

Amended Preliminary Convention Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Peop & Bridge & Foll.
(Type of Superstructures.)

Port of Survey Hamburg/Kiel
Date of Survey _____
Name of Surveyor _____
Particulars of Classification +100 A1
Petrol. in Bulk. contempt.

| | | | | |
|---|---|-----------------|---------------|-------------------------------|
| Ship's Name <u>Howaldtswerke AG. Kiel</u> <u>Yard No 740.</u> | Nationality and Port of Registry <u>U.K.</u> | Official Number | Gross Tonnage | Date of Build <u>1936.</u> |
|---|---|-----------------|---------------|-------------------------------|

Moulded Dimensions: Length 395.0' Breadth 55.0' Depth 27.0'
Moulded displacement at moulded draught = 85 per cent. of moulded depth 10,950 tons
Coefficient of fineness for use with Tables 0.77.769

| Depth for Freeboard (D) | Depth correction | Round of Beam correction |
|--|---|--|
| Moulded depth <u>27.0'</u> | (a) Where D is greater than Table depth <u>.73</u> (D-Table depth) R = (27.06 - 26.33) <u>3.00</u> | Moulded Breadth (B) <u>55.00</u> |
| Stringer plate <u>0.06</u> | = + <u>2.19"</u> | Standard Round of Beam = $\frac{B \times 12}{50}$ = <u>13.20"</u> |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u> | (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u> | Ship's Round of Beam = <u>13"</u> |
| Depth for Freeboard (D) = <u>27.06</u> | If restricted by superstructures <u>✓</u> | Difference <u>Defect .20"</u> |
| | | Restricted to |
| | | Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right)$ = $\frac{.20^2}{4} \times \frac{.371}{.77} = +.02"$ |

DEDUCTION FOR SUPERSTRUCTURES.

| Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|--|--|-------------|---------------------------------------|--|
| Poop enclosed <u>143.0'</u> | <u>143.00</u> | <u>7.5'</u> | <u>✓</u> | <u>143.00</u> |
| " overhang | | | | |
| R.Q.D. enclosed | | | | |
| " overhang | | | | |
| Bridge enclosed... <u>equist.</u> <u>25.60</u> | <u>25</u> | <u>7.0'</u> | <u>$\frac{7.00}{7.45}$</u> | <u>$\frac{24.05}{7.45}$</u> |
| " overhang aft <u>2.50</u> | <u>1.88</u> | | | <u>1.77</u> |
| " overhang forward <u>5.88</u> | <u>.50</u> | | | <u>.47</u> |
| Fore enclosed <u>equist.</u> <u>75.46</u> | <u>46.80</u> | <u>7.0'</u> | <u>$\frac{7.00}{7.45}$</u> | <u>$\frac{72.33}{7.45}$</u> |
| " overhang <u>77.47</u> | <u>77.47</u> | | | <u>78</u> |
| Trunk aft | | | | |
| " forward | | | | |
| Tonnage opening aft | | | | |
| " forward | | | | |
| Total | <u>249.57</u> | | | <u>242.07</u> |

Standard Height of Superstructure 7.45'
" " R.Q.D. ✓
Deduction for complete superstructure 41.67
Percentage covered $\frac{S}{L} = \frac{249.57}{395.0} = 63.18\%$
" " $\frac{S_1}{L} = \frac{242.07}{395.0} = 61.28\%$
" " $\frac{E}{L} = \frac{242.07}{395.0} = 61.28\%$
Percentage from Table, Line A. & B 48.18%
(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 = $41.67 \times \frac{48.18}{100} = 20.08$

SHEER CORRECTION.

Normal.

| Station | Standard Ordinate | S M | Product | Actual Ordinate | Effective Ordinate | S M | Product |
|----------------------------------|-------------------|-----|---------|-----------------|--------------------|-----|---------|
| A.P. | | 1 | | | | 1 | |
| $\frac{1}{4}$ L from A.P. | | 4 | | | | 4 | |
| $\frac{2}{4}$ L " | | 2 | | | | 2 | |
| Amidships | | 4 | | | | 4 | |
| $\frac{2}{4}$ L from F.P. | | 2 | | | | 2 | |
| $\frac{1}{4}$ L " | | 4 | | | | 4 | |
| F.P. | | 1 | | | | 1 | |
| Total | | | | | | | |

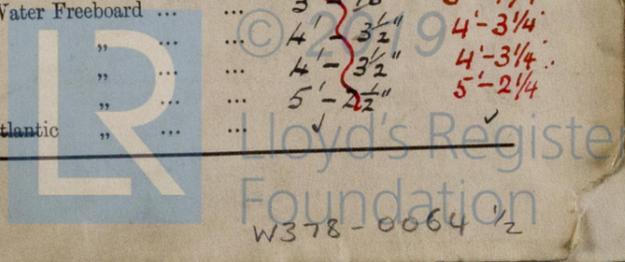
Mean actual sheer aft =
Mean standard sheer aft = } *Standard*
Mean actual sheer forward =
Mean standard sheer forward = }
Length of enclosed superstructure forward of amidships = } *Standard*
" " aft of " = } *sheer.*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \text{Nil.}$
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) | 69.95 |
| Addition for Winter and Winter North Atlantic Freeboard. | Displacement in salt water at summer load water line | Correction for coefficient | 74.574 |
| Depth to Freeboard Deck = <u>27.06</u> Ft. | $\Delta =$ | Depth Correction | 2.19 |
| Summer freeboard = <u>4.75</u> | Tons per inch immersion at summer load water line | Deduction for superstructures | 17.81 <u>20.08</u> |
| Moulded draught (d) = <u>22.31</u> | T = | Sheer correction | .02 |
| Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>5.58</u> = <u>5$\frac{1}{2}$"</u> | Deduction = $\frac{\Delta}{40T}$ inches | Round of Beam correction | .02 |
| Addition for Winter North Atlantic Freeboard (if required) = <u>✓</u> | $d_{1/4} = 5\frac{1}{2}"$ | Correction for Thickness of Deck amidships | - |
| | | Other corrections, scantlings, etc. | - |
| | | Summer Freeboard = <u>56.97</u> | |

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

| | | | |
|---|-------------------|---------------------------------------|----------------------|
| Tropical Fresh Water Line above Centre of Disc | 11" | Tropical Fresh Water Freeboard | 4' 9" |
| Fresh Water Line " " | 5 $\frac{1}{2}$ " | Fresh Water " " | 3' 10" |
| Tropical Line " " | 5 $\frac{1}{2}$ " | Tropical " " | 4' 3 $\frac{1}{4}$ " |
| Winter Line below " " | 5 $\frac{1}{2}$ " | Winter " " | 4' 3 $\frac{1}{4}$ " |
| Winter North Atlantic Line " " | ✓ | Winter North Atlantic " " | 5' 2 $\frac{1}{4}$ " |



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|---|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Description of Hatchway | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dimensions of Hatchway | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| COAMINGS | Height above Deck | ... | ... | ... | ... | ... | ... | ... | ... |
| | Thickness | ... | ... | ... | ... | ... | ... | ... | ... |
| | Stiffeners | ... | ... | ... | ... | ... | ... | ... | ... |
| | Brackets, Stays | ... | ... | ... | ... | ... | ... | ... | ... |
| HATCH BEAMS | Number | ... | ... | ... | ... | ... | ... | ... | ... |
| | Spacing | ... | ... | ... | ... | ... | ... | ... | ... |
| | Scantling and Sketch | ... | ... | ... | ... | ... | ... | ... | ... |
| FORE AND AFTERS | Bearing Surface | ... | ... | ... | ... | ... | ... | ... | ... |
| | Number | ... | ... | ... | ... | ... | ... | ... | ... |
| | Spacing | ... | ... | ... | ... | ... | ... | ... | ... |
| | Unsupported Lengths | ... | ... | ... | ... | ... | ... | ... | ... |
| HATCH COVERS | Material | ... | ... | ... | ... | ... | ... | ... | ... |
| | Thickness | ... | ... | ... | ... | ... | ... | ... | ... |
| | How fitted | ... | ... | ... | ... | ... | ... | ... | ... |
| | Bearing Surface | ... | ... | ... | ... | ... | ... | ... | ... |
| Spacing of Cleats | ... | ... | ... | ... | ... | ... | ... | ... | |
| Number of Tarpaulins | ... | ... | ... | ... | ... | ... | ... | ... | |

*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 :-

Particulars of Flush Bunker Scuttles :-

Particulars of Companionways :-

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

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

Particulars of Gangway Cargo and Coaling Ports :-

Particulars of Scuppers and Sanitary Discharge Pipes

Particulars of Side Scuttles :

Particulars of Guard Rails :-

Particulars of Gangways, Lifelines, etc. :-

RETAIN

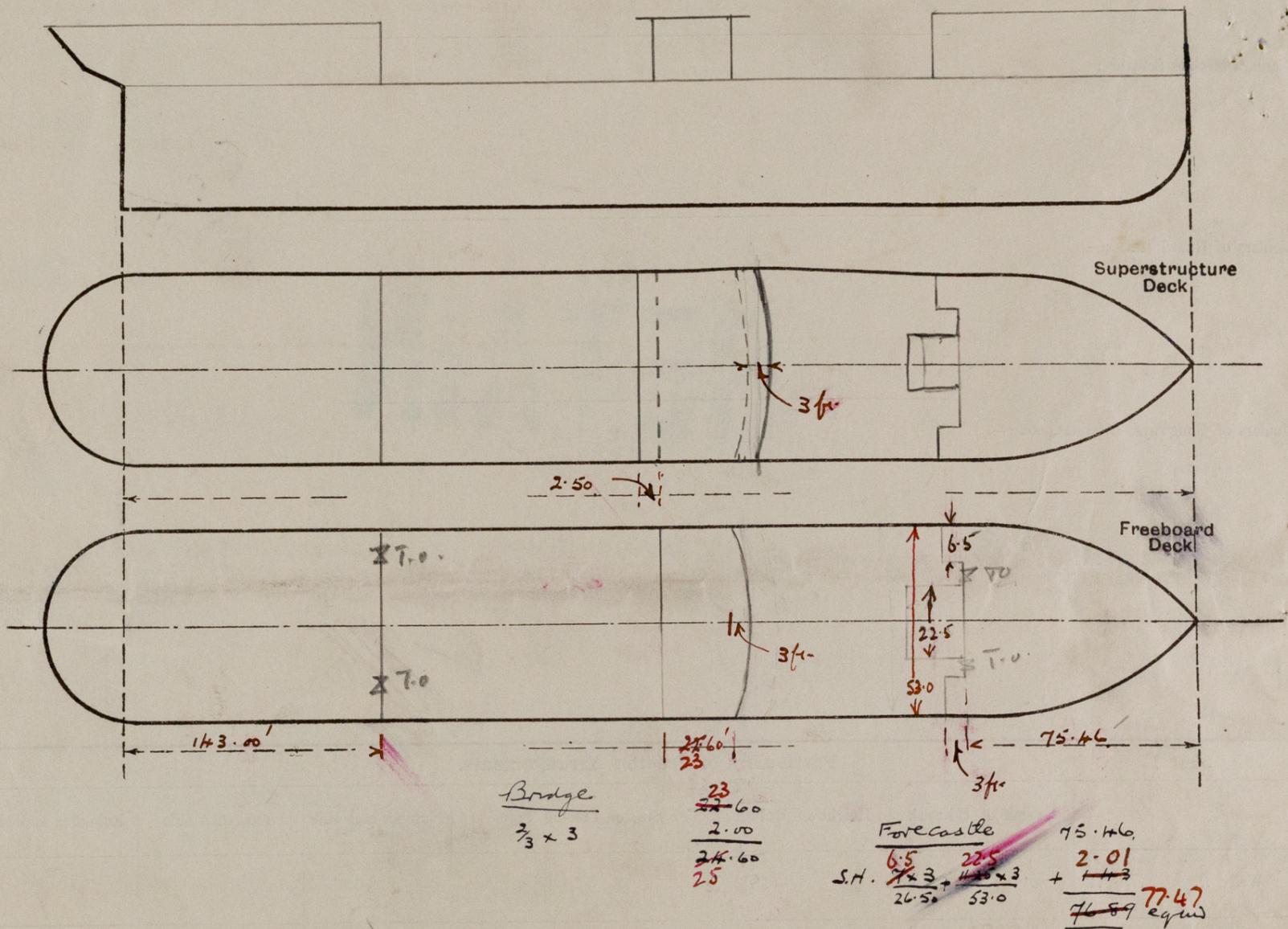
| Particulars of Freeing Arrangements. | | | | | | |
|--------------------------------------|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
| After Well | ... | ... | ... | ... | ... | ... |
| Forward Well | ... | ... | ... | ... | ... | ... |

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 | ... | ... | ... | ... | ... | ... | ... | ... |
| Bridge, After Bulkhead | ... | ... | ... | ... | ... | ... | ... | ... |
| Bridge, Forward Bulkhead | ... | ... | ... | ... | ... | ... | ... | ... |
| Forecastle Bulkhead | ... | ... | ... | ... | ... | ... | ... | ... |
| Trunk, Aft | ... | ... | ... | ... | ... | ... | ... | ... |
| Trunk, Forward | ... | ... | ... | ... | ... | ... | ... | ... |
| 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 | ... | ... | ... | ... | ... | ... | ... | ... |

| 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 | ... |

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.....

Names of sister ships.....

Owners.....

Fee £ : : Received by me.....



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