

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

D153

 Computation of Freeboard for Steamer, Sailing Ship, Tanker  
 having *Lancaster R.Q.D.*
Port of Survey *Sunderland.*Date of Survey *30<sup>th</sup> August. 1932.*Name of Surveyor *T. D. SCOTT.*
 Particulars of Classification *100 A1*  
*S.S. Std. No. 2-29*

Ship's Name

*"LYS"*

(Type of Superstructures.)

 Nationality and Port of Registry  
*British*  
*Sunderland.*
Official Number  
*144520*Gross Tonnage  
*1830*Date of Build  
*1920*  
*5<sup>mo</sup>.*
 Moulded Dimensions: Length *259.5* Breadth *37.25* Depth *19.8*  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *3590* tons  
 Coefficient of fineness for use with Tables *.777*

## Depth for Freeboard (D)

 Moulded depth ... *19.67*  
 Stringer plate ... *.54*  
 Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$  *.04*  
 Depth for Freeboard (D) = *19.71*

## Depth correction

 (a) Where D is greater than Table depth  
 (D - Table depth) R = *(19.71 - 17.30) 1.996 = + 4.81"*  
 (b) Where D is less than Table depth (if allowed)  
 (Table depth - D) R = *0*
If restricted by superstructures */*

## Round of Beam correction

 Moulded Breadth (B) *37.25*  
 Standard Round of Beam =  $\frac{B \times 12}{50} =$  *8.94"*  
 Ship's Round of Beam = *9.4"*  
 Difference *.31"*  
 Restricted to  
 Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$  *\frac{.31}{4} \times .2986 = -.02"*

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
„ overhang ...					
R.Q.D. enclosed	<i>154.00</i>	<i>154.00</i>	<i>4.9</i>	<i>✓</i>	<i>154.00</i>
„ overhang					
Bridge enclosed...					
„ overhang aft					
„ overhang forward					
F'cle enclosed ...	<i>26.50</i>	<i>26.50</i>	<i>7.6</i>	<i>✓</i>	<i>26.50</i>
„ overhang ...	<i>3.00</i>	<i>1.50</i>			<i>1.50</i>
Trunk aft ...					
„ forward ...					
Tonnage opening aft					
„ „ forward					
Total ...	<i>183.50</i>	<i>182.00</i>			<i>182.00</i>

 Standard Height of Superstructure *6.095*  
 „ „ R.Q.D. *4.127*  
 Deduction for complete superstructure *31.95*  
 Percentage covered  $\frac{S}{L} =$  *70.71%*  
 „ „  $\frac{S_1}{L} =$  *70.14%*  
 „ „  $\frac{E}{L} =$  *70.14%*  
 Percentage from Table, Line A. *63.17%*  
 (corrected for absence of forecastle (if required))  
 Percentage from Table, Line B.  
 (corrected for absence of forecastle (if required))  
 Interpolation for bridge less than .2L (if required)  
 Deduction = *31.95 × .6317 = -20.18"*

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>35.95</i>	<i>1</i>		<i>35.95</i>	<i>36.75</i>	<i>43.48</i>	<i>1</i>		<i>43.48</i>
$\frac{1}{4}$ L from A.P. ...	<i>16.00</i>	<i>4</i>		<i>64.00</i>	<i>16.59</i>	<i>19.35</i>	<i>4</i>		<i>77.40</i>
$\frac{2}{4}$ L „ ...	<i>3.95</i>	<i>2</i>		<i>7.90</i>	<i>4.14</i>	<i>4.78</i>	<i>2</i>		<i>9.56</i>
Amidships ...		<i>4</i>		<i>0</i>			<i>4</i>		
$\frac{3}{4}$ L from F.P. ...	<i>7.91</i>	<i>2</i>		<i>15.82</i>	<i>9.28</i>	<i>9.28</i>	<i>2</i>		<i>18.56</i>
$\frac{1}{4}$ L „ ...	<i>31.99</i>	<i>4</i>		<i>127.96</i>	<i>37.12</i>	<i>37.12</i>	<i>4</i>		<i>148.48</i>
F.P. ...	<i>71.90</i>	<i>1</i>		<i>71.90</i>	<i>84</i>	<i>84.00</i>	<i>1</i>		<i>84.00</i>
Total ...				<i>323.53</i>					<i>381.48</i>

 Mean actual sheer aft = *Excess*  
 Mean standard sheer aft = *Excess*

 Mean actual sheer forward = *Excess*  
 Mean standard sheer forward = *Excess*

 Length of enclosed superstructure forward of amidships = *.093*  
 „ „ aft of „ = *.500*

 Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) =$  *\frac{57.95}{18} \left( \frac{.75 - .3535}{2} \right) = -1.28*

 If limited on account of midship superstructure, *1.28 × \frac{193}{200} = -1.23* If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

 Depth to Freeboard Deck = *24.46*  
 Summer freeboard = *6.42*  
 Moulded draught (d) = *18.04*

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *4.51*Addition for Winter North Atlantic Freeboard (if required) = *2*

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$  *3934*

Tons per inch immersion at summer load water line

 $T =$  *19.80*Deduction =  $\frac{\Delta}{40T}$  inches $=$  *4.96 = 5"*

## TABULAR FREEBOARD corrected for Plank Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<i>4.81</i>	<i>-</i>
Deduction for superstructures ...	<i>-</i>	<i>20.18</i>
Sheer correction ...	<i>-</i>	<i>1.23</i>
Round of Beam correction ...	<i>-</i>	<i>.02</i>
Correction for Thickness of Deck amidships	<i>-</i>	<i>-</i>
Other corrections, scantlings, etc. ...	<i>57.00</i>	<i>-</i>
	<i>61.81</i>	<i>21.43</i>

Summer Freeboard = *77.11*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>9.2</i>	Tropical Fresh Water Freeboard ...	<i>6.5</i>
Fresh Water Line „ „ „ „ „ „	<i>5</i>	Fresh Water „ „ „ „ „ „	<i>5.7 1/2</i>
Tropical Line „ „ „ „ „ „	<i>4 1/2</i>	Tropical „ „ „ „ „ „	<i>6.0</i>
Winter Line below „ „ „ „ „ „	<i>4 1/2</i>	Winter „ „ „ „ „ „	<i>6.0 1/2</i>
Winter North Atlantic Line „ „ „ „ „ „	<i>6 1/2</i>	Winter North Atlantic „ „ „ „ „ „	<i>6.9 1/2</i>
		Winter North Atlantic „ „ „ „ „ „	<i>6.11 1/2</i>

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	No. 1 Fore.	No. 2 Fore.	No. 3 Aft.	No. 4 Aft.	X Bunker.	Fore Peak Store.	Chain Locker.		
Dimensions of Hatchway	24' 9" x 25' 0"	35' 6" x 25' 4"	30' 3" x 25' 0"	24' 6" x 22' 10"	6' 2" x 10' 0"	30' x 36"	24' x 36"		
COAMINGS	Height above Deck	42"	42"	48"	48"	10"	12 1/2"	12 1/2"	
	Thickness	50"				44"	25 BA.	25 BA.	
	Stiffeners	6A 6" x 3 1/2" x 40"		6A 1 1/2"					
	Brackets, Stays	6P 7" x 25"							
HATCH BEAMS	Number	4	7	5	4				
	Spacing	60"	62 1/2"	62 1/2"	60"				
	Scantling and Sketch	3 1/2" x 7 1/2" x 50"	4A 1 1/2" x 50"	3 1/2" x 50"	4A 1 1/2" x 50"				
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"				
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
HATCH COVERS	Material	Red Pine				Red Pine	Red Pine	Red Pine	
	Thickness	3"				2 1/4"	2 1/4"	2 1/4"	
	How fitted	7A	6A 1 1/2"			7A	7A	7A	
	Bearing Surface	3 1/2"				3"	2 1/2"	2 1/2"	
Spacing of Cleats	24"					34"	16"	16"	
Number of Tarpaulins	2					2	2	2	

\*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:

*Fiddle grating fitted hinged steel covers, strongly constructed.  
 Funnel & Boiler room ventilators in good condition & true.  
 Engine room skylight of steel, strongly constructed.*

Particulars of Flush Bunker Scuttles:—

*None*

Particulars of Companionways:—

*None*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

No. 1 Hold. 1 vent. 12" dia. Coaming 36" x 28" on Forecastle Head.  
 No. 2 Hold. 1 " " " " " Fore deck.  
 No. 3 Hold. 1 " " " " " R.Q.D.  
 No. 4 Hold. 1 " " " " " R.Q.D.  
 Fore Peak Space 1 " 6" " C.I. Spar deck 8" sill on Forecastle Head.  
 Crew Space. 4 " 10" " Coaming 26" x 25" on Forecastle Head.  
 " " 5 " 7 " " " " R.Q.D.

*Keels fitted canvas covers or plys.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Fore Peak. 1 air pipe 4" dia. x 9" sill C.I. on Forecastle Head.  
 No. 1 Tank. 1 air pipe each side 3" x 34 1/2" sill. Secured to bulwark.  
 No. 2 Tank. 1 " " " 2 1/2" x 34 1/2" sill. Secured to bulwark and deck overhead.  
 No. 3 Tank. 1 " " " 4" x 6 1/2" sill. Secured to bulwark and deck overhead.  
 Aft Peak. 1 " " 3" dia. x 9" sill C.I. on R.Q.D.

*Air pipes fitted with canvas covers or plys.*

Particulars of Gangway Cargo and Coaling Ports:—

*None*

Particulars of Scuppers and Sanitary Discharge Pipes:—

*Incaselle. 1 each side. Sanitary discharge on board below deck. 5" dia. Fitted 6M. storm valves.*

Particulars of Side Scuttles:—

*Incaselle. 4 each side 8" dia. fitted C.I. hinged covers.  
 2 staid side 8" dia. fitted C.I. hinged covers.  
 3 port side 8" dia. fitted C.I. hinged covers.*

Particulars of Guard Rails:—

*On Incaselle head.  
 2 rods. 36" high with stanchions spaced 48"*

Particulars of Gangways, Lifelines, etc.:—

*Stanchions & lines fitted.*

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 ... R.Q.D. ...	154' 0"	3' 6"	34" x 18"	8	34 sq ft	30.8 sq ft
Forward Well ...	76' 8"	4' 0"	34" x 18" (rectangular) 30" x 18" (oval)	4	20 sq ft	15.3 sq ft

State position of each freeing port (F. and A. position and height above deck edge) ... After Well:— As shown in sketch. Height above deck. R.Q.D. 9"  
 Forward Well:—  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—  
 8 R.Q.D. all ports fitted with shutters. 2 Fore well fitted with bars spaced 7".  
 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 ...	Vert. plate	34	6" x 3" x 35" BA	21"	None	—	—	21"
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	Vert. plate	25	3" x 3" x 35" angle	3-1	—	4' 9" x 18"	18"	7' 6"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Vert. plate	38	3 1/2" x 3 1/2" x 31" angle	26"	—	4' 6" x 28"	19"	7' 3"
Exposed Machinery Casings on Superstructure Decks ...								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								

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

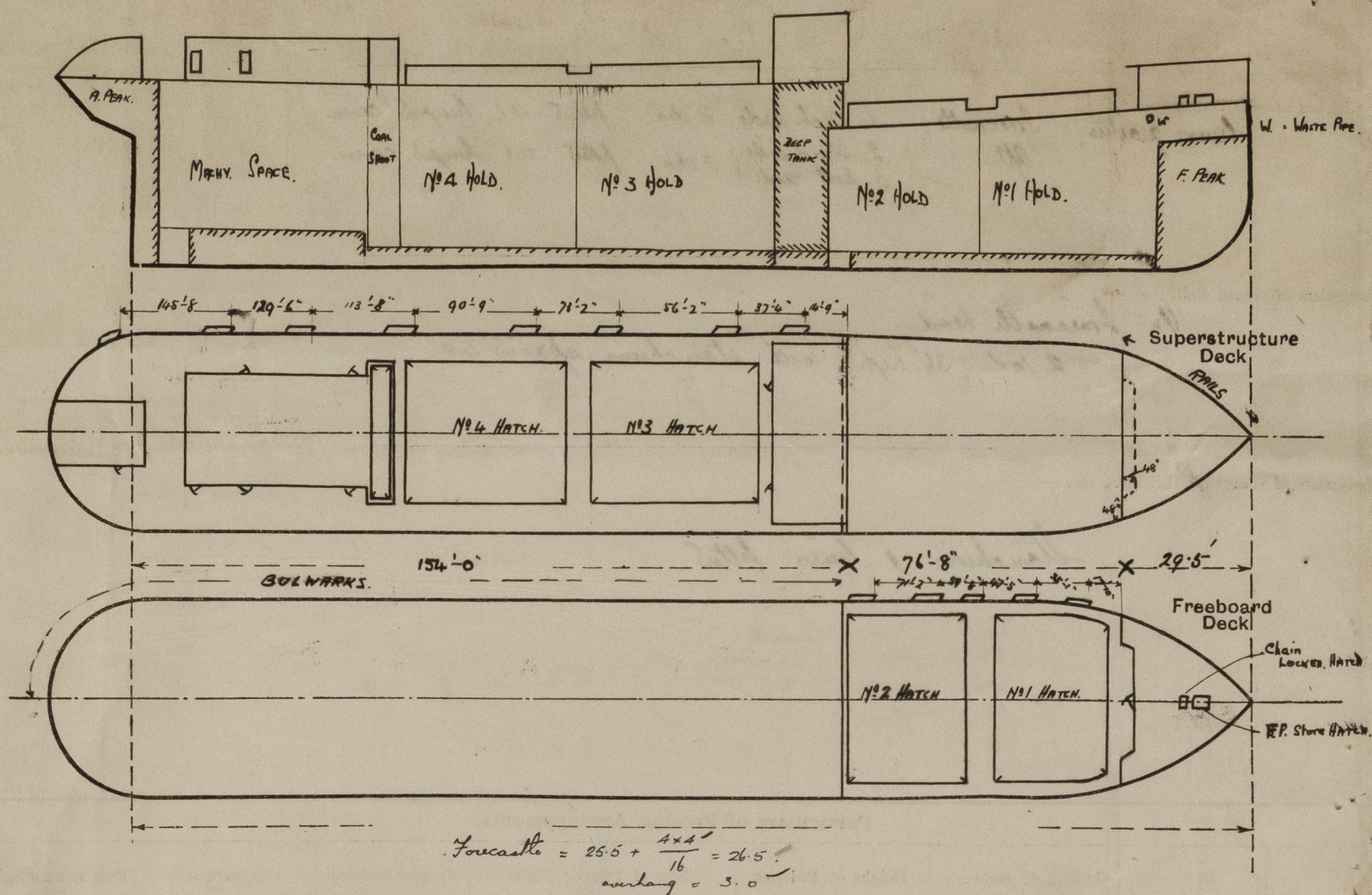
Poop Bulkhead ...	
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ...	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	

*no openings*

*1 Teak wood door, solidly constructed. Operates from both sides.  
 Fiddle, hinged steel door, strongly constructed. Operates from both sides.  
 C.I. Teak wood door, solidly constructed. Operates from both sides. 1 Port. 1 staid side.  
 Crew space. Teak wood door, solidly constructed. Operates from both sides. 1 staid side.*



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:—



Vessel examined afloat. As the vessel is now laid up, it is not intended to carry out special survey at the present time.

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

Draught.	Displacement.	T.P.I.
17'-0"	3650	19.5
18'-0"	3885	19.75
19'-0"	4125	20.

These particulars supplied by Builders.

Builder's name and yard number S. P. AUSTIN & SON, LD. No 290

Names of sister ships "VAUX"

Owners Westwick P.S. Co. Ltd. (James Westwick Ltd. Mgrs.)

Fee £ 8 : 7 : 0

Received by me



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