensjoner
3.1 Type A Sveist

3 Types and dimensions
3.1 Type A Welded

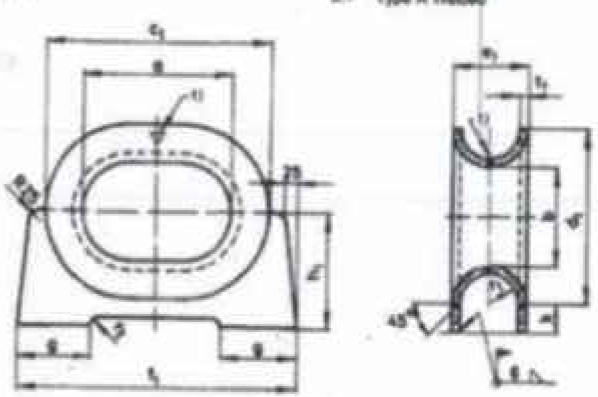


Fig. 1 Type A

1) Klyssene kan etter produsentens valg sammensveises som vist i oppriss eller snitt.
Som alternativ til V-sveis kan X-sveis benyttes. For sveisefuger, se NS 472.

1) At the manufacturer's option the chocks can be welded as shown in view or section.
Double-V butt weld can be used as an alternative to single-V butt weld. Welding grooves, see NS 472.

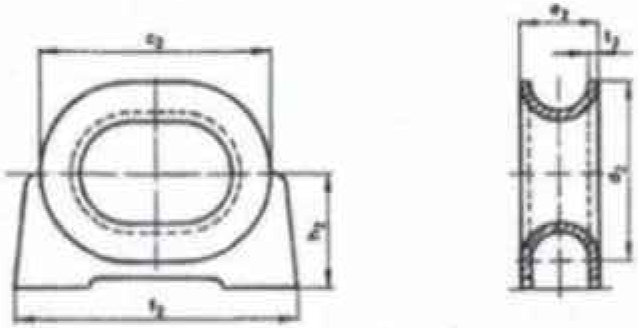
Tabell 1 Type A Sveist
Table 1 Type A Welded

Mål i mm
Dimensions in mm

Nominell størrelse Nominal size	a	b	c_1	d_1	e_1	f_1	g	h_1	k	r_1	r_2	t_1	Masse Mass kg	Kodenr. Code No.
200 x 150	200	150	330	280	130	430	125	185	45	48	15	16	23,0	
300 x 200	300	200	450	350	150	560	150	230	55	58	20	16	51,8	
400 x 250	400	250	590	440	190	730	190	295	75	75	25	20	109	

3.2 Type B Støpt

3.2 Type B Cast



For øvrig som Type A
Otherwise as Type A

Fig. 2 Type B

Tabell 2 Type B Støpt
Table 2 Type B Cast

Mål i mm
Dimensions in mm

Nominell størrelse Nominal size	c_2	d_2	e_2	f_2	h_2	t_2	Masse Mass kg	Kodenr. Code No.
200 x 150	338	288	138	438	189	20	28,5	
300 x 200	458	358	158	568	234	20	63,3	
400 x 250	600	450	200	740	300	25	138	

4 Materiale
Type A Sveist: Stål NS 12 132 (RSt 42-2)
Type B Støpt: Støpestål NS 11 640 (Sst 400)

4 Material
Type A Welded: Steel NS 12 132 (RSt 42-2)
Type B Cast: Cast steel NS 11 640 (Sst 400)

5 Utførelse
Flater som kommer i kontakt med fortøyningstauet, skal være glatte. For øvrig skal grader eller skarpe kanter ikke forekomme.

5 Quality of manufacture
Surfaces coming into contact with the mooring line shall be smooth. Furthermore burrs or sharp edges shall not occur.

6 Overflatebehandling
Klyssene renses til Sa 2½ etter Svensk Standard SIS 05 59 00 og påføres ett strøk korrosjonshindrende grunnmaling.

6 Surface treatment
The chocks shall be cleaned to Sa 2½ in accordance with Swedish Standard SIS 05 59 00 and painted with an anti-corrosive primer.

7 Betegnelse

Klyss etter denne standard betegnes ved i rekkefølge å angi

- klyss
- denne standards nummer
- nominell størrelse
- type (A eller B)

Eksempel

Klyss NS 2588-200x150-A

7 Designation

Chocks conforming to this standard shall be designated as follows

- chock
- the number of this standard
- nominal size
- type (A or B)

Example

Chock NS 2588-200x150-A

NORSK STANDARD

NS 2589

Utarbeidet av
Norsk Verkstedsindustris Standardiseringssentral (NVS)

2. utg. nov. 1982

Erstatter NS 2589, 1. utg. 1967.
Type A tilføyd.

Supersedes NS 2589, 1st edition 1967.
Type A added.

Skipsteknikk

Klyss for skanseskledning

Panamatype

Marine industry

Chocks in bulwark

Panama type

Oppstår det tvil om fortolkningen av denne standard, er det den norske teksten som gjelder.

In the event of any differences in the interpretation of this standard the Norwegian version shall take precedence.

1 Orientering

Klyss etter denne standard er godkjent av Panama Canal Commission (PCC).

Nominell størrelse 300 x 250 gjelder som "single chock" i PCC og skal tåle en trekkraft i slepetauet på 445 kN (100 000 lbf).

Nominell størrelse 400 x 250 gjelder som "double chock" i PCC og skal tåle en trekkraft i slepetauet på 625 kN (140 000 lbf).

1 Introduction

The chocks according to this standard are approved by Panama Canal Commission (PCC).

Nominal size 300 x 250 is designated as single chock in PCC and shall be capable of withstanding a strain of 445 kN (100 000 lbf) on a towing wire.

Nominal size 400 x 250 is designated as double chock in PCC and shall be capable of withstanding a strain of 625 kN (140 000 lbf) on a towing wire.

2 Referanser

NS 472	Sveising. Fugeformer for konstruksjonsstål
NS 12 132	Alminnelige konstruksjonsstål. RSt 42-2
NS 11 640	Stålstøpegods 11 640. Type for 400
SIS 05 59 00-1967	Rustgrader hos stålytor och rostgrader vid stålytors förbehandling för rostskyddsmålning

2 References

NS 472	Welding. Grooves for structural steels
NS 12 132	Structural steel grade RSt 42-2
NS 11 640	Steel casting, grade 11 640
SIS 05 59 00-1967	Pictorial surface preparation standards for painting steel surfaces

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 organisation) or as direct by the organisation immediately on receipt of demand from the said , organisation in writing , in the event be tenderer fail to perform the tender , it is expressly understood that the organisation 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

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