Rpt. 1.

STEEL STEAMER ~~or MOTORSHIP~~.

Received at London Office

State if Report has been sent on the Freeboard of the Vessel Yes

State if Report is sent on the Machinery of the Vessel Yes

Date of completion of report 8th January, 1942 *Port of* Vancouver, B. C. *No.* 5859

Survey held at North Vancouver, B.C. *Date First Survey* 18th September, 1942 *Last Survey* 31st December, 1942

On the (*State if Machinery fitted Aft and if Single, Twin or Triple Screw*) Steel Single Screw Steamer "FORT DREW"

State Type (*Full Scantling, Complete Superstructure with or without Tonnage Openings*) C.S.S. with T.O. closed *State Type of Erections* ———

TONNAGE under Tonnage Deck.... 6704.07

Do. of space or spaces between Tonnage Dk. and Upper Dk. ———

Total ———

Gross Tonnage 7133.91

Register Tonnage 4243.89

REGISTERED DIMENSIONS.

	FEET.
Length	424.6
Breadth	57.2
Depth	34.9

CLASS ✠100 A1 with Freeboard corresponding to a Summer Mld. Dft. of 26'-10". *State if with freeboard condition of Class* Yes

	FEET.	
Length *from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a)*	L	416.00
Breadth *(greatest moulded)*	B	56.88
Depth, *at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c)*	D	37.33
Depth to 2nd Deck - 28.58'		
1st Longitudinal Number (L × D)	=	15529
2nd Numeral L × (B + D)	=	39191
Framing Depth "d," *at middle of length. See Sec. 3 (1d)*		25.08
Proportions—*Depth to Length — Uppermost continuous deck to top of keel*		11.14
Do. Long Bridge to top of keel		———
Draught Moulded		26.86

Built at North Vancouver, B. C.

Launched 16th Nov., 1942 *Yard No.* 115

Builders North Van Ship Repairs, Ltd.

Owners Minister of Munitions & Supply of Canada.

Managers Maclay & McIntyre Ltd.
(*Where necessary to be entered in Reg. Book.*)

Residence Glasgow

Port of Registry ———

If surveyed while building, afloat, or in dry dock Building and Afloat

FRAMES, DOUBLE BOTTOM AND BEAMS.

	Inches in Ship.	Any Departure from Approved Plans to be Noted.
FRAMES, Spacing amidships	30	
" " from 3/5 length amidships to Collision bulkhead	27	
" " in peaks	24	
SIDE FRAMING.		
Frame Amidships, ~~Angle, [or [~~	12x4x4x.47	
" " Extends up to	2nd Deck	
Reversed Frame Amidships, Angle	- - -	
" " Extends up to	- - -	
Depth of Framing Girder	12	
Frames in Uppermost Continuous 'tween Decks, Angle ~~[or [~~	6 3½ .50	
" **Second 'tween Decks,** Angle [or [	- - -	
No.1 Hold(Frs.135-162) [	15x4x4x.625	
" ~~Third~~ " " " "		
No.2 Hold(Frs.106-135) [	12x4x4x.625	
from ½ len. for'd. to 15% len. from Stem	- - -	
" **in Peaks,** ~~Angle or [~~	8 3½ .34	
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	⅞ At 6½ Dias.	
State if Frame Joggled	No	
Are the scantlings and arrangements in the **Panting Area** in accordance with the Rules and/or as approved?	Yes	
Are the scantlings and arrangements in way of the **Bottom Forward** in accordance with the Rules and/or as approved?	Yes	
SINGLE BOTTOM.		
Floors, Depth and thickness at mid-line in Holds		
Height of Brackets at side above base line at toe of frame		
Middle Line Keelson, on Floors, Angles, [or [		
" " " Through Plate or Intercoastal Plate		
" " " Foundation Plate on Floors		
" " " Flat Plate Keel Angles		
Side Keelsons, No. each side		
" " thickness of Intercostal Plate		
" " Angles		
DOUBLE BOTTOM.		
Solid Floors, thickness and spacing	.36" At 30"	
" " Are Frame and Reversed Frame joggled?	Yes	
Bracket Floors, breadth and thickness at middle line	- - -	
" " breadth and thickness at margin plate	- - -	

	Inches in Ship.	Any Departure from Approved Plans to be Noted.
Bracket Floors, Frame	- - -	
" " Reversed Frame	- - -	
" " Vertical Struts	- - -	
Centre Girder, depth and thickness amidships	43½x.54	
" " top Angles	3½ 3½ .44	
" " bottom Angles	4 4 .50	
Side Girders, No. each side and thickness	One	
(BA.S. Top & Bottom	6 3½ .44	
Margin Plate depth (excl. of flange) and thickness	40½ x .54"	
" " ~~Vertical Angle~~ to Tank side Bracket abaft ¼ len. from stem	Welded to	
" " ~~Vertical Angle~~ to Tank side Bracket from forward ¼ len. from stem to Panting Area	Tank side Brackets	
" " Gussets, spacing and scantling abaft ~~¼ len. from stem~~ Fr.144	10½x.40"(FL 2") Continuous	
" " Gussets, spacing and scantling ~~from forward ¼ len. from stem to Panting Area~~ Fr.144 to F.P. Bhd.	17"x.40"(FL 2") Continuous	
Tank Side Brackets, height above base line at toe of Frame and thickness	104½ x .45	see plan
INNER BOTTOM PLATING.		
Breadth and thickness of Middle Line Strake	84 x .48	
Thickness of remainder in Holds	.44	
Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space and framing in Bunkers and Boiler Room?	Yes	
BEAMS.		
Uppermost Continuous Deck, amidships ~~in Wells, Angle [or [~~	8 3½ .46"	
" " in way of Bridge, Angle, [or [	- - -	
Spacing	Every Frame	
Second Deck, amidships, ~~Angle,~~ [or [	9x3½x.38	see plan
	12x4x4x.47	
Spacing	Every Frame	
Third Deck, amidships, Angle, [or [		
Spacing		
Fourth Deck, amidships, Angle, [or [		
Spacing		
Poop Deck, Angle, [or [		
Spacing		
Bridge Deck, Angle, [or [		
Spacing		
Forecastle Deck, Angle, [or [		
Spacing		

PILLARS AND DECKS.

	Inches in Ship.			Any Departure from Approved Plans to be Noted.
PILLARS, No. of Rows. One - in tween decks only.				
" in 'tween Decks, Size and Spacing	6	6	5/8	
	on alt. frs.			
" " " " "	-	-	-	
" in Holds " "	-	-	-	
" " " " "	-	-	-	
Centre Line Bulkhead. in Holds Stiffeners and Spacing	CH 12x3½x3½x.45 on alt. frs.			see plan
Plating, thickness of		.30		
STRINGERS AND DECKS. **Uppermost Continuous Deck.** Stringer Plate, breadth and thickness ~~in Wells~~	61	x	.64	
" " " " in way of Bridge	-	-	-	
" E.W. to Shell-Sheer-Strake ~~Angle in Wells~~				
Thickness of Plating abreast Deck openings ~~in way of Wells~~		.55		
Thickness of Plating abreast Deck openings in way of Bridge	-	-	-	
Thickness of Plating within line of openings		.40		
If Sheathed, material and thickness	-	-	-	
Second Deck. Stringer Plate, breadth and thickness ~~in Wells~~	50"	x	.43"	

	Inches in Ship.			Any Departure from Approved Plans to be Noted.
Stringer Plate, breadth and thickness in way of Bridge	-	-	-	
Thickness of Plating abreast Deck openings ~~in way of Wells~~		.35		
Thickness of Plating abreast Deck openings in way of Bridge	-	-	-	
Thickness of Plating within line of openings		.34		
If Sheathed, material and thickness				
Third Deck. Stringer Plate, breadth and thickness				
If Plated, state thickness				
Fourth Deck. Stringer Plate, breadth and thickness				
If plated, state thickness				
Poop Deck. Stringer Plate, breadth and thickness				
Plating, Sheathing, material and thickness				
Bridge Deck. Stringer Plate, breadth and thickness				
Plating, Sheathing, material and thickness				
Forecastle Deck. Stringer Plate, breadth and thickness				
Plating, Sheathing, material and thickness				

SHELL PLATING.

STRAKES.	SCANTLINGS. As in Vessel. Amidships. Breadth. Inches.	Amidships. Thickness. Inches.	Forward. Thickness. Inches.	Aft. Thickness. Inches.	Any Departure from Approved Plans to be Noted.	RIVETING. Edges. (State if joggled? No) Single or Double.	Edges. Rivets. Diam. Inches.	Edges. Rivets. Spacing. cr. to cr. Inches.	Butts. No. of Rows of Rivets	Butts. Rivets. Diam. Inches.	Butts. Rivets. Spacing. cr. to cr. Inches.	Strapped or Lapped.
Flat Plate Keel	52	.78	.68	.68		Double	7/8	3.3"	Butts Welded			
Dblg. (if any)	-	-	-	-		-	-	-	-	-	-	
Bottom Plating, No. of Strakes Four	-	.61	.56	.52								
Bilge Plating, No. of Strakes One	-	.61	.56	.49		Double	7/8	3.3"	Butts Welded			
Side Plating, No. of Strakes Three	-	.61	.56	.48								
Upper Deck Sheer-strake ~~in Wells~~	84	.70	.50	.50								
Upper Deck Sheer-strake in Bridge	-	-	-	-								
Strake below Sheer-strake ~~in Wells~~	78	.61	.50	.48		Double	7/8	3.3"	Butts Welded			
Strake below Sheer-strake in Bridge												
Poop Side Plating												
Bridge Side Plating												
Forec'tle Side Plating												

WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel—

Extending to Upper Deck (Sec. 3 c) One(1) Coll^n. on Fr.162

" Deck next below Seven(7) (Frs.Nos.12,40,58,66,93, (106 & 135)

In Tween Decks - Six divisional W.T. Bhds. (Frs.19,40,66, 93,106 & 135)

As per Rule ←(Seven (7)

	Plating Thickness. Ins.	Stiffeners. Vertical. Scantlings. Ins.	Vertical. Spacing. Ins.	Horizontal. Scantlings.	Horizontal. Spacing.
MIDSHIP BULKH'D. (Fr.93 Upper tween decks	.26	6x3½x.38	30	-	-
" " Second	-	-	-	-	-
" " Third	-	-	-	-	-
" " Holds	.26/.39	CH. 12x3½x3½x3/8	30	-	-
COLLISION " (in Hold) (Fr.162)	.33/.50	7x3x.36	24	3 Stgrs.	6'-0"
AFTER PEAK " " (Fr.12)	.30/.35	7x3x.38	24	2 "	6'-6"

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings. Ins.	Maker's Name.	Any Departure from Approved Plans to be Noted.
KEEL ~~Bar~~	Flat Plate			
STEM (Upper	M.S. Fashion Plate			
STEM (Lower-Rolled Bar		10"x2½"	Algoma Steel Products Co.	
STERN FRAME Propeller Post	C.S.	As Appd.	Vcr. Eng. Wks.	
~~Rudder~~ "	-	-	-	-
Speed of Vessel	Not exceeding 12 Knots			
RUDDER—Type	Semi-Balanced Streamlined			
" A × D	282	-	-	
" Diam. of head	-	9¼ Dia.		
" Mainpiece at top pintle	-	12 Dia.		
" " heel	-	9¼ Dia.		
" how constructed	Built, Riv^d., & E.W.			
" double or single plate	Double			
" coupling, vertical or horizontal	Horizontal			

STEEL. Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture) Open Hearth

Central Iron & Steel Co., Carnegie-Illinois Steel Corpn., The Phoenix Iron Co., Dominion Steel and Coal Corpn. Ltd. Algoma Steel Products Co. Ltd., Inland Steel Co., & Bethlehem Steel Co.

Has the Steel been tested as required by the Rules? Yes

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26 FEB 1943

EQUIPMENT No. 39800 LETTER a ANCHORS.

Number of Certificate.	Anchors.	Weight, Ex. Stock.	Weight of Stock.	Test, per Certificate.	Weight Required by SPECIFICATION. Cwts.	Description of Anchor.	Makers.	Where and when tested and Superintendent.
F2411	1st Bower	7947 LBS.		See Correspondence with S. Dept. War Sale(?)	68.0	C.S. BALDT TYPE STOCKLESS.	RIVERSIDE IRON WORKS LTD.	CALGARY. DECEMBER 1942. P.D. McARTHUR.
F2410	2nd "	7936 LBS.			68.0			
	3rd "							
	Collective Weight.	15883 LBS.			136.0			
F2412	Stream	2775 LBS.			23¾.	C.S. BALDT TYPE STOCKLESS	RIVERSIDE IRONWORKS LTD.	CALGARY. DEC. 1942 P.D. McARTHUR

CHAIN CABLES.

Number of Certificate.	Length (Fathoms)	Diam. (Ins.)	Test Statutory (Tons)	Test Breaking (Tons)	Weight Supplied	Weight Per Rule (Cwts.)	Specified Length (Fathoms)	Specified Diam. (Ins.)	Description.	Makers of Cables.	Where and when tested, and Superintendent.
1577	225	2 5/16	A.30 B.42	3320 4630	69492 LBS.	600 (Rule → 270)	225	2 5/16	C.S. STUD LINK.	NATIONAL MALLEABLE & STEEL CASTINGS Co.	SHARON, PA. 19-11-42. A.T. GRIMES.
("NACO" DETACHABLE LINKS USED INSTEAD OF SHACKLES)											
~~Iron~~ Stream ~~Chain or~~ Steel Wire	90	Cir. 5		Tons. 53.22	6X12 G.S.W.R.		90	Cir. 5	6X12 G.S.W.R.		

HAWSERS AND WARPS.

Material.	Length supplied (Fathoms)	Cir. supplied (Ins.)	Breaking Test of Steel Wire (Tons)	Length per Table 53 (Fathoms)	Cir. per Table 53 (Ins.)
Towline	120	4¾	65.3	120	4¾
Hawsers & Warps	2@90	2¾	15.5	2@90	2¾
"	2@90	2½	13.28	2@90	2½

Steering Gear, Type (Power or hand) Steam with telemotor control **Alternative Means of Steering** (Efficient arrangement of blocks and tackle led to after warping winch.

Steering Chains (Size and Test) - - - - - - - - - - **Windlass** Steam - 11" x 13" **Boats** (2@20'x6.75'x2.60' (1@26'x8.00'x3.25' (1@28'x8.60'x3.75'(Motor)

Ceiling in Holds, thickness and material 2½" thk. B.C. Fir **Cargo Battens,** thickness, material and spacing (1½" thk. B.C. Fir 9" Clear.

Cargo Hatchways.—(Upper Deck) Strong steel plates and angles **Thickness of Hatches** 3" thk. B.C. Fir

Size of Hatchways No. 1 (Fwd.) 33'9"x20' No. 2 35'x20' No. 3 15'x20' No. 4 35'x20' No. 5 35'x20' x Bkr. ~~No. 6~~ 8'x20'

Number of **Shifting Beams** ~~and/or Fore and Afters~~ Nos. 1, 2, 4 and 5 -- each 5. No.3 - 2. x Bkr. - 1.

NORTH VAN. SHIP REPAIRS LIMITED
Builder's Signature Donald M. [illegible]
Manager

GENERAL DECLARATION. *It should be stated (a) whether the vessel (if not a motorship) is fitted for the carriage and burning of oil used as fuel* No *(b) whether the vessel, not being an oil tanker, is fitted for carrying oil as cargo* No *The positions in which oil is carried as fuel or cargo should be indicated, together with the flash point (where required to be inserted in the Notation).*

This ship has been constructed in accordance with the approved plans, instructions and printed Rules of the Society. The materials and workmanship are of good quality. The double bottom, peaks, deep and fresh water tanks, decks, bulkheads, tunnels, watertight doors, steering gear, and windlass have been tested and found satisfactory. The freeboards assigned by the Committee have been marked on the ship's sides and verified. The equipment of anchors and chain cables is in accordance with the War Emergency Reduction of Equipment requirements. Regarding the anchors all the requirements of Sections 12 and 13 of the Rules for Quality and Testing of Materials have been carried out except the Statutory Tests of Section 12 for which tensile tests on the materials of each head and shank were substituted, (28 tons per sq. inch minimum, with the usual extension). It is recommended that a suitable Notation be entered on the First Entry Certificate because of these departures from the Rules. The ship has also been surveyed during construction on behalf of the Minister of Munitions & Supply of Canada in accordance with the Hull Specification requirements which have been carried out to our satisfaction.

The amount of Entry Fee £ $ 50.00
Special Survey Fee £ $ 2145.00
Freeboard $ 100.00
Travelling Expense, if any £ $ 50.00
Owner's Rep. $ 1000.00

Fees applied for, 29th Dec 1942
Received by me, 19

(Special notations, where part of class, to be stated.)

We are ~~I am~~ of opinion the Vessel should be Classed ✠100 A1 with Freeboard.

State whether the Vessel has been built under Special Survey Yes

Signature [illegible] [illegible]
Surveyors to Lloyd's Register of Shipping.

H.O.M. Certificates ~~to be~~ sent to New York Date of issue 7th April 1943

Committee's Minute TUES. 2 MAR 1943

Character assigned ✠100 A1

With freeboard

Butts of shell & Dk. plating Elec. Weld.

O.L. [illegible]

+ Lmc 1.43

note for S.R.L.

Write [illegible]

The Surveyors are requested not to write on or below the Committee's Minutes.

0152 2/2

GENERAL REMARKS—*(The Surveyor should state the Number of Report and Name of any Sister Vessel. Plans showing Vessel as built should be forwarded and a List of the Plans should be embodied.)*

This ship is the fifteenth of this type to be built by North Van Ship Repairs, Ltd., and is a sistership to their Yard No. 101 - S.S. "FORT ALEXANDRIA" (Vancouver Report No.5755).

The approved plans have been retained for dealing with sisterships building and to be built.

Blue print of plan of Midship Section is forwarded herewith.

Interim Certificate issued - copy attached.

Immersed main ship's side openings Certificate issued - copy attached.

A copy of each of the following Certificates attached hereto.

Certificate No. F-4612 for cast steel stern frame.

Certificate No. F-5309 for rudder.

Certificate No. F-4292 for steam steering engine, quadrant and tiller.

Certificate No. F-1147 for steam windlass.

Certificate Nos. F-1372, F-1311, F-4909, F-4906, F-1344, F-1345, F-4908, F-4907, F-1342, F-1343 & F-1428 for winches.

Certificate Nos. F-2411, F-2410, F-2412 for Anchors.

Tonnage openings in six divisional tween deck bulkheads rivetted watertight except bulkhead No.93 which is fitted with watertight doors, (hinging).

PARTICULARS OF ELECTRIC WELDING *(if employed)* All connections to double bottom tanks' margin plates, watertight floors and gusset plates; 2nd deck stringer closing plates all welded; plate butts of shell plating, tank top (part), tunnel, 2nd and upper decks, centre girder and hatch side girders; hold bhds. and tunnels' sides to tank top plating; other items of minor importance; Electrodes, complying with section 4 paras. 1 - 9 of the Rules have been employed for manual welding and the Rules for the Application of Electric Arc Welding to Ship Construction have been complied with where applicable. Also Upper Deck stringer plates E.W. to sheer strake. After deck house and engineer's deck house welded to upper deck.

SPECIAL NOTATIONS:—*Either as part of the vessel's class or for record in the Register Book* Cruiser stern; Direction Finder; Echo Sounder; Wireless.

Particulars of **Drop Test** of Cast Steel Anchors, viz:—Weight, Surveyor's Initials, Number of Certificate, Date of Test.

1st Bower	5689 lbs.	P.D.M.	F-2411	17-12-42
2nd "	5711 lbs.	P.D.M.	F-2410	17-12-42
~~3rd "~~ Stream	1997 lbs.	P.D.M.	F-2412	17-12-42

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop -- ft., R.Q.D. -- ft., Bridge -- ft., Forecastle -- ft. (in feet and tenths). When the Poop or Forecastle are joined to the B.D., this should be distinctly stated - - - - - - - - - - - - - - - -

Official No. ..... Signal Letters ..... Extreme Breadth over Belting (Circ. 1611) No belting Over-all Length (Circ. 1703) 441.5'

No. and Material of Decks Two- (2) steel.

Parts of Bottom of Vessel coated with cement or approved composition Double bottom tanks all cement washed. Cement 2" thick on bottom of Nos. 5 & 6 tanks and 3 frame spaces fore and aft of same. All bilges cement washed. Bitumastic on tank top in tunnels and under boilers.

Particulars of composition (if fitted) and of approval .....

PARTICULARS OF WATER BALLAST:— (*Comprising all tanks which may be used for Water Ballast. (Circ. 1284) Wells are not to be included in the lengths of the tanks, but Cofferdams and Dry Tanks (if tested) are to be included.*)

Where Fitted.		Length.	Water Capacity.	Where Fitted.		Length.	Water Capacity.
		Feet.	Tons.			Feet.	Tons.
Double bottom, aft, Nos. 7 and 8	S.W.	135.0	306.	Fore peak tank,	S.W.	22.	145.
Double bottom, under Engines and Boilers,		--	--	After peak tank,	S.W.	24.	160.
Double bottom, if under Engines only, No.6	S.W.	25.0	106.	Deep tank, ~~aft,~~ Port	S.W.	20.	390.
Double bottom, if under Boilers only, No.5 (Dry)	S.W.	20.0	89.	Deep tank, ~~forward,~~ Star'd.	S.W.	20.	375.
Double bottom, forward, Nos.1,2,3 & 4	S.W.	188.25	648.	Other tanks, if fitted,			
Total length (if continuous) and Capacity	S.W.	368.25	1149	(If necessary, furnish further information by sketch.)			

Order for Special Survey No. 49

Date 22-7-41

Dates of Surveys held while building

1942 Sept. 18,24 Oct. 29,30,31, Nov. 2,3,4,5,6,9,10,11,12,13,14,15,16,26, Dec. 2,3,4,7,8,9,10,12,14,15,16,17,18,19,21,22,23,24,28,31.

Total No. of Visits 39

For S.S.O.F. see "Fort Alexandria" (Vol. 5755).