



Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR ~~STEAMER~~ ~~SAILING SHIP~~ TANKER.)

14 NOV 1951

| | | | | | |
|---|------------------------|--|---|------------------------------------|--|
| Ship's Name SHETLAND | Official Number --- | Nationality and Port of Registry Danish Copenhagen | Gross Tonnage About 10670 | Date of Build 1952 1 | Port of Survey Göteborg |
| Moulded Dimensions: Length 156.970 M. Breadth 19.510 M. Depth 11.730 Metres 157.275 Metres to Centre Line of Rudder Stock. | | | | | Date of Survey Whilst building |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth 23.100 M³ | | | | | Surveyor's Signature <i>Hama</i> |
| Coefficient of fineness for use with Tables .76 .755 | | | | | Particulars of Classification +100A1 |
| | | | | | Carrying Petroleum in bulk |

| Depth for Freeboard (D). M. | Depth correction. | Round of Beam correction. |
|---|--|---|
| Moulded depth 11.730 | (a) Where D is greater than Table depth (D-Table depth) R = 8.33(11.751-10.484)30 = +317 m/m. | Moulded Breadth (B) 19.51 M. Standard Round of Beam = $\frac{B \times 12}{50} = \frac{390}{50} = 390$ Ship's Round of Beam = 475 mm. Difference +85 |
| Stringer plate021 | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓ | Restricted to Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{85^2}{4} \times 0.5917 = -13 \text{ m/m.}$ |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | If restricted by superstructures ✓ | |
| Depth for Freeboard (D) = 11.751 | | |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|---|-------------------------|--|-------------|-------------------|----------------------|
| Poop enclosed <i>As per plan</i> 34852 | 34852 | 34852 | 2440 | | 34852 |
| .. overhang ... | | | | | |
| R.Q.D. enclosed ... | | | | | |
| .. overhang ... | | | | | |
| Bridge enclosed <i>As per plan</i> 11522 | 11522 | 11522 | 2440 | | 11522 |
| .. overhang aft ... | | | | | |
| .. overhang forward ... | | | | | |
| Forecastle enclosed ... | 17840 | 17840 | 2440 | | 17840 |
| .. overhang ... | | | | | |
| Trunk aft ... | | | | | |
| .. forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| .. forward ... | | | | | |
| Total ... | 64214 | 64214 | | | 64214 |

Standard Height of Superstructure **2290 m/m**
 " " R.Q.D. **✓**
 Deduction for complete superstructure **1067 m/m.**
 Percentage covered $\frac{S}{L} =$
 " " $\frac{S_1}{L} =$ } **40.83**
 " " $\frac{E}{L} =$
 Percentage from Table, Line **TANKER 31.83**
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required) **✓**
 Deduction = **1067 x 31.83 = -340 m/m.**

SHEER CORRECTION.

| Station | Standard Ordinate | S M | Product | Actual Ordinate | Effective Ordinate | S M | Product |
|-------------------------------|-------------------|----------|--------------|-----------------|--------------------|----------|-------------|
| A.P. ... | 1564 | 1 | 1564 | 1016 ✓ | 1016 | 1 | 1016 |
| $\frac{1}{4}$ L from A.P. ... | 695 | 4 | 2780 | 91 ✓ | 91 | 4 | 364 |
| $\frac{2}{4}$ L " ... | 174 | 2 | 348 | 0 ✓ | ✓ | 2 | ✓ |
| Amidships ... | ✓ | 4 | ✓ | 0 ✓ | ✓ | 4 | ✓ |
| $\frac{3}{4}$ L from F.P. ... | 347 | 2 | 694 | 0 ✓ | ✓ | 2 | ✓ |
| $\frac{1}{4}$ L " ... | 1390 | 4 | 5560 | 555 ✓ | 555 | 4 | 2220 |
| F.P. ... | 3128 | 1 | 3128 | 2440 ✓ | 2440 | 1 | 2440 |
| Total ... | | | 14074 | | | | 6040 |

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

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.5458} \right) = \frac{8034}{18} \left(\frac{.75 - 2042}{.5458} \right) = +244 \text{ m/m.}$
 If limited on account of midship superstructure.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **11.751**
 Summer freeboard = **2.660**
 Moulded draught (d) = **9.091**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48} \text{ inches} = 189 \text{ m/m.}$

Addition for Winter North Atlantic Freeboard (if required) = **189 + 129 = +318 m/m.**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 20979$

Tons per inch immersion at summer load water line

$T = 66.66$

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

= **200 m/m.**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.76 + .68}{1.36} = \frac{1.44}{1.36}$

Depth Correction **317** ✓
 Deduction for superstructures **340** ✓
 Sheer correction **244** ✓
 Round of Beam correction **13** ✓
 Correction for Thickness of Deck amidships **✓**
 Other corrections, scantlings, etc. **✓**

2316
2452

561 353 + 208
Summer Freeboard = 2460 m/m.

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~WATER~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... **390..** m/m ✓
 Fresh Water Line " " ... **200..** " ✓
 Tropical Line " " ... **190..** " ✓
 Winter Line below " " ... **190..** " ✓
 Winter North Atlantic Line " " ... **320..** " ✓

Tropical Fresh Water Freeboard ... **2660** ✓
 Fresh Water " ... **2250** ✓
 Tropical " ... **2470** ✓
 Winter " ... **2250** ✓
 Winter North Atlantic " ... **2980** ✓

Shetland.

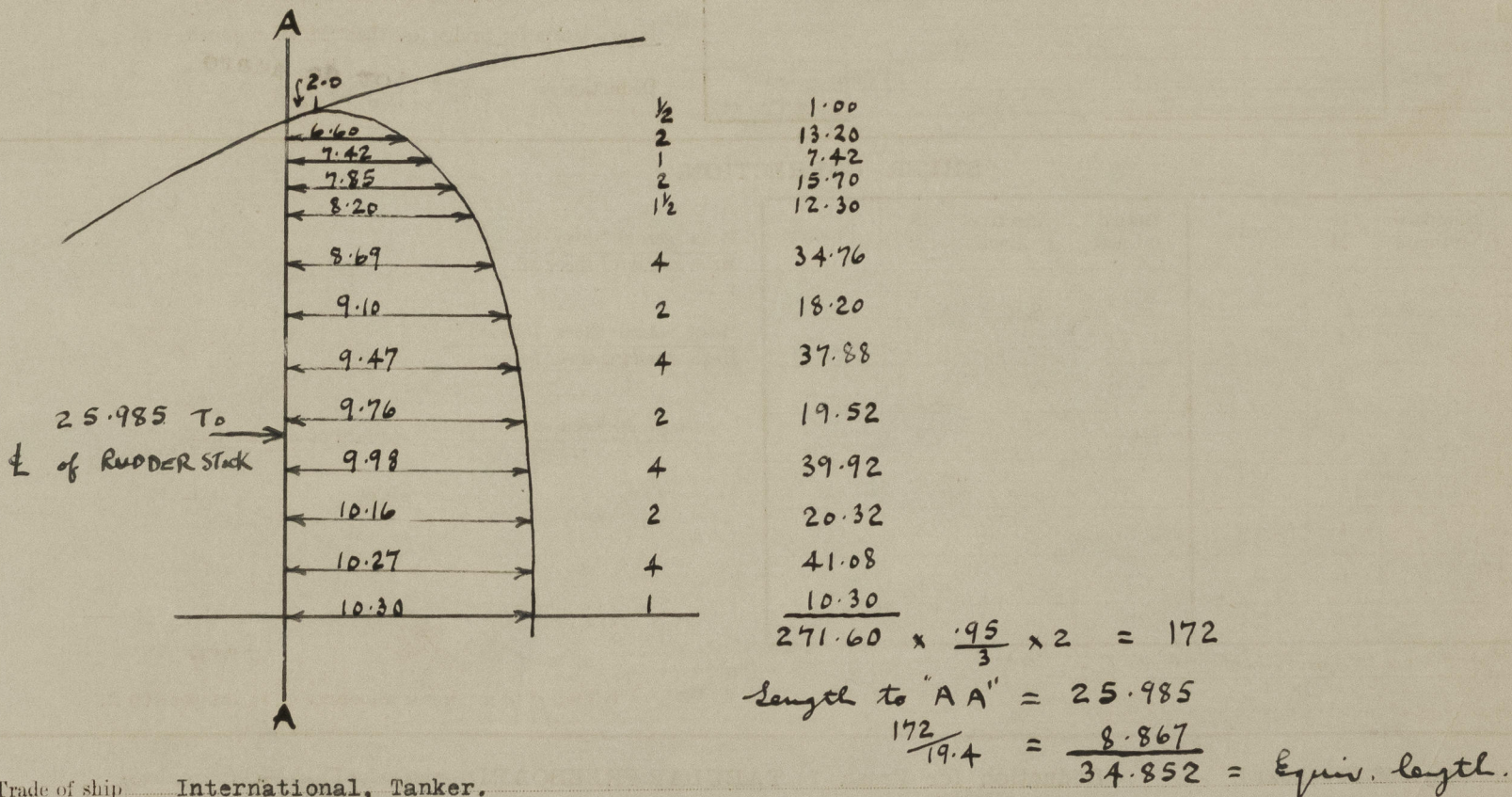
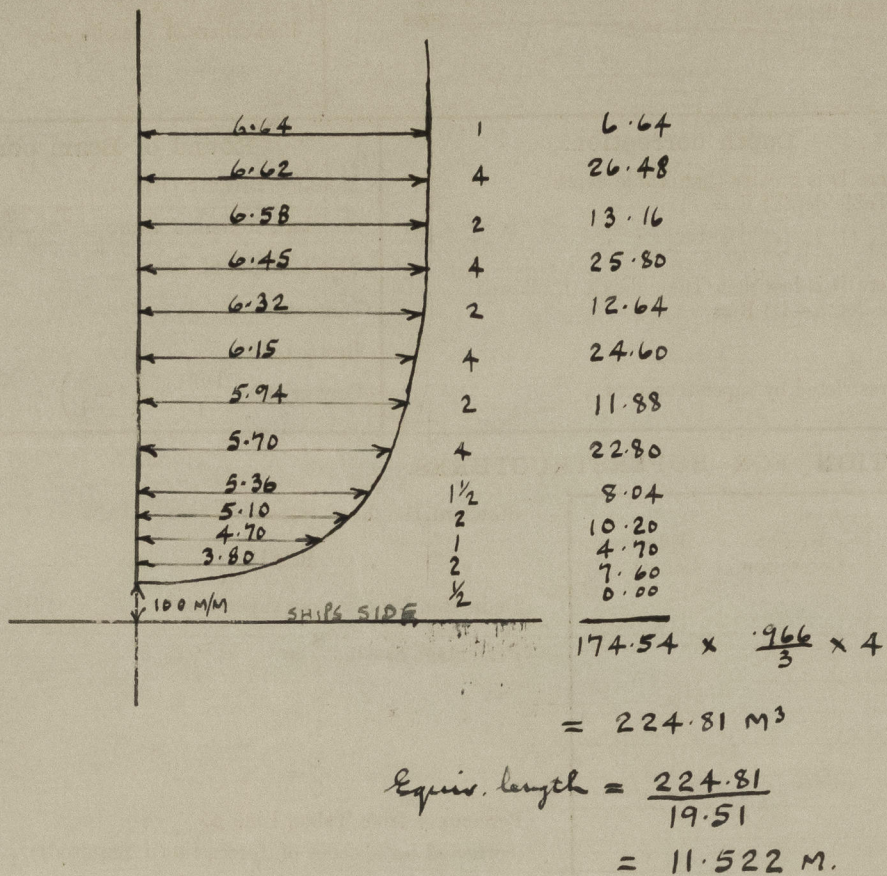
A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Displacements on shell plating and tons per inch immersion in salt water.

Displacement at 75 % of moulded depth 20220 tons, and 66.25 tons per inch

| | | | | | | | | | | | | |
|---|---|-------|---|---|---|-------|---|---|-------|---|---|---|
| " | " | 85 % | " | " | " | 23360 | " | " | 67.95 | " | " | " |
| " | " | 95 % | " | " | " | 26570 | " | " | 69.68 | " | " | " |
| " | " | 100 % | " | " | " | 28170 | " | " | 70.50 | " | " | " |

BRIDGE



Trade of ship International, Tanker.

M/T "Nerma Dan", AB Lindholmens Varv, Gothenburg, Yard No.1015 &
Names of sister ships M/T "Christiansborg", AB Lindholmens Varv, Gothenburg, Yard No.1016.

Builder's name and yard number AB Lindholmens Varv, Gothenburg, Yard No. 1017.

Owners AS Det Dansk-Franske Dampskibsselskab.

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