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(For London Office only.)

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

15 APR 1932

Port of Survey **NEWCASTLE**

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having **SHELTER DECK WITH TONNAGE OPENING AFT**

(Type of Superstructures.)

Date of Survey **13<sup>th</sup> April 1932**

Ship's Name

**KENILWORTH**

Nationality and Port of Registry

**BRITISH  
NEWCASTLE**

Official Number

**140709**

Gross Tonnage

**5457.**

Date of Build

**1918**

Name of Surveyor

**J. G. M. J.**

Moulded Dimensions: Length **429.6** Breadth **54.67** Depth **29.12**  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth **12740** tons  
 Coefficient of fineness for use with Tables **.767**

Particulars of Classification **100 R.1.**  
**Shelter Deck with Freeboard**

| Depth for Freeboard (D)            |     |     |              | Depth correction   |  | Round of Beam correction   |                       |
|------------------------------------|-----|-----|--------------|--|--|--|-----------------------|
| Moulded depth                      | ... | ... | <b>29.12</b> | (a) Where D is greater than Table depth<br>(D - Table depth) R =           |  | Moulded Breadth (B)  | <b>54.67</b>          |
| Stringer plate                     | ... | ... | <b>.04</b>   | ( <b>29.16</b> - <b>28.64</b> ) <b>3.00</b> = <b>+ 1.56</b>                |  | Standard Round of Beam = $\frac{B \times 12}{10}$                            | <b>13.12</b>          |
| Sheathing on exposed deck          | ... | ... |              | (b) Where D is less than Table depth (if allowed)<br>(Table depth - D) R = |  | Ship's Round of Beam   | <b>14</b>             |
| $T \left( \frac{L-S}{L} \right) =$ |     |     |              |  |  | Difference   | <b>.88</b>            |
| Depth for Freeboard (D) =          |     |     | <b>29.16</b> | If restricted by superstructures   |  | Restricted to  |                       |
|                                    |     |     |              |  |  | Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$ | <b>.23</b> (1 - .995) |

## DEDUCTION FOR SUPERSTRUCTURES.

|                               | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height     | Height Correction | Effective Length (E) |  |
|-------------------------------|-------------------------|--|------------|-------------------|----------------------|--|
| Poop enclosed                 | <b>34.0</b>             | <b>34.00</b>                                 | <b>9.0</b> |                   | <b>34.00</b>         | Standard Height of Superstructure <b>7.50</b>      |
| " overhang                    |                         |  |            |                   |                      | R.Q.D.   |
| R.Q.D. enclosed               |                         |  |            |                   |                      | Deduction for complete superstructure <b>42.00</b> |
| " overhang                    |                         |  |            |                   |                      | Percentage covered $\frac{S}{L} = 100\%$           |
| Bridge enclosed               |                         |  |            |                   |                      | " $\frac{S_1}{L} = 99.50\%$                        |
| " overhang aft                |                         |  |            |                   |                      | " $\frac{E}{L} = 99.50\%$                          |
| " overhang forward            |                         |  |            |                   |                      | Percentage from Table, Line A.                     |
| Deck enclosed                 |                         |  |            |                   |                      | (corrected for absence of ...)                     |
| " overhang                    |                         |  |            |                   |                      | Percentage from Table, Line A.                     |
| Trunk aft <b>Shelter Deck</b> | <b>391.27</b>           | <b>391.27</b>                                | <b>9.0</b> |                   | <b>391.27</b>        | (corrected for absence of ... required)            |
| forward                       | <b>4.33</b>             | <b>2.16</b>                                  | <b>9.0</b> |                   | <b>2.16</b>          | Interpolation for bridge less than ... required    |
| Tonnage opening aft           | <b>4.4</b>              |  |            |                   |                      | Deduction = <b>42.00 - 99.38 = - 41.62</b>         |
| " forward                     |                         |  |            |                   |                      |  |
| Total                         | <b>429.60</b>           | <b>427.43</b>                                |            |                   | <b>427.43</b>        |  |

## SHEER CORRECTION.

| Station                   | Standard Ordinate | S | M | Product       | Actual Ordinate | Effective Ordinate | S | M | Product       |   |
|---------------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|---|
| A.P.                      | <b>52.96</b>      | 1 |   | <b>52.96</b>  | <b>68.5</b>     | <b>68.50</b>       | 1 |   | <b>68.50</b>  | Mean actual sheer aft = <b>Excess</b>                         |
| $\frac{1}{2}$ L from A.P. | <b>23.56</b>      | 4 |   | <b>94.24</b>  | <b>54.0</b>     | <b>31.20</b>       | 4 |   | <b>124.80</b> | Mean actual sheer forward = <b>Excess</b>                     |
| $\frac{2}{3}$ L           | <b>5.83</b>       | 2 |   | <b>11.66</b>  | <b>13.5</b>     | <b>7.80</b>        | 2 |   | <b>15.60</b>  | Length of enclosed superstructure forward of amidships =      |
| Amidships                 |                   | 4 |   |               |                 |                    | 4 |   |               | " aft of " =  |
| $\frac{2}{3}$ L from F.P. | <b>11.65</b>      | 2 |   | <b>23.30</b>  | <b>26.2</b>     | <b>14.81</b>       | 2 |   | <b>29.62</b>  |   |
| $\frac{1}{2}$ L           | <b>47.13</b>      | 4 |   | <b>188.52</b> | <b>105.0</b>    | <b>59.24</b>       | 4 |   | <b>236.96</b> | Sheer increased by virtue of excess height of superstructures |
| F.P.                      | <b>105.92</b>     | 1 |   | <b>105.92</b> | <b>133.0</b>    | <b>133.00</b>      | 1 |   | <b>133.00</b> |   |
| Total                     |                   |   |   | <b>476.60</b> |                 |                    |   |   | <b>712.50</b> |   |

Correction = Difference between sums of products

 $\left( \frac{75-S}{18} \right) = \frac{235.90}{18} (75-50) = - 3.28$ 

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.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **29.16**  
 Summer freeboard = **3.54**  
 Moulded draught (d) = **25.62**

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **6.40** = **6.5**

Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 13300$ 

Tons per inch immersion at summer load water line

 $T = 47.35$ Deduction =  $\frac{\Delta}{40T}$  inches $= 7.02 = 7$ 

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

Correction for coefficient

 $\frac{68+767}{1.36} = 1.447$ 

Depth Correction ... **1.56**  
 Deduction for superstructures ... **41.74**  
 Sheer correction ... **3.28**  
 Round of Beam correction ...  
 Correction for Thickness of Deck amidships ...  
 Other corrections, scantlings, etc. ...

**1.56** **45.02** **- 43**  
 Summer Freeboard = **42**

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

|  |       |             |                                |     |            |
|--|-------|-------------|--------------------------------|-----|------------|
| Tropical Fresh Water Line above Centre of Disc | ...   | <b>13.2</b> | Tropical Fresh Water Freeboard | ... | <b>2.5</b> |
| Fresh Water Line                               | ...   | <b>7</b>    | Fresh Water                    | ... | <b>2.1</b> |
| Tropical Line                                  | ...   | <b>6.5</b>  | Tropical                       | ... | <b>1.8</b> |
| Winter Line                                    | below | <b>6.5</b>  | Winter                         | ... | <b>1.5</b> |
| Winter North Atlantic Line                     | ...   | <b>15.7</b> | Winter North Atlantic          | ... | <b>1.2</b> |

010066 - 0204 1/2

3.62

2.5

2.1

1.8

1.5

1.2

1.0



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

|                        |                       | HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|------------------------|-----------------------|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                        |                       | UPPER DECK                                      |                       |                       |                       |                       |                       | SHELTER DK.           |                       | S.D.                  |                       | S.D.                  |                       | CASING TOP            |                       | S.D.                  |                       |
|                        |                       | Nº1   | Nº2                   | Nº3                   | Nº4                   | Nº5                   | Nº6                   | Nº1                   | Nº2                   | Nº3                   | Nº4                   | Nº5                   | Nº6                   | BUNKER HATCH          | BUNKER HATCH          | BUNKER HATCH          | BUNKER HATCH          |
| Position of Hatchway   |                       | 26-0  | 26-0                  | 23-9                  | 26-0                  | 26-0                  | 23-9                  | 26-0                  | 26-0                  | 23-10                 | 4-0                   | 8-6                   | 7-9                   | 5-1                   | 4-4                   | 3-0                   | 4-0                   |
| Dimensions of Hatchway |                       | 20-0  | 22-0                  | 22-0                  | 22-0                  | 22-0                  | 22-0                  | 20-0                  | 22-0                  | 22-0                  | 4-0                   | 3-10                  | 17-9                  | 1-6                   | 22-0                  | 3-0                   | 4-0                   |
| AMINGS                 | Height above Deck     | 9"  | 9"                    | 9"                    | 9"                    | 9"                    | 9"                    | 2-6"                  | 2-6"                  | 2-6"                  | 2-6"                  | 2-6"                  | 9"                    | 1-6"                  | 9"                    | 9"                    | 9"                    |
|                        | Thickness             | .50   | .50                   | .50                   | .50                   | .50                   | .50                   | .44                   | .44                   | .44                   | .40                   | .40                   | .50                   | .44                   | .50                   | .50                   | .50                   |
|                        | Stiffeners            | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | 7x3BR                 | 7x3BR                 | 7x3BR                 | -                     | -                     | -                     | -                     | -                     | -                     | -                     |
|                        | Brackets, Stays       | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | none                  | none                  | none                  | -                     | -                     | -                     | -                     | -                     | -                     | -                     |
|                        |                       | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | none                  | none                  | none                  | -                     | -                     | -                     | -                     | -                     | -                     | -                     |
| HATCH BEAMS            | Number                | 5   | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     | 5                     |
|                        | Spacing               | 4'-4"   | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 | 4'-4"                 |
|                        | Scantling and Sketch  | 3 1/2 x 3 1/2 x 4 1/2                           | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 | 3 1/2 x 3 1/2 x 4 1/2 |
|                        |                       | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
|                        | Bearing Surface       | 3 1/2   | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 | 3 1/2                 |
| FORE AND AFTERS        | Number                | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
|                        | Spacing               | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
|                        | Unsupported Lengths   | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
|                        | Scantling* and Sketch | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
|                        | Bearing Surface       | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
| HATCH COVERS           | Material              | W.P.  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  | W.P.                  |
|                        | Thickness             | 2 1/2   | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 | 2 1/2                 |
|                        | How fitted            | F&A   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   | F&A                   |
|                        | Bearing Surface       | 3   | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     | 3                     |
|                        |                       | ✓   | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     | ✓                     |
| Number of Cleats       |                       | 24  | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    | 24                    |
| Number of Tarpaulins   |                       | 2   | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     | 2                     |

Good fore and afters steel shod at all bearing surfaces? *Yes*  
 Pattens and wedges efficient and in good condition? *Yes*  
 Tarpaulins in good condition and in accordance with rule requirements? *Yes*  
 Washings provided in accordance with rule requirements? *Yes*

Particulars of fiddle, funnel and ventilator coamings:-

*Fiddle Gratings fitted with steel hinged covers strongly constructed.  
 Funnel & Ventilators in efficient condition.  
 Engine Room skylight of steel strongly constructed.*

Particulars:-

*NONE*

*Entrance to Crew Space Aft*

*Steel Companionway strongly constructed 6'-9" x 3'-0" x 7'-0" high  
 1 1/2" Leak Entrance Door 4'-8" x 2'-0" 16" Sill operated from both sides.*

Positions on freeboard and superstructure decks:-

*VENTS ON SHELTER DK 24" DIAM. COAMINGS 36" HIGH x 40" THICK  
 " " MAST HOUSES 24" " " 20" " x 40"  
 " " TS TO CREW SPACE 6" 6" " 12" " x 25"  
 " " TUNNEL VENT 21" " " 42" " x 40"*

*All Vents constructed in accordance with the Rules and coamings closed with wood plugs and canvas covers.*

Positions on freeboard, raised quarter, or superstructure decks:-

*Sounding Pipes act as Air Pipes. All flush with decks and fitted with screw caps.*

Coaling Ports:-

*NONE*



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## Particulars of Scuppers and Sanitary Discharge Pipes —

All scupper and sanitary discharge pipes of iron  
 Discharge pipes fitted with brass storm valves.  
 Shelter Tween Dk fitted with 8 Collinson Scuppers each side  
 have now been fitted with wood plugs and cemented  
 making the scuppers watertight at the outside inboard ends.

## Particulars of Side Scuttles:

Side scuttles in poop sides are 8" diam. and fitted with hinged deadlights. All strongly constructed.

## Particulars of Guard Rails:—

Steel bulwark fitted from stem to fore end of No 1 Hatch.  
 Height 3'-6" aft to 4'-2" at stem 44'-6" long. Stiffened by 7 1/2" x 40 Bulb Plate alt. with .40 flanged brackets 4'-8" apart. Rail bar 6 x 3 B.A.  
 Midship Bulwark 88'-9" long from fore end of saloon to Engineers house. 3'-6" high. Stiffeners 7 1/2" x 40 Bulb Plate spaced 5'-6" apart.  
 Guard Rails elsewhere. 3'-8" high. Stems 4'-8" apart 3 Rails 1 @ 1 1/2" & 2 @ 1" diam.

## Particulars of Gangways, Lifelines, etc. :—

None.

## Particulars of Freeing Arrangements.

|  | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
|--|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| Stormage Well<br>After Well ... ..     | 4'-4"             | 9'-0"             | 17" x 15"             | 1                |                |                     |
| Midship Bulwark<br>Forward Well ... .. | 88'-9"            | 3'-6"             | 36" x 18"             | 2                |                |                     |

State position of each freeing port ... .. } After Well:— 29' x 60' from Eng's House.  
 (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:— Shutters with 1 bar

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 |
|--|--------------|---------|---------------------|---------|-------------------------------|------------------|-----------------|-------------------|
| Stormage Well aft<br>Poop Bulkhead ... ..  |              | .40     | 4" flanges          | 2'-9"   | —                             | —                | —               | 9'-0"             |
| Raised Quarter Deck Bulkhead ...   |              |         |                     |         |                               |                  |                 |                   |
| Bridge, After Bulkhead ... ..  |              |         |                     |         |                               |                  |                 |                   |
| Bridge, Forward Bulkhead ... ..  |              |         |                     |         |                               |                  |                 |                   |
| Forecastle Bulkhead ... ..   |              |         |                     |         |                               |                  |                 |                   |
| Trunk, Aft ... ..  |              |         |                     |         |                               |                  |                 |                   |
| Trunk, Forward ... ..  |              |         |                     |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ...                        |              |         |                     |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Super-structure Decks ... ..                                  | 17 1/2" x 50 | .40     | 3 1/2 x 3 1/2 x .40 | 3'-6"   | Brackets                      | 4'-4" x 2'-0"    | 19"             | 7'-3"             |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... .. | 24" x 50     | .40     | 3 1/2 x 3 1/2 x .40 | 3'-6"   | Brackets                      | 4'-4" x 2'-0"    | 25"             | 9'-0"             |
| Stormage Well forward Bulkhead<br>Deckhouses on Flush Deck Ships ...                       |              | .40     | 4" flanges          | 2'-9"   | Brackets                      | 3'-11" x 3'-2"   | 24"             | 9'-0"             |

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

|   |                                       |
|---|---------------------------------------|
| Stormage Well aft Bulkhead  | Intact bulkhead                       |
| Raised Quarter Deck Bulkhead  | ✓                                     |
| Bridge, After Bulkhead  | ✓                                     |
| Bridge, Forward Bulkhead  | ✓                                     |
| Forecastle Bulkhead   | ✓                                     |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks                     | ✓                                     |
| Exposed Machinery Casings on Super-structure Decks                                  | Lock & Handles both sides             |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | Lock & Handles both sides             |
| Stormage Well forward Bulkhead<br>Deckhouses on Flush Deck Ships                    | 2 1/2" Storm boards fitted full depth |

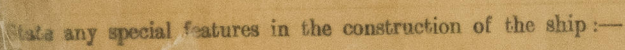


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Foundation



Kencelwanti



3 Shelter Susan Deeks fitted with 8 Collinson Scuppers each side.

Names of sister ships

Owners.

APPLIED FOR 14 APR 1932