

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having Raised Quarter deck, Trunk (connected to R.Q.D.) & Forecastle. Port of Survey Newcastle-on-Tyne.

HEMSLEY (Type of Superstructures.) Date of Survey February 1932.

Ship's Name <u>SHELL MEX 1.</u>	Nationality and Port of Registry <u>British London</u>	Official Number <u>148719</u>	Gross Tonnage <u>927</u>	Date of Build <u>1915</u>	Name of Surveyor <u>Alex. E. Stevenson</u>
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Moulded Dimensions: Length 190.0' Breadth 32.5' Depth 14.0'
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 1,610 FROM SCALE. tons
 Coefficient of fineness for use with Tables .767

Particulars of Classification +100A1
Carrying Petroleum in bulk.

Depth for Freeboard (D) Moulded depth <u>14.00'</u> Stringer plate <u>.04</u> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>14.04</u>	Depth correction (a) Where D is greater than Table depth (D - Table depth) R = $(14.04 - 12.67) \times 1.461 = +2.00$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	Round of Beam correction Moulded Breadth (B) <u>32.5'</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>7.8"</u> Ship's Round of Beam = <u>8.25"</u> Difference <u>.45"</u> Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.45^2}{4} (1 - .726) = -.03$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <u>6.0'</u>
" overhang ...						" " R.Q.D. <u>3.6'</u>
R.Q.D. enclosed ...	<u>55.23</u>	<u>60.58</u>	<u>4.0'</u>	<u>✓</u>	<u>60.58</u>	Deduction for complete superstructure <u>25.0</u>
" overhang ...	<u>60.58</u>					Percentage covered $\frac{S}{L} =$ <u>45.81</u>
Bridge enclosed...						" $\frac{S_1}{L} =$ <u>72.59</u>
" overhang aft ...						" $\frac{E}{L} =$ <u>63.65</u>
" overhang forward						Percentage from Table, Line A. <u>✓</u>
Poole enclosed <u>8.405</u>	<u>26.46</u>	<u>26.46</u>	<u>7.25'</u>	<u>✓</u>	<u>26.46</u>	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, <u>TANKER</u> <u>56.01</u>
Trunk aft <u>29.75</u>	<u>✓</u>	<u>40.75</u>	<u>4.0'</u>	<u>4.0</u>	<u>27.17</u>	(corrected for absence of forecastle (if required))
" forward <u>16.25</u>	<u>✓</u>	<u>10.12</u>		<u>4.0</u>	<u>6.75</u>	Interpolation for bridge less than 2L (if required) <u>TANKER.</u>
Tonnage opening aft ...						Deduction = <u>25.0</u> \times <u>56.01</u> = <u>-14.0</u>
" forward						
Total ...	<u>87.04</u>	<u>137.91</u>			<u>120.96</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>29.00</u>	<u>1</u>		<u>29.00</u>	<u>31.50</u>	<u>31.50</u>	<u>1</u>		<u>31.50</u>	Mean actual sheer aft = <u>DEFECTIVE.</u>
$\frac{1}{2}$ L from A.P. ...	<u>12.90</u>	<u>4</u>		<u>51.60</u>	<u>9.75</u>	<u>9.75</u>	<u>4</u>		<u>39.00</u>	Mean standard sheer aft
$\frac{3}{8}$ L " ...	<u>3.19</u>	<u>2</u>		<u>6.38</u>	<u>2.12</u>	<u>2.12</u>	<u>2</u>		<u>4.24</u>	Mean actual sheer forward = <u>DEFECTIVE.</u>
Amidships ...		<u>4</u>					<u>4</u>			Mean standard sheer forward
$\frac{3}{8}$ L from F.P. ...	<u>6.38</u>	<u>2</u>		<u>12.76</u>	<u>3.00</u>	<u>3.00</u>	<u>2</u>		<u>6.00</u>	Length of enclosed superstructure forward of amidships = <u>TANKER</u>
$\frac{1}{2}$ L " ...	<u>25.81</u>	<u>4</u>		<u>103.24</u>	<u>16.50</u>	<u>16.50</u>	<u>4</u>		<u>66.00</u>	" " aft of " = <u>DOES NOT APPLY.</u>
F.P. ...	<u>58.00</u>	<u>1</u>		<u>58.00</u>	<u>54.75</u>	<u>54.75</u>	<u>1</u>		<u>54.75</u>	NOTE. SHEER AFT INCREASED BY VIRTUE OF INTACT R.Q.D. HAVING A HEIGHT IN EXCESS OF THE STANDARD.
Total ...				<u>260.98</u>					<u>201.49</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{59.49}{18} \left(.75 - \frac{229}{521} \right) = +1.72$
 If limited on account of midship superstructure. ✓ If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{767+68}{1.36} \cdot \frac{1.447}{1.36}$	<u>21.50</u>
Depth to Freeboard Deck = <u>14.04</u>	$\Delta = 1780$	Depth Correction <u>2.00</u>	<u>22.88</u>
Summer freeboard = <u>1.064</u>	Tons per inch immersion at summer load water line	Deduction for superstructures <u>-14.00</u>	
Moulded draught (d) = <u>12.98</u>	$T = 12.50$	Sheer correction <u>1.72</u>	
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction <u>.03</u>	
Winter freeboard = $\frac{d}{4}$ inches = <u>3.25</u> = <u>3\frac{1}{4}</u>	= <u>3.56</u> = <u>3\frac{1}{2}</u>	Correction for Thickness of Deck amidships <u>-</u>	
Addition for Winter North Atlantic Freeboard (if required) = <u>1.9</u> = <u>2</u>		Other corrections, scantlings, etc. <u>-</u>	
		Summer Freeboard = <u>12.63</u>	<u>57</u>

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

Tropical Fresh Water Line above Centre of Disc ...	<u>5\frac{3}{4}</u>	Tropical Fresh Water Freeboard ...	<u>1'-0\frac{1}{2}"</u>
Fresh Water Line " " ...	<u>3\frac{1}{2}</u>	Fresh Water " " ...	<u>8\frac{5}{8}"</u>
Tropical Line " " ...	<u>3\frac{1}{4}</u>	Tropical " " ...	<u>9\frac{1}{4}"</u>
Winter Line below " " ...	<u>3\frac{1}{4}</u>	Winter " " ...	<u>1'-4\frac{3}{4}"</u>
Winter North Atlantic Line " " ...	<u>5\frac{1}{4}</u>	Winter North Atlantic " " ...	<u>8\frac{5}{8}"</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	on Deck	on upper deck	fore cofferdam	Cargo hatch on Trunk top	6 off	oil fuel on Trunk top	1 off	on R.O.D. to store aft	
Dimensions of Hatchway	2'0" x 2'0"	5'12" x 7'0"	16" x 12"	6'0" x 4'0"		2'0" x 1'6"	15" dia.	1'6" x 1'0"	
COAMINGS									
Height above Deck	9"	30"		7'3" BA.		6'3" BA.	7'3" E.	6'3" BA.	
Thickness	30"	30"							
Sides	30"	30"							
Stiffeners									
Brackets, Stays									
HATCH BEAMS									
Number	2	2	2	2	2	2	2	2	
Spacing	12"	12"	12"	12"	12"	12"	12"	12"	
Scantling and Sketch									
Bearing Surface									
FORE AND AFTERS									
Number									
Spacing									
Unsupported Lengths									
Scantling* and Sketch									
Bearing Surface									
HATCH COVERS									
Material	Pressed steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
Thickness	40"	40"	50"	2 1/2" x 2 1/2" x 3/4"	36"	30"	50"	50"	
How fitted	cover	with 3/4" x 3/4" stiffeners		diag. stiffeners					
Bearing Surface									
Spacing of Cleats	16"	bolts 18"	bolts 3/4"	bolts 16"					
Number of Tarpaulins	Two		apart	apart					

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

Particulars of fiddle, funnel and ventilator coamings:—
 steel skylight, with hinged steel flaps above Engine Room on Poop Deck. (Poop deck 7'6" above R.O.D.)
 & Two 18" dia. vents through skylight ☒

Particulars of Flush Bunker Scuttles:—
 1- 18" dia. on Poop deck. to galley bunker on R.O.D. ☒

Particulars of Companionways:—
 wood companion, with steel coaming 3'1" x 4'8" on poop deck sill 17' above wood deck.
 double hinged wood doors, opening from both sides. ☒

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
 on Poop deck:
 2 off 8" dia. 18" coaming x 25 (16 wds to deck) to shore under R.O.D. ☒
 remainder to poop space. ☒
 on Pump Room top:
 2 off 15" dia. x 17" coaming x 30 (20 wds) ☒

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
 Pump room top:
 2 off 2 1/4" dia. goosenecks 11" high from oil fuel tanks (closing appliances) ☒
 Upper Deck forward:
 2 off 2 1/4" dia. goosenecks 3'6" high from cofferdam ☒

Particulars of Gangway Cargo and Coaling Ports:—
 Gangway: ☒
 Coaling: ☒

Particulars of Scuppers and Sanitary Discharge Pipes —

Discharges Aft are from poop space above R.O.D. ☒
 From Fore space: port one, 2 1/2" from bath. ☒
 stand. one 4" from w.c. with storm valve. storm valve brass. lead pipe. ☒

Particulars of Side Scuttles:

Poop space 12" x 10" dia. ☒
 Fore space: 9" dia. with hinged deadlights. ☒

Particulars of Guard Rails:—

on poop:
 Two tier 18" apart. ☒
 top rail 3'0" above deck. ☒
 stanchions 3'3" apart. ☒
 Trunk Top (R/S sides):
 Two tier 18" apart. ☒
 top rail 3'0" above trunk top. ☒
 stanchions 4'0" apart. ☒
 upper deck:
 Two tier 16" apart. ☒
 top rail 3'4" above deck. ☒
 stanchions 3'9" above deck. ☒
 stanchions 4'0" apart. ☒
 Fore deck:
 Two tier 18" apart. ☒
 top rail 3'0" above wood die. ☒
 stanchions 3'6" apart. ☒

Particulars of Gangways, Lifelines, etc.:

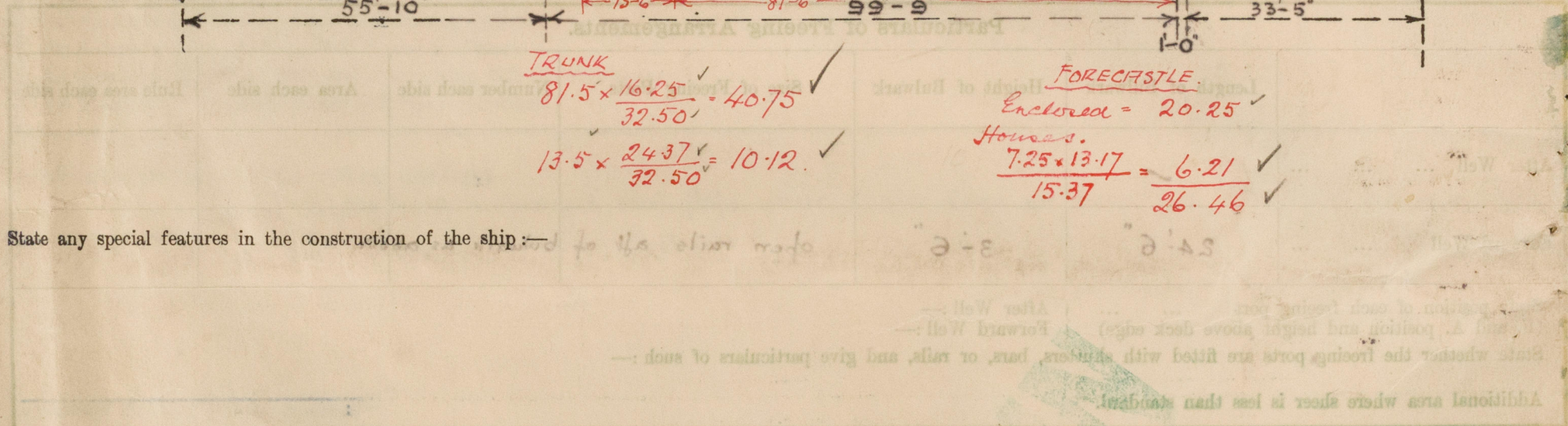
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well						
Forward Well	24'6"	3'6"	open rails aft of bulwark as above.			

State position of each freeing port ... After Well:—
 (F. and A. position and height above deck edge) Forward Well:—
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
 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	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead		40"	3" x 2 1/2" x 30"	33"				4'0"
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead		26"	2 1/2" x 2 1/2" x 30"	21"		4'8" x 2'0"	2'0"	7'0"
Trunk, Aft		30"	5" x 3" x 38"	22 1/2"	Bkts at top.			4'0"
Trunk, Forward			2 1/2" x 2 1/2" x 34"	26"-33"				
Exposed Machinery Casings on Freeboard or Raised Quarter Decks		25"	2 1/2" x 2 1/2" x 34"	26"-33"		5'6" x 2'0"	12"	7'6"
Exposed Machinery Casings on Superstructure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Pump Room	30"	26"	2 1/2" x 2 1/2" x 30"	26"	Bkts at top.	5'6" x 2'0"	14"	7'6"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Hinged steel w.t. doors (5'8" x 2'6", coaming 14", 2 off) with hinged clips manipulated from both sides. <input checked="" type="checkbox"/>
Raised Quarter Deck Bulkhead	<input checked="" type="checkbox"/>
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	Hinged wood doors, with lock handle manipulated from both sides. <input checked="" type="checkbox"/>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Hinged steel doors, with handle manipulated from both sides. <input checked="" type="checkbox"/>
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Pump Room	Hinged steel w.t. doors, with hinged clips, manipulated from both sides. <input checked="" type="checkbox"/>
Deckhouses on Flush Deck Ships	

ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

[illegible]

Names of sister ships

Owners Anglo-Saxon Petroleum Co. Ltd.

Fee £ 6 : 16 : 0 Received by me _____