

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker, *Motor Vessel.*

having *Poop + Forecastle*

(Type of Superstructures.)

Ship's Name *"Crescence"* Nationality and Port of Registry *British Rochester* Official Number *163255* Gross Tonnage *254.64* Date of Build *1936*

Moulded Dimensions: Length *114'-0"* Breadth *25'-3"* Depth *9'-8"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *(8'-3")* *481.0* tons

Coefficient of fineness for use with Tables *712*

Port of Survey *Hull*

Date of Survey *while building*

Name of Surveyor *W. Malcolm*

Particulars of Classification *100 A1 (contemplated)*

Depth for Freeboard (D) *9'-8"*

Moulded depth ... *9'-8"*

Stringer plate ... *30"* ... *.03*

Sheathing on exposed deck  $T \left( \frac{L-S}{L} \right) =$  *✓*

Depth for Freeboard (D) = *9.70*

Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R = *✓*  
 $(9.70 - 7.60) \times .877 = +1.84$  *✓*

(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) *25'-3"*

Standard Round of Beam =  $\frac{B \times 12}{50} =$  *6.06* *✓*

Ship's Round of Beam = *7.2* *✓*

Difference *1.44* *✓*

Restricted to *✓*

Correction =  $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L}\right) =$   $\frac{1.44}{4} \times .602 = .22$  *✓*

## DEDUCTION FOR SUPERSTRUCTURES.

|                                 | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height       | Height Correction | Effective Length (E) |
|---------------------------------|-------------------------|--|--------------|-------------------|----------------------|
| Poop enclosed ...               | <i>33'-8"</i>           | <i>33.67</i>                                 | <i>6'-8"</i> | -                 | <i>33.67</i>         |
| " overhang ...                  |                         |  |              |                   |                      |
| R.Q.D. enclosed ...             |                         |  |              |                   |                      |
| " overhang ...                  |                         |  |              |                   |                      |
| Bridge enclosed ...             |                         |  |              |                   |                      |
| " overhang aft ...              |                         |  |              |                   |                      |
| " overhang forward ...          |                         |  |              |                   |                      |
| Forecastle enclosed <i>open</i> | <i>12'-0"</i>           | <i>11.57</i>                                 | <i>6'-0"</i> | -                 | <i>11.57</i>         |
| " overhang ...                  |                         |  |              |                   |                      |
| Trunk aft ...                   |                         |  |              |                   |                      |
| " forward ...                   |                         |  |              |                   |                      |
| Tonnage opening aft ...         |                         |  |              |                   |                      |
| " forward ...                   |                         |  |              |                   |                      |
| Total ...                       | <i>45.67</i>            | <i>45.24</i>                                 |              |                   | <i>45.24</i>         |

|  |                                      |
|--|--------------------------------------|
| Standard Height of Superstructure                    | <i>6.0</i> <i>✓</i>                  |
| " R.Q.D.   | <i>✓</i>                             |
| Deduction for complete superstructure                | <i>17.4</i> <i>✓</i>                 |
| Percentage covered $\frac{S}{L} =$                   | <i>40.06</i> <i>✓</i>                |
| " $\frac{S_1}{L} =$                                  | <i>39.68</i> <i>80</i> <i>✓</i>      |
| " $\frac{E}{L} =$                                    | <i>39.68</i> <i>✓</i>                |
| Percentage from Table, Line A.                       | <i>23.22</i> <i>✓</i>                |
| (corrected for absence of forecastle (if required))  | <i>✓</i>                             |
| Percentage from Table, Line B.                       | <i>✓</i>                             |
| (corrected for absence of forecastle (if required))  | <i>✓</i>                             |
| Interpolation for bridge less than .2L (if required) | <i>✓</i>                             |
| Deduction =  | $17.4 \times 23.22 = -4.04$ <i>✓</i> |

## SHEER CORRECTION.

| Station<br>[mtr] [mtr]        | Standard<br>Ordinate | S<br>M | Product  | Actual<br>Ordinate<br><i>ins.</i> | Effective<br>Ordinate | S<br>M | Product  |
|-------------------------------|----------------------|--------|----------|-----------------------------------|-----------------------|--------|----------|
| A.P. ...                      | ✓ 21.40              | 1      | ✓ 21.40  | 22.25                             | 21.40 ✓               | 1      | ✓ 21.40  |
| $\frac{1}{2}$ L from A.P. ... | ✓ 9.52               | 4      | ✓ 38.08  | 10.25                             | 9.52 ✓                | 4      | ✓ 38.08  |
| $\frac{3}{8}$ L „ ...         | ✓ 2.355              | 2      | ✓ 4.71   | 2.5                               | 2.355 ✓               | 2      | ✓ 4.71   |
| Amidships ...                 | -                    | 4      | -        | 0                                 | -                     | 4      | -        |
| $\frac{3}{8}$ L from F.P. ... | ✓ 4.71               | 2      | ✓ 9.42   | 4.6                               | 4.6 ✓                 | 2      | ✓ 9.20   |
| $\frac{1}{2}$ L „ ...         | ✓ 19.04              | 4      | ✓ 76.16  | 19.0                              | 19.0 ✓                | 4      | ✓ 76.00  |
| F.P. ...                      | ✓ 42.80              | 1      | ✓ 42.80  | 42.0                              | 42.0 ✓                | 1      | ✓ 42.00  |
| Total ...                     |                      |        | ✓ 192.57 |                                   |                       |        | ✓ 191.39 |

Mean actual sheer aft = *Excess* *✓*

Mean standard sheer aft = *Excess* *✓*

Mean actual sheer forward = *Deficient (98.92 of Standard)* *✓*

Mean standard sheer forward = *Deficient* *✓*

Length of enclosed superstructure forward of amidships = *Deficient*

  " aft of " = *sheer*

| Standard                   | Actual                    |
|----------------------------|---------------------------|
| <i>4.71</i> $\frac{3}{8}$  | <i>4.6</i> $\frac{3}{8}$  |
| <i>19.04</i> $\frac{3}{8}$ | <i>19.0</i> $\frac{3}{8}$ |
| <i>42.80</i> $\frac{1}{2}$ | <i>42.0</i> $\frac{1}{2}$ |
| <i>114.05</i>              | <i>112.8</i>              |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$   $\frac{1.18}{18} \left( .75 - \frac{2003}{5497} \right) = +.04$  *✓*

If limited on account of midship superstructure. *✓*If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. *✓*

$\frac{112.8}{114.05} = 98.92$  *✓*

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

|                           |                      |
|---------------------------|----------------------|
| Depth to Freeboard Deck = | <i>9.70</i> <i>✓</i> |
| Summer freeboard =        | <i>0.77</i> <i>✓</i> |
| Moulded draught (d) =     | <i>8.93</i> <i>✓</i> |

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *2.23 = 2 1/4* *✓*Addition for Winter North Atlantic Freeboard (if required) = *4 1/4* *✓*

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

|   |                     |
|---|---------------------|
| $\Delta =$  | <i>539</i> <i>✓</i> |
| Tons per inch immersion at summer load water line | <i>5.8</i> <i>✓</i> |

Deduction =  $\frac{\Delta}{40 T}$  inches

$= \frac{539}{40 \times 5.8} = 2.32 = 2 1/4$  *✓*

*2 1/4 Draught. 2 1/4 T.P.I.*

*8-0 1/2 4.71 5.7*

*9-0 1/2 5.42 5.8*

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

Correction for coefficient

|  |                       |
|--|-----------------------|
| $\frac{712 + .68}{1.86} = \frac{1.392}{1.36}$ <i>✓</i> | <i>11.40</i> <i>✓</i> |
| <i>11.67</i> <i>✓</i>                                  |                       |
| Depth Correction ...                                   | <i>1.84</i> <i>✓</i>  |
| Deduction for superstructures ...                      | <i>4.04</i> <i>✓</i>  |
| Sheer correction ...                                   | <i>0.04</i> <i>✓</i>  |
| Round of Beam correction ...                           | <i>0.22</i> <i>✓</i>  |
| Correction for Thickness of Deck amidships ...         | <i>✓</i>              |
| Other corrections, scantlings, etc. ...                | <i>✓</i>              |
| <i>1.88</i> <i>4.26</i> <i>- 2.38</i> <i>✓</i>         |                       |

Summer Freeboard = *9.29* *✓*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Wood, Steel, Deck* :-

|  |                       |                                    |                            |
|--|-----------------------|------------------------------------|----------------------------|
| Tropical Fresh Water Line above Centre of Disc ... | <i>4 1/2</i> <i>✓</i> | Tropical Fresh Water Freeboard ... | <i>0'-9 1/4"</i> <i>✓</i>  |
| Fresh Water Line " " ...                           | <i>2 1/4</i> <i>✓</i> | Fresh Water " " ...                | <i>0'-4 3/4"</i> <i>✓</i>  |
| Tropical Line " " ...                              | <i>2 1/4</i> <i>✓</i> | Tropical " " ...                   | <i>0'-7</i> <i>✓</i>       |
| Winter Line below " " ...                          | <i>2 1/4</i> <i>✓</i> | Winter " " ...                     | <i>0'-7</i> <i>✓</i>       |
| Winter North Atlantic Line " " ...                 | <i>4 1/4</i> <i>✓</i> | Winter North Atlantic " " ...      | <i>0'-11 1/2"</i> <i>✓</i> |
|  |                       |                                    | <i>1'-1 1/2"</i> <i>✓</i>  |

-6 OCT 1936

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS  |                       |     |     |                                       |                         |  |  |  |  |
|--|-----------------------|-----|-----|---------------------------------------|-------------------------|--|--|--|--|
| Description of Hatchway  | ...                   | ... | ... | No1 Forward Well                      | No2 Forward Well        |  |  |  |  |
| Dimensions of Hatchway   | ...                   | ... | ... | 24'-6" x 15'-0" ✓                     | 24'-6" x 15'-0" ✓       |  |  |  |  |
| COAMINGS   | Height above Deck     | ... | ... | 3'-3" ✓                               | 3'-3" ✓                 |  |  |  |  |
|  | Thickness             | ... | ... | .38 ✓                                 | .38 ✓                   |  |  |  |  |
|  | Stiffeners            | ... | ... | 7x3x36L at Sides ✓                    | 7x3x36L at Sides ✓      |  |  |  |  |
|  | Brackets, Stays       | ... | ... | 6x30 B.P. 8'-9" apart ✓               | 6x30 B.P. 8'-9" apart ✓ |  |  |  |  |
| HATCH BEAMS  | Number                | ... | ... | 3 ✓                                   | 3 ✓                     |  |  |  |  |
|  | Spacing               | ... | ... | 3'-6" ✓                               | 3'-6" ✓                 |  |  |  |  |
|  | Scantling and Sketch  | ... | ... | 11x30 ✓<br>11x30 ✓<br>Angles 3x2x16 ✓ | ditto ✓                 |  |  |  |  |
|  | Bearing Surface       | ... | ... | 3" ✓                                  | 3" ✓                    |  |  |  |  |
| FORE AND AFTERS  | Number                | ... | ... |                                       |                         |  |  |  |  |
|  | Spacing               | ... | ... |                                       |                         |  |  |  |  |
|  | Unsupported Lengths   | ... | ... |                                       |                         |  |  |  |  |
|  | Scantling* and Sketch | ... | ... | none ✓                                | none ✓                  |  |  |  |  |
| HATCH COVERS   | Material              | ... | ... | W.P. ✓                                | W.P. ✓                  |  |  |  |  |
|  | Thickness             | ... | ... | 2 1/2 ✓                               | 2 1/2 ✓                 |  |  |  |  |
|  | How fitted            | ... | ... | 1/4" ✓                                | 1/4" ✓                  |  |  |  |  |
|  | Bearing Surface       | ... | ... | 3x3 1/2" ✓                            | 3x3 1/2" ✓              |  |  |  |  |
| Spacing of Cleats  | ...                   | ... | ... | 24" ✓                                 | 24" ✓                   |  |  |  |  |
| Number of Tarpaulins   | ...                   | ... | ... | 2 ✓                                   | 2 ✓                     |  |  |  |  |
| <p>*Are wood fore and afters steel shod at all bearing surfaces? ✓</p> <p>Are battens and wedges efficient and in good condition? ✓</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? ✓</p> <p>Are lashings provided in accordance with rule requirements? ✓</p> |                       |     |     |                                       |                         |  |  |  |  |

Particulars of fiddle, funnel and ventilator coamings:— Fiddle, funnel ventilators in good condition.

Particulars of Flush Bunker Scuttles:— one, on poop deck to galley bunker in poop, substantially constructed with permanent chain attachment required.

Particulars of Companionways:— one on poop deck, built into end of motor casing. height 6' x 4' x 2'-7" wide. plating .26, stiffers 3x2x16 @ 24". opening 1'-11" x 4'-0" closed by hinged leak door having spring lock. sill 18" above wood deck ✓

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—  
 Poop Deck: 2, 6" dia to E. Room, coaming 33"x30" ✓  
 2, 5" dia. to accom. " " 30"x30" ✓  
 Rem. 5" M. Vents.  
 Upper Deck: 1, 11 1/2" dia to hold forward coaming 36"x34" ✓  
 1, 11 1/2" " aft " 36"x34" ✓  
 } wood plies & canvas covers to be provided.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—  
 Fore Deck: 3" dia F.N. height 21" ✓ to fore peak tank.  
 Upper Deck: 3" " " 33" to No1 DB tank. } stuffing holes drilled in upper part of bend  
 3" " " 30" " No2 " }  
 Poop Deck: 3" " F.N. " 18" ✓ to Aft peak tank.  
 } wood plies & canvas covers to be provided.

Particulars of Gangway Cargo and Coaling Ports:—  
 none

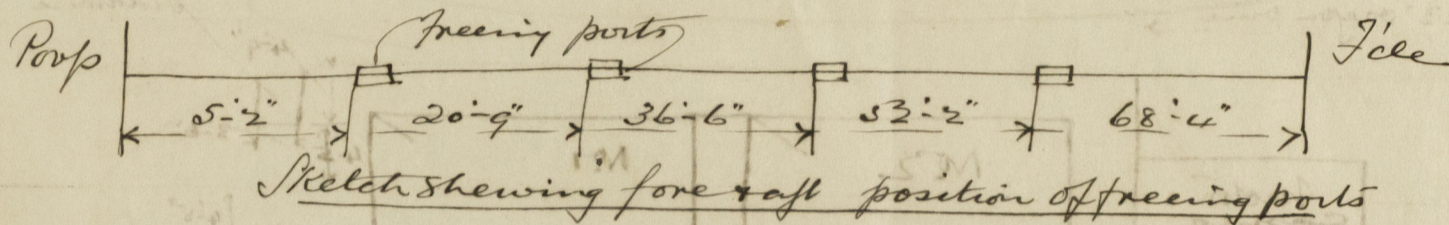


Particulars of Scuppers and Sanitary Discharge Pipes :- On upper deck of gunwale bar type ✓  
From upper deck in poop :- 1 1/2" dia x 2" dia Scuppers lead to shell below fwd deck ✓  
with screw caps on deck x storm valve to shell. ✓  
Sanitary discharge pipes lead to shell below upper deck with non-return valve  
at shell controlled from above upper deck. ✓

Particulars of Side Scuttles :- In poop tween decks having hinged dead lights and of  
substantial construction ✓

Particulars of Guard Rails :- Fwd deck. 3'-0" high, 2 rod stanchions spaced 14' 1/2" apart. ✓  
Well. Steel bulwark 3'-0" high strongly constructed & stayed.  
Stays 6x30 B.P. @ 6ft apart. ✓  
Poop deck. part steel bulwark strongly constructed, height 2'-9".  
and part rails & stanchions 3'-0" high, 2 rod.  
Stanchions spaced 5' 6" apart. ✓

Particulars of Gangways, Lifelines, etc. :- no gangways.  
Lifeline ~~to be fitted and seen in place~~ provided in accordance with regulations



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 ... | 68-4 ✓            | 3'-0" ✓           | 2'-6" x 1'-9" ✓       | 4 ✓              | 17.55 sf ✓     | 13.66 sf ✓          |

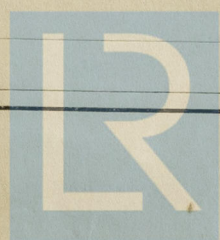
State position of each freeing port ... } After Well :-  
(F. and A. position and height above deck edge) } Forward Well :- 8" above deck. ✓  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- hinged steel shutters ✓  
Additional area where sheer 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 ...   | .25 ✓   | .25 ✓   | 3 x 2 1/2 x 30 ✓ | 30" ✓     | lup T.B. ✓                    | none ✓           | none ✓          | 6'-8" ✓           |
| Raised Quarter Deck Bulkhead ...  |         |         |                  |           |                               |                  |                 |                   |
| Bridge, After Bulkhead ...  |         |         |                  |           |                               |                  |                 |                   |
| Bridge, Forward Bulkhead ...  |         |         |                  |           |                               |                  |                 |                   |
| Forecastle Bulkhead ...   | None.   |         |                  |           |                               |                  |                 |                   |
| Trunk, Aft ...  |         |         |                  |           |                               |                  |                 |                   |
| Trunk, Forward ...  |         |         |                  |           |                               |                  |                 |                   |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ...                     |         |         |                  |           |                               |                  |                 |                   |
| Exposed Machinery Casings on Super-structure Decks Poop ...                             | .26 ✓   | .26 ✓   | 3 x 2 1/2 x 26 ✓ | 27 1/2" ✓ | bus at top ✓                  | 3'-9" x 22" ✓    | 21 1/2" ✓       | 3'-9" x 6'-0" ✓   |
| 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 ...   | no openings ✓                           |
| Raised Quarter Deck Bulkhead ...  |   |
| Bridge, After Bulkhead ...  |   |
| Bridge, Forward Bulkhead ...  |   |
| Forecastle Bulkhead ...   | open.                                   |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ...                     |   |
| Exposed Machinery Casings on Super-structure Decks Poop ...                             | leak hinged doors, spring locks, yes. ✓ |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... |   |
| Deckhouses on Flush Deck Ships ...  |   |

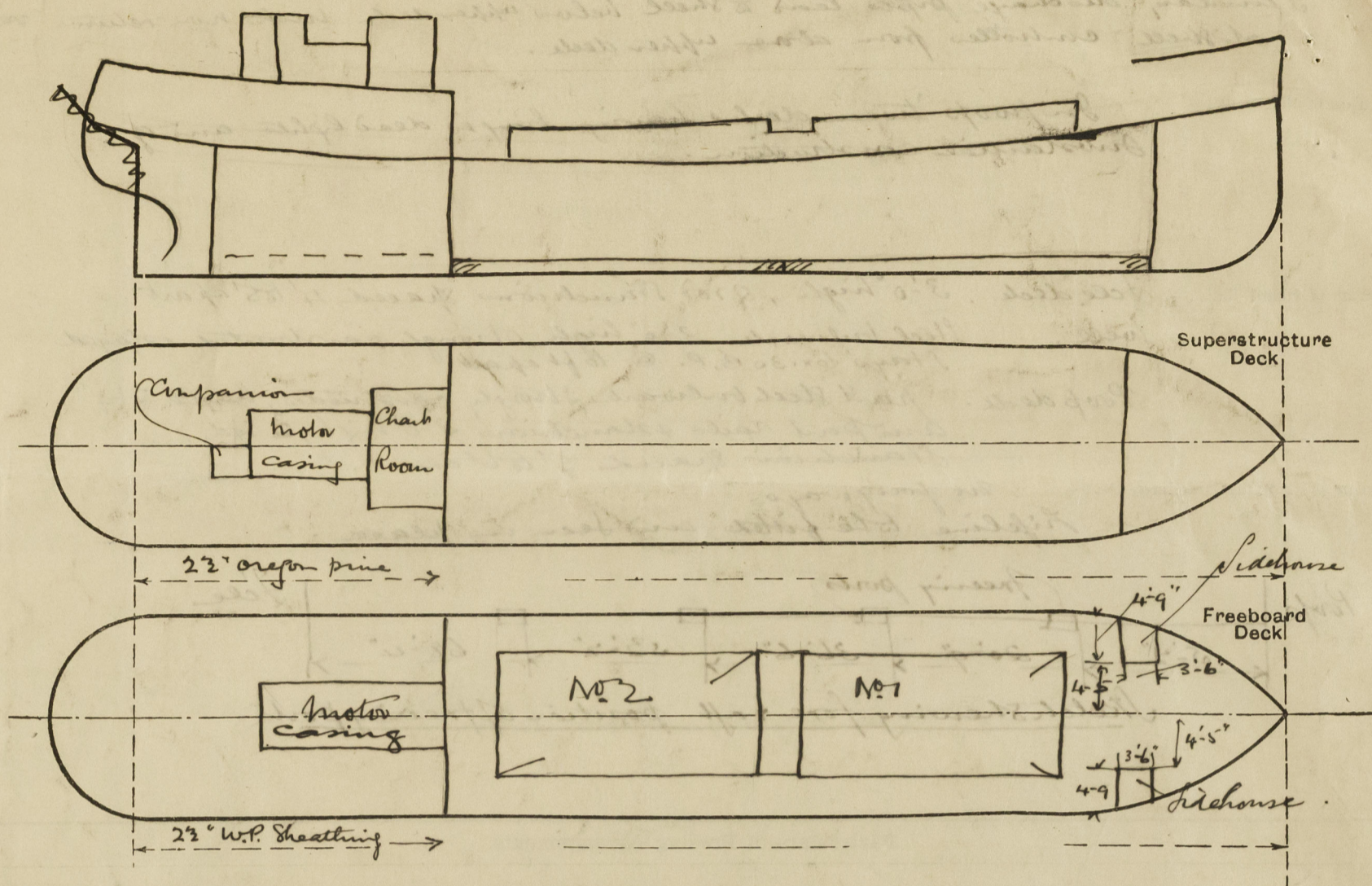


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*Crescence*

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:—

Builder's name and yard number *Toole S.B. & R. Co. Ltd; No 319.*

Names of sister ships ☒

Owners *London & Rochester Trading Co. Ltd.*

Fee £ *(to be charged with first entry)* Received by me *[Signature]*



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