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Report No 3947

Index. No. 29092
(For London Office only.)

19 NOV 1932

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for *motor vessel* *Whaling Factory*
having *poop bridge & fore-castle*

(Type of Superstructures.)

Ship's Name M/V "PIONER"	Nationality and Port of Registry Norwegian Oslo	Official Number 1767	Gross Tonnage 1920	Date of Build 7
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Port of Survey **Oslo**
Date of Survey **14th Nov. 1932**
Name of Surveyor **Plude**

Moulded Dimensions: Length **242.2** Breadth **40.0** Depth **23'-8"**
Moulded displacement at moulded draught = 85 per cent. of moulded depth **3887** tons
Fineness for use with Tables **.698**

Particulars of Classification **100 A1**
Carrying whale oil in bulk.
S.S. Os. N° 3-2-30

for Freeboard (D)	Depth correction	Round of Beam correction
23.67	(a) Where D is greater than Table depth (D-Table depth) R = $(23.71 - 16.14) 1.863 = 14.10$	Moulded Breadth (B) 40.0 Standard Round of Beam = $\frac{B \times 12}{50} = 9.6$ Ship's Round of Beam = 10.0 Difference .4
.04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S}{L}\right) = \frac{.4}{4} \times .3343 = .03$
for Freeboard (D) = 23.71	If restricted by superstructures	

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
44.00	44.00	7'-2"	-	44.00
47'-9"	47.75	7'-10"	-	47.75
68.00	34.00	11'-4" @ cr.	-	34.00
35.50	35.50	7'-2"	-	35.50
195.25	161.25			161.25

Standard Height of Superstructure	6.0
" " R.Q.D.	
Deduction for complete superstructure	30.22
Percentage covered $\frac{S}{L} =$	80.60
" " $\frac{S_i}{L} =$	66.57
" " $\frac{E}{L} =$	66.57
Percentage from Table, Line A. (corrected for absence of fore-castle (if required))	
Percentage from Table, Line B. (corrected for absence of fore-castle (if required))	57.17
Interpolation for bridge less than .2L (if required)	
Deduction =	-17.28

SHEER CORRECTION.

Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
34.22	1	34.22	34"	31.75	31.75	31.75
15.22	4	60.88	9"	7.30	7.30	29.20
3.77	2	7.54	3"	1.50	1.50	-3.00
7.53	2	15.06	7"	10.30	7.56	15.12
30.45	4	121.80	25"	30.90	30.61	122.44
68.44	1	68.44	66"	64.75	68.78	68.78
		307.94				264.29

Mean actual sheer aft = *Deficient*, 539 StandardMean actual sheer forward = *Excess*Length of enclosed superstructure forward of amidships =
" " aft of " = } *sheer deficient*

Sheer aft

S	A
34.22	31.75
45.66	21.9
11.31	-4.5
91.19	49.15

$\frac{49.15}{91.19} = .539$

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Difference between sums of products $(.75 - \frac{S}{2L}) = \frac{43.65}{18} (.75 - .403) = +.84$

account of midship superstructure.

Tropical Freeboard.
Winter and Winter North
Freeboard.

Freeboard Deck = **23.71**
Freeboard = **2.40**
Moulded draught (d) = **21.31**

Tropical freeboard and addition for
board = $\frac{d}{4}$ inches = **5.33 5/4**

tion for Winter North Atlantic Freeboard (if
required) = **2" = 51 mm**

Deduction for Fresh
Water.Displacement in salt water at
summer load water line

$\Delta =$
Tons per inch immersion at
summer load water line

$T =$ *60 tons per inch*
Deduction = $\frac{\Delta}{40 T}$ inches

$5\frac{1}{4} = 133 \text{ mm}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{698 + 68}{1.36} = \frac{1.378}{1.36}$

Depth Correction	14.10
Deduction for superstructures	17.28
Sheer correction	.84
Round of Beam correction	.03
Correction for Thickness of Deck amidships	-
Other corrections, scantlings, etc.	-

14.94 17.31 - 2.37
Summer Freeboard = **28.78**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	10 1/2" = 266 mm
Fresh Water Line	5 1/4" 133
Tropical Line	5 1/4" 133
Winter Line below	5 1/4" 133
Winter North Atlantic Line	7 1/4" 184

Tropical Fresh Water Freeboard	2'-4 3/4" = 730 mm
Fresh Water	1'-6 1/4" 464
Tropical	1'-11 1/2" 597
Winter	2'-10" 863
Winter North Atlantic	3'-0" 914

-4 APR 1933



MARKING FORM
RECEIVED 31 MAR 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS						
on upper deck						
Description of Hatchway	N ^o 1	N ^o 2	Hatch on fore to fore bk. above 7'	Hatch on bridge deck to bunker	Hatch on poop to after bk.	
Dimensions of Hatchway	20'-0" x 13'-0"	20'-0" x 13'-0"	3'-4" x 2'-4"	3'-4" x 13'-0"	2'-6" x 2'-10"	
COAMINGS	Height above Deck	31"	31"	10"	31"	10"
	Thickness	4"	4"	3"	4"	3"
	Sides	4"	4"	3"	4"	3"
	Stiffeners	7" Ba	7" Ba			
HATCH BEAMS	Number	2	2			
	Spacing	equal	equal			
	Scantling and Sketch	15" x 36"	15" x 36"			
	Bearing Surface	3" x 3" x 40"	3" x 3" x 40"			
FORE AND AFTERS	Number	three	three			
	Spacing	equal	equal			
	Unsupported Lengths	6'-8"	6'-8"			
	Scantling and Sketch	7" x 6"	7" x 6"			
HATCH COVERS	Material	wood	wood	wood	wood	wood
	Thickness	2 1/2" x 3"	2 1/2" x 3"	2 1/2"	2 1/2"	2 1/2"
	How fitted	aluminum	aluminum	f-a	f-a	aluminum
	Bearing Surface	3"	3"	1"	2 1/2"	1 1/2"
Spacing of Cleats	22" x 24"	22"	15" x 18"	24" x 26"	24"	
Number of Tarpaulins	2	2	2	2	2	

*Are wood fore and afters steel shod at all bearing surfaces? *yes*
 Are battens and wedges efficient and in good condition? *yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes*
 Are lashings provided in accordance with rule requirements? *yes*

Particulars of fiddle, funnel and ventilator coamings:— *Fiddle openings above donkey boiler casing closed by steel hinged covers on bridge deck.*
Funnel and ventilator coamings in good condition.
Funnel and vent. coamings to machinery space in good condition on poop deck.
Inquire Room skylight of strong construction

Particulars of Flush Bunker Scuttles:— *none*

Particulars of Companionways:— *On forecastle: 2'-1" x 3'-0" x 4'-0", steel opening 3'-2" x 1'-6", wood door. sill 7" above wood dk.*
on —: Small wood skylight, with wood shutters.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
Forecastle: Three 8 1/2" x 2'-6" x 32"
Two stove pipes 5 1/2" x 1'-6" x 20"
Three — 3 1/2" x 9" x 20"
Fore deck: one 11" x 3'-0" x 24"
Three 14 1/2" derrick post vents,
Two 22 1/2" x 10'-0" x 36"
supported
after deck: Two 21" x 11'-0" x 34"
supported
one 11" x 3'-0" x 30"
supported
Poop: Two 12" x 3'-0" x 31" to E.R.
7 mushroom vents to sea.
one 2 1/2" x 2" greenhouse
one 5 1/2" x 2'-6" x 28"
one 7 1/2" x 3'-8" x 34"
one 12" x 1'-6" x 30" to E.R.

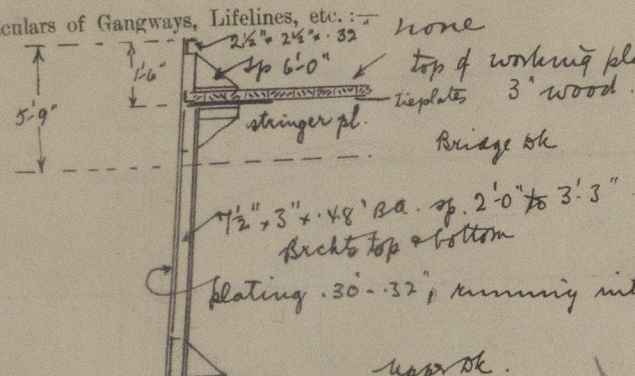
Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
Forecastle: one 3 1/2" x 30". Three 2 3/4" x 18"
Fore deck: Two 3 1/2" x 34" P.S.
Bridge: one 3 1/2" x 5"
After dk: Two 3 1/2" x 34" P.S. Two 4 1/2" x 3'-3" P.S.
Poop: Two 2" x 24". one 2 1/2" x 18". one 3 1/2" x 30". one 2 1/2" x 18"
all have fast means of closing.
ce wood plating

Particulars of Gangway Cargo and Coaling Ports:— *none.*
Openings in the ship's side from below the freeboard deck are capable of being made watertight

Particulars of Scuppers and Sanitary Discharge Pipes:— *Aft, from poop, one bolted overboard 12" above upper dk, with storm valve*
one 58" — 3'-0" below — — — — —
one 58" — 12" above — — — — —
one 58" — 15" — — — — —
one 58" — 5'-0" below — — — — —
Midships
Forward: — — — — —

Particulars of Side Scuttles:— *In forecastle a poop a in working space in fore well fitted with hinged skylights.*

Particulars of Guard Rails:— *Forecastle: Stanchions 3'-9" spaced 4'-6" 3 rails*
Bridge: — 3'-9" — 4'-6" apart bulwarks. —
Poop: — 3'-9" — 4'-0" to 4'-6" —

Particulars of Gangways, Lifelines, etc.:— *none*

2 1/2" x 2 1/2" x 32"
up 6'-0" top of working platform
3" wood
stringer pl.
Bridge dk
1 1/2" x 3" x 48" a. sp. 2'-0" to 3'-3"
Bricks top bottom
Plating .30-.32, running into full bridge side pl.
upper dk.

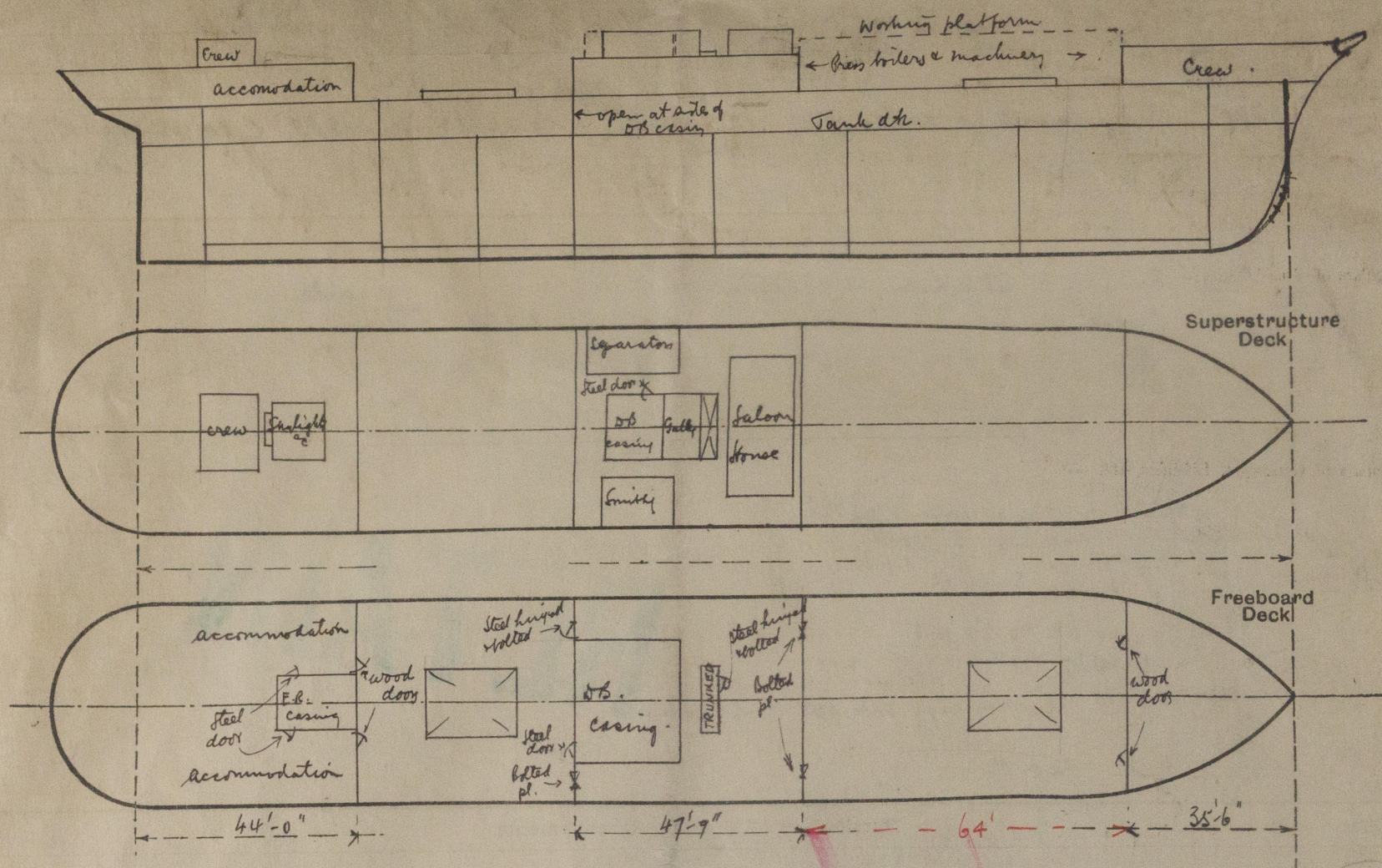
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	46'-0"	4'-10"	3'-1" x 1'-11"	2	11.8	11.1
Forward Well	68'-0"	See sketch above	3'-1" x 1'-11" Refuse ports 1'-10" x 1'-8"	3	16.0	13.6
State position of each freeing port from bridge end. After Well: 12'-0" x 3'-0" 16" above dk edge. Forward Well: 16'-6" x 21'-6" x 35'-6" x 63'-0" 16" above dk edge.						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— <i>after well: 2 hor. & 2 ver. bars a hinged shutter forward: — hinged shutter, gunny upwards, pivoted at top & with means of freeing shutters.</i>						
Additional area where sheer is less than standard.						

Particulars of Superstructures, Trunks, Casings, Deckhouses.							
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills
Poop Bulkhead	12" x 40"	.30"	7" x 3 1/2" x 40"	26"	bracket at top over at bottom	4'-9" x 1'-11"	13"
Raised Quarter Deck Bulkhead			7" x 3" x 40"	32" x 33"	nil.	5'-0" x 3'-0"	16"
Bridge, After Bulkhead	13" x 36"	.32"	7" x 3 1/2" x 40"	24" x 26"	bracket top & bottom	5'-0" x 3'-0"	24"
Bridge, Forward Bulkhead	13" x 36"	.30"	7" x 3 1/2" x 40"	24"	none	4'-10" x 1'-10"	13"
Forecastle Bulkhead	18" x 36"	.30"	5" x 3" x 36"	24"			
Trunk, Aft							
Trunk, Forward							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks		.24"	2 1/4" x 2 1/4" x 24"	30"	bracket at top none at bottom	5'-5" x 2'-0"	10"
Exposed Machinery Casings on Superstructure Decks or Above Decks		.24"	3" x 3" x 32"	29" x 30"	large bracket at top	5'-2" x 2'-0"	9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	9" x 46"	.30"	3" x 3" x 32"	26" x 29"	none		
Deckhouses on Flush Deck Ships							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	wood door P.S.
Raised Quarter Deck Bulkhead	Steel hinged door, port side .42; bolted plate S.R. side, hook bolts ap. 12" passing through plate only
Bridge, After Bulkhead	Steel hinged door to donkey boiler room, gunny from both sides
Bridge, Forward Bulkhead	Bolted plate P.S.; bolt ap. 5'-6" through bld. & plate
Forecastle Bulkhead	wood doors.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks or Above Decks	Steel hinged door port side
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Steel hinged door P.S.
Deckhouses on Flush Deck Ships	

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:

This vessel is a whaling factory.

	<u>Sheers Ford</u>		<u>Actual</u>		<u>Effective</u>		<u>Eff. Sheers Ford</u>
	<u>Standard</u>						
3	22.59		30.90		22.90	$\div 3 =$	7.56
3	91.35		92.70		91.82	$\div 3$	30.60
1	68.44		64.75		68.78	$\div 1$	68.7
	<u>182.38</u>		<u>188.35</u>		<u>183.50</u>		

$$182.38 + \frac{.039}{.25} \times 5.97 = \underline{183.30}$$

Shear off Ford

Standard	7.53	30.45	68.44
Actual	10.30	30.90	64.75
Diff	2.77	.45	- 3.69
Diff $\times \frac{29}{250}$.43	.07	-
Eff.	7.96	30.52	-
			64.75 allowed

The present feelboards, as assigned
by N.V. 26/3/25 are:

F.W.	2'-4"	} from top of steel upper deck.
T.	2'-5 1/2"	
S.	2'-9 1/2"	
W.	3'-1 1/2"	
W.N.A.	3'-3 1/2"	
Deck S.	2'-9 1/2"	

The following information was obtained from the owners:

Trans. draft	Trans per inch
19'-6"	17.78
20'-6"	17.81
21'-6"	17.84

The survey was held in floating dock, at the same time as a Damage Survey

Builder's name and yard number *Akt. Rödby Havn Jernskitsværft, Rödby Havn*

Names of sister ships

Owners. *A/s Pioneer (A. W. Nordström & Kr. Eijlberg)*

Fee *£* 170.00

Received by me