

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Computation of Freeboard for <del>Steamer</del> Sailing Ship, Tanker					Port of Survey <b>NANTES</b>	
having <i>poop, Bridge &amp; Forecastle.</i>					Date of Survey <i>19<sup>th</sup> 20<sup>th</sup> 21<sup>st</sup> April 1933</i>	
(Type of Superstructures.)					Name of Surveyor <i>R. J. Easthope.</i>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <i>+100.A.1. Carrying Bulk in bulk.</i>	
"SHAPUR."	<i>French</i> <i>Moore</i>	-	4121	1922-4		
Moulded Dimensions: Length <i>350.0'</i> Breadth <i>49.0'</i> Depth <i>27'-0"</i>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth						
Coefficient of fineness for use with Tables <i>.788</i>						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth ... .. <i>27'-0"</i>			(a) Where D is greater than Table depth (D-Table depth) R = <i>(27.05-23.33) 2.692 = + 10.01"</i>		Moulded Breadth (B) <i>49.00'</i>	
Stringer plate ... .. <i>.05</i>			(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = 11.76"$	
Sheathing on exposed deck <i>none.</i>			If restricted by superstructures		Ship's Round of Beam = <i>12"</i>	
$T \left( \frac{L-S}{L} \right) =$					Difference <i>.24"</i>	
Depth for Freeboard (D) = <i>27.05</i>					Restricted to	
					Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.24}{4} \times .5207 = -.03"$	

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..	82.75	82.75	7'-6"	-	82.75	Standard Height of Superstructure <i>7.0</i> ✓
" overhang ... ..						" " R.Q.D. <i>-</i>
R.Q.D. enclosed ... ..						Deduction for complete superstructure <i>38.67</i> ✓
" overhang ... ..						Percentage covered $\frac{S}{L} = 50.67\%$ ✓
Bridge enclosed... ..	30.30	30.30			30.30	" " $\frac{S_1}{L} = 47.93\%$ ✓
" overhang aft ... ..	4.68	3.51	8'-0"	-	3.51	" " $\frac{E}{L} = 47.93\%$ ✓
" overhang forward ... ..	4.68	2.34			2.34	Percentage from Table, Line A.
F'cle enclosed equivalent <i>57.25</i>	42.76	42.76	8'-0"	-	42.76	(corrected for absence of forecastle (if required))
" overhang ... ..	12.16	6.08			6.08	Percentage from Table, Line B. <i>Tanker. 38.93%</i> ✓
Ink aft ... ..						(corrected for absence of forecastle (if required))
forward ... ..						Interpolation for bridge less than 2L (if required)
Image opening aft ... ..						Deduction = <i>38.67 × .3893 = - 15.05"</i> ✓
" " forward ... ..						
Total ... ..	177.33	167.74			167.74	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	45.00	1		45.00	48.00	48.00	1		48.00
$\frac{1}{2}$ L from A.P. ... ..	20.03	4		80.12	21.40	21.13	4		84.52
$\frac{3}{8}$ L " ... ..	4.95	2		9.90	5.34	5.27	2		10.54
Amidships ... ..		4					4		
$\frac{3}{8}$ L from F.P. ... ..	9.90	2		19.80	10.72	10.59	2		21.18
$\frac{1}{2}$ L " ... ..	40.05	4		160.20	43.00	42.46	4		169.84
F.P. ... ..	90.00	1		90.00	96.00	96.00	1		96.00
Total ... ..				405.02					430.08

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{25.06}{18} (.75 - .2537) = -.69"$

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)	51.30
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.68 \times .788}{1.36} = \frac{1.468}{1.36}$	55.38
Depth to Freeboard Deck = <i>27.05</i>	$\Delta = 8901$	Depth Correction ... ..	10.01
Summer freeboard = <i>4.13</i>	Tons per inch immersion at summer load water line	Deduction for superstructures ... ..	15.05
Moulded draught (d) = <i>22.92</i>	T = <i>35</i>	Sheer correction ... ..	.69
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction ... ..	.03
Winter freeboard = $\frac{d}{4}$ inches = <i>5.73</i> = <i>146</i> ✓	= <i>6.36</i> = <i>162</i> ✓	Correction for Thickness of Deck amidships ... ..	-
Addition for Winter North Atlantic Freeboard (if required = <i>3.50</i> = <i>89</i> ✓		Other corrections, scantlings, etc. ... ..	-
		10.01 15.77 - 5.76	
		Summer Freeboard = <i>49.62</i> = <i>1260</i> ✓	

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

Tropical Fresh Water Line above Centre of Disc ... ..	308	Tropical Fresh Water Freeboard ... ..	952
Fresh Water Line " " ... ..	162	Fresh Water " " ... ..	1098
Tropical Line " " ... ..	146	Tropical " " ... ..	1114
Winter Line below " " ... ..	146	Winter " " ... ..	1406
Winter North Atlantic Line " " ... ..	255	Winter North Atlantic " " ... ..	1495



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		1, 2, 3 & 4	5, 6, 7 & 8	Summer tank	Poop deck	Forecastle deck	U. D.K. (Fore)		
Dimensions of Hatchway		6'-0" x 4'-2"	6'-0" x 4'-2"	6'-0" x 3'-4"	6'-0" x 3'-4"	2'-10" x 3'-2"	4'-0" x 4'-0"	10'-0" x 20'-0"	4'-0" x 12'-0"
COAMINGS	Height above Deck	16"	16"	2'-8"	2'-8"	21"	20"	12"	24"
	Thickness	5/8"							
	Stiffeners					none			
	Brackets, Stays					none			
HATCH BEAMS	Number								
	Spacing								
Scantling and Sketch		none						none	
Bearing Surface									
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
Bearing Surface									
HATCH COVERS	Material			steel		wood		steel	
	Thickness			.60"		2 1/2"		.60"	
	How fitted					athwartships			
	Bearing Surface					3"			
Spacing of Cleats				none		2 5"		none	
Number of Tarpaulins				none		2		none	

\*Are wood fore and afters steel shod at all bearing surfaces? —  
 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: Winged steel covers, strongly constructed fitted on fiddle top & boiler casing 4 ventilators on engine room casing 24" dia. 4" thick & coamings 4 1/4" high (These ventilators are well protected by the ships boats) no funnel coaming. The engine & boiler casings are strongly constructed.

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways:— 1 on boat deck at after end of the Engine Room skylight leading to the engineer's messroom. This companionway together with the door is strongly constructed & made of teak. Height of sill above deck 10".

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— Forecastle deck 2 off 36" high 18" dia. 40 thick. On U.D.K. aft in way of the pump room 12 off (p.s.) coaming 40" high, 12" dia. 40" thick. On poop deck 4 off (p.s.) coamings 36" high, 10" dia. 42" thick. Several cabin ventilators on poop, bridge & forecastle decks in good condition. Strongwood plugs & canvas covers for closing all ventilators.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, & superstructure decks:— On forecastle deck 5 off 24" above deck, On after U.D.K. for copperdam 2 off 24" above deck. On poop deck (p.s.) 6 off 22" above deck. Wood plugs for closing in case of necessity.

Particulars of Gangway Cargo and Coaling Ports:—

none



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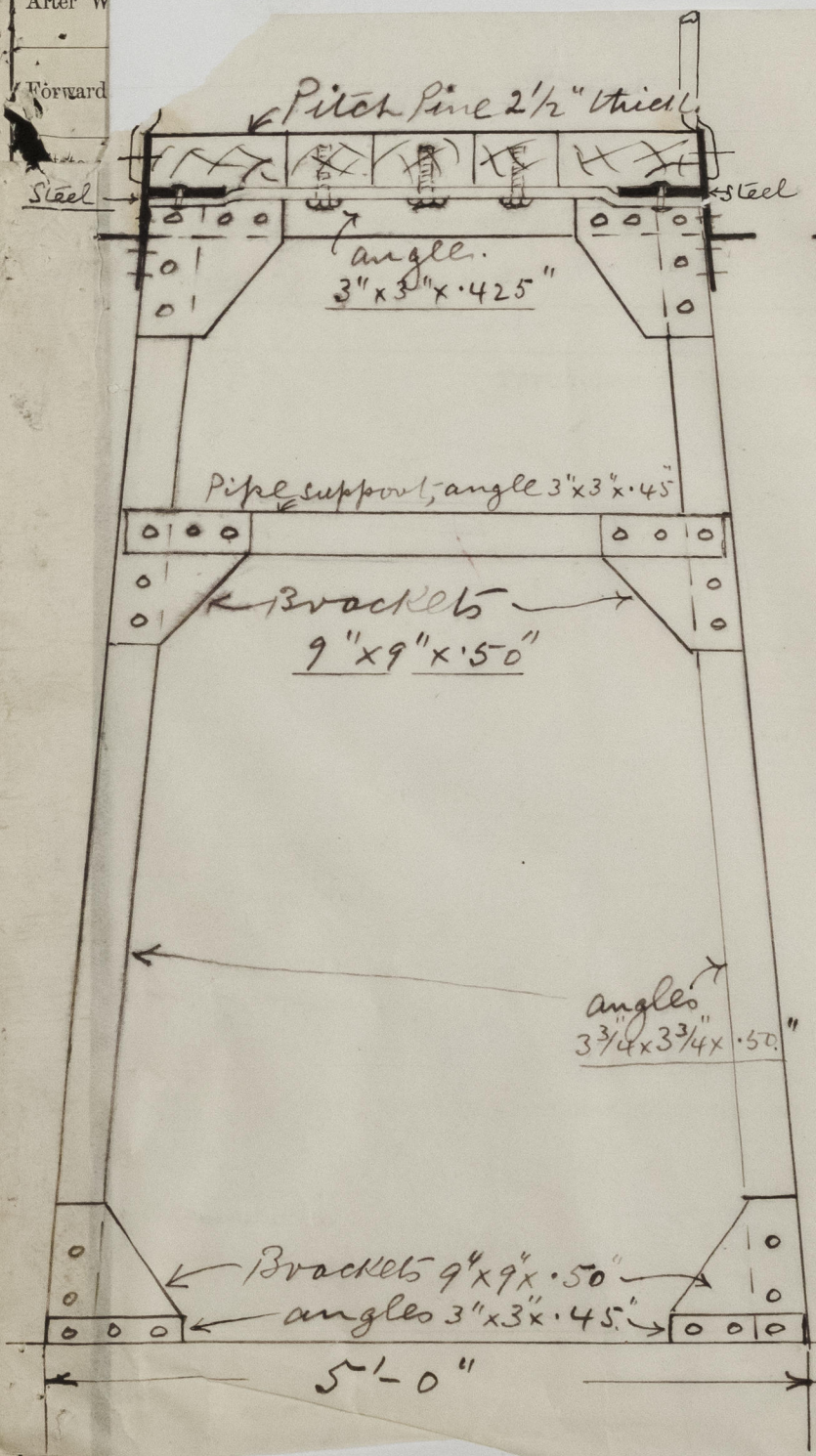
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After W

Forward

Steel



S/S. "SHAPUR."

Fore & aft gangways. 8'-0" high  
well secured to the fore & aft masts.



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Particulars of Scuppers and Sanitary Discharge Pipes

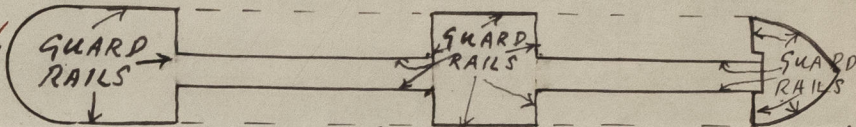
2 galvanised iron scupper pipes 2" dia (p+s side) & discharging about 12" below the summer load line, fitted with a bronze screw down valve with a wheel on each valve. 4 galvanised iron scupper pipes (p+s) discharging about five feet below the U. D.K. in forecastles fitted with bronze non return valves. 4 sanitary discharge pipes fitted amidships & 1 aft discharging above the upper M.K. level & fitted with bronze non return valves.

Particulars of Side Scuttles:

strong side scuttles fitted in the poop, bridge space & forecastle with properly constructed deadlights. 6 fitted in the forecastle below the U. D.K. at a distance of approximately 2 feet to lower edge of sill.

Particulars of Guard Rails:

strong guard rails fitted on the poop, bridge & forecastle decks & on the centre line fore & aft gangways. Height of all guard rail 3'-8".



Particulars of Gangways, Lifelines, etc.:

Solid gangways fitted from the poop to bridge & from the bridge to the forecastle. These are fitted with strong steel supports & securely riveted to the deck. There is no fore & aft bracing to these gangways, which are firmly secured to the poop, bridge & forecastle decks. There is no athwartship bracing. (Details of bracing on added sketch)

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 ...	112'-0"	4'-0"	42" x 18" <del>44x27</del>	14	115 <del>235</del> sq ft	112 sq ft or 50% open rails
Forward Well ...	69'-0"	4'-0"	42" x 18" <del>45x28</del>	8	70 <del>144</del> sq ft	69 sq ft or 50% open rails

State position of each freeing port (F. and A. position and height above deck edge)

After Well: —  
Forward Well: —

See sketch Page 4. Height above deck 14"

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:

fitted over each pilling port. 3 horizontal bars

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 ...	.44	.42	Bulw angle 8"x3 1/2"x4"	30"	Brackets top & bottom	2-48"x36"	22"	—
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	.42	.40	angles 3 3/4"x2 1/2"x4"	30"	none	2-60"x30" 1-48"x34"	18"	—
Bridge, Forward Bulkhead ...	.44	.42	Bulw angle 7 1/4"x3 1/2"x4"	28"	Brackets top & bottom	1-60"x30"	18"	—
Forecastle Bulkhead ...	.42	.40	angles 3 1/2"x2 1/2"x4"	30"	none	2-68"x26"	15"	—
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Deck ...				none				
Exposed Machinery Casings on Superstructure Decks ...	.42	.40	angles 5"x3 3/8"x42"	55"	none	6-62"x24"	20"	8'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	.42	.40	angles 5"x3 3/8"x42"	55"	do	none	—	—
Deckhouses on Flush Deck Ships ...								

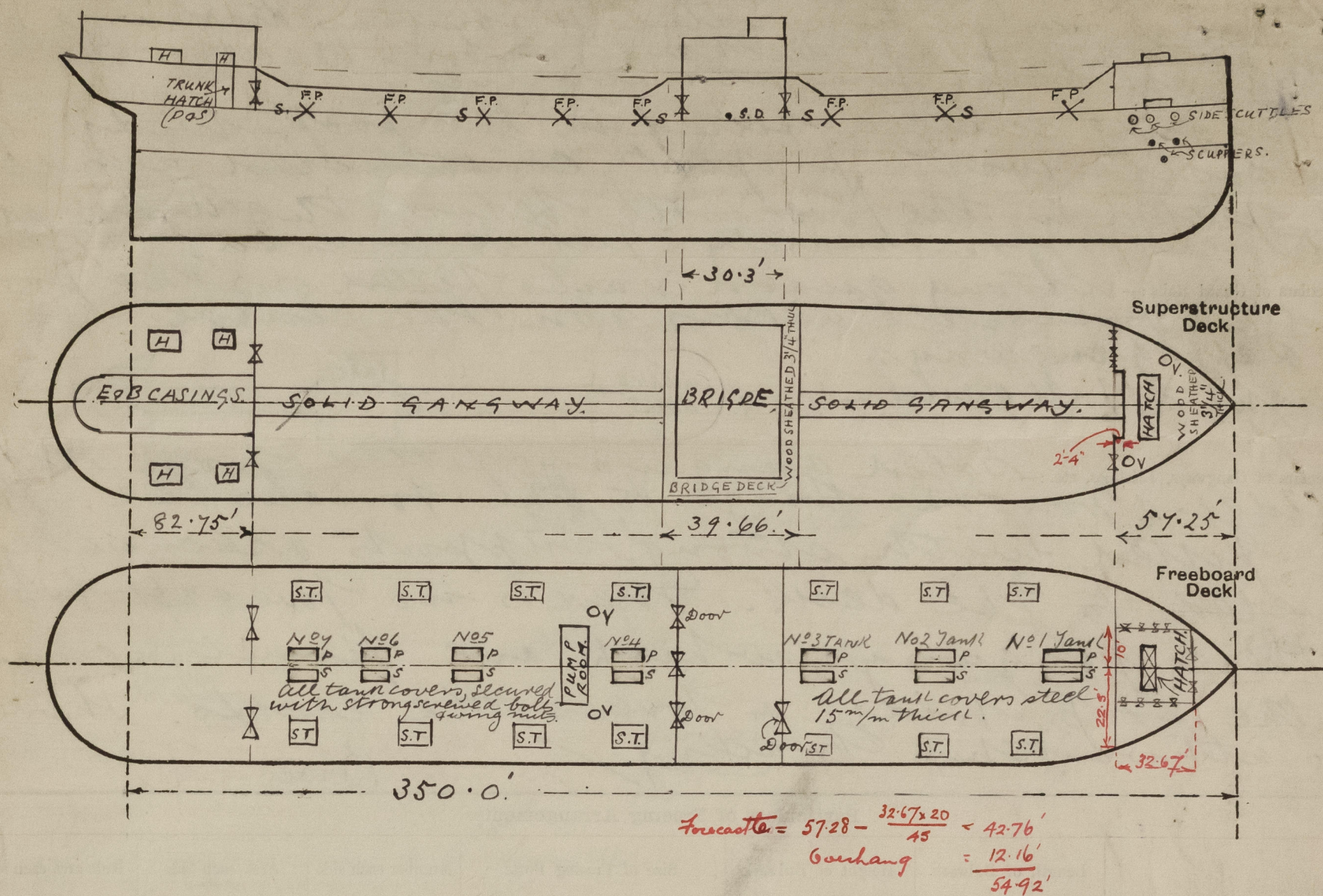
Particulars of Closing Appliances (state if capable of being manipulated from both sides). Yes.

Poop Bulkhead ...	2 openings (p+s) with riveted channels & shifting boards full height. 3 steel hinged doors w.t. steel hinged doors
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	1 opening (centre) with riveted channels & shifting boards full height. 2 openings (p+s) strong steel w.t. hinged doors, fastened with clips.
Bridge, Forward Bulkhead ...	1 opening (starboard) strong steel hinged w.t. door fastened with clips. 4 steel hinged doors fitted with locks & handles. 4 wood hinged doors " " " "
Forecastle Bulkhead ...	
Exposed Machinery Casings on Free-board or Raised Quarter Deck ...	none
Exposed Machinery Casings on Superstructure Decks ...	6 steel w.t. hinged doors fastened with locks & handles
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	none
Deckhouses on Flush Deck Ships ...	

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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard, decks, 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:—

Builder's name and yard number. ✓