

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

1874

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~

having Poop, Bridge and Forecastle.

Port of Survey Nagasaki.

Date of Survey 26th Jany 1933 to
8th Februaty 1933.

(Type of Superstructures.)

Ship's Name

s.s. "T H E L M A"

Nationality and Port of Registry
Grimstad.
Norwegian.

Official Number

-

Gross Tonnage

5578

Date of Build

1919-8mo

Name of Surveyor H.D. Buchanan.

Moulded Dimensions: Length 399.5 Breadth 52.0 Depth 31.0

Moulded displacement at moulded draught = 85 per cent. of moulded depth

tons

Coefficient of fineness for use with Tables

Particulars of Classification *100AI

Carrying oil fuel in bulk F.P.
above 150° F. 5.5 Yds No 3-1-31.

Depth for Freeboard (D)

Moulded depth 31.

Stringer plate70

Sheathing on exposed deck

$$T \left(\frac{L-S}{L} \right) =$$

Depth for Freeboard (D) =

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R =

(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) 52.0

Standard Round of Beam = $\frac{B \times 12}{50} =$ 12.4

Ship's Round of Beam =

Difference

Restricted to

Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|------------------------------|--|--------------|-------------------|----------------------|
| Poop enclosed | <u>49.5</u> <u>49.0'</u> | | <u>7.25'</u> | | |
| " overhang | | | | | |
| R.Q.D. enclosed | | | | | |
| " overhang | | | | | |
| Bridge enclosed... .. | <u>121.0'</u> | | <u>7.5'</u> | | |
| " overhang aft | | | | | |
| " overhang forward | <u>38.66</u> <u>39.0'</u> | | <u>6.5'</u> | | |
| W'ele enclosed | | | | | |
| " overhang | | | | | |
| Trunk aft | <u>86.75'</u> | | <u>7.5'</u> | | |
| " forward | <u>103.75'</u> | | <u>7.5'</u> | | |
| Tonnage opening aft ... | | | | | |
| " forward | | | | | |
| Total | <u>399.5'</u> <u>.66</u> | | | | |

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

Percentage covered $\frac{S}{L} =$

" " $\frac{S_1}{L} =$

" " $\frac{E}{L} =$

Percentage from Table, Line A.

(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 =

SHEER CORRECTION.

| Station | Standard Ordinate | S M | Product | Actual Ordinate | Effective Ordinate | S M | Product |
|----------------------------------|-------------------|-----|---------|-----------------|--------------------|-----|---------|
| A.P. | | 1 | | <u>51.25"</u> | | 1 | |
| $\frac{1}{8}$ L from A.P. | | 4 | | <u>9.375"</u> | | 4 | |
| $\frac{3}{8}$ L " | | 2 | | <u>-875"</u> | | 2 | |
| Amidships | | 4 | | <u>0</u> | | 4 | |
| $\frac{5}{8}$ L from F.P. | | 2 | | <u>.5"</u> | | 2 | |
| $\frac{7}{8}$ L " | | 4 | | <u>15"</u> | | 4 | |
| F.P. | | 1 | | <u>88"</u> | | 1 | |
| Total | | | | | | | |

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =
L

" " aft of " =

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

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.

Ft.

Depth to Freeboard Deck =

Summer freeboard =

Moulded draught (d) =

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches =

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

| + | - |
|---|---|
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| | |

Summer Freeboard =

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

| | |
|---|--|
| Tropical Fresh Water Line above Centre of Disc | |
| Fresh Water Line " " | |
| Tropical Line " " | |
| Winter Line below " " | |
| Winter North Atlantic Line " " | |

Tropical Fresh Water Freeboard

Fresh Water "

Tropical "

Winter "

Winter North Atlantic "

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Lloyd's Register

Norwegian 1909 Rules.

Jobs. re-assigned.

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | | |
|---|----------------------------|-----------------|------------------|----------------|------------------|------------------|------------------|----------------------|----------------------|--------------|
| Description of Hatchway | Forw'd. Hold. | After Hold. | 10 Cargo Oil Tks | Cross Tank | Coal Hatch 4 off | Coal Hatch 2 off | Coal Hatch 1 off | Coal Hatch in Bridge | Escape to No. 1 Hold | Poop Stores |
| Dimensions of Hatchway | 23'10" x 18'10" | 13'10" x 18'10" | 4'10" x 3'10" | 4'10" x 3'10" | 8'10" x 4'10" | 8'10" x 4'10" | 8'10" x 4'10" | 8'10" x 4'10" | 8'10" x 4'10" | 10'6" x 4'2" |
| COAMINGS | Height above Deck ... 31" | 31" | 7x3x1/2 | 7x3x1/2 | 30" | 30" | 30" | 9x3x7/16 | 18" | 18" |
| | Thickness Sides38 | .38 | Angle | Angle | .38 | .38 | .38 | .38 | .38 | .38 |
| | Stiffeners ... 7x3x.38 | 7x3x.38 | | | | | | | | |
| | Brackets, Stays ... | | | | | | | | | |
| HATCH BEAMS | Number ... 4 | 2 | | | | | | | | |
| | Spacing ... 4x3x.40 | 4x3x.40 | | | | | | | | |
| | Scantling and Sketch ... | Plate 16x.40 | | | | | | | | |
| | Bearing Surface ... 3" | 3" | | | | | | | | |
| FORE AND AFTERS | Number ... | | | | | | | | | |
| | Spacing ... | | | | | | | | | |
| | Unsupported Lengths ... | | | | | | | | | |
| | Scantling and Sketch ... | | | | | | | | | |
| | Bearing Surface ... | | | | | | | | | |
| HATCH COVERS | Material ... Wood | Wood | Steel | Steel | Wood | Wood | Wood | Wood | Wood | Wood |
| | Thickness ... 2 1/2" | 2 1/2" | .50" | .50" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |
| | How fitted ... Fore & Aft. | Fore & Aft. | O.T. | O.T. | Athwartships | Athwartships | Athwartships | Athwartships | Athwartships | Athwartships |
| | Bearing Surface ... 3 1/2" | 3 1/2" | Efficient. | Efficient. | 3" | 3" | 3" | 3" | 3" | 3" |
| Spacing of Cleats | 20" | 20" | Swivel Bolts | Swivel Bolts | 20" | 20" | 20" | 20" | 20" | 20" |
| Number of Tarpaulins | 2 | 2 | with wing nuts | with wing nuts | 2 | 2 | 2 | 2 | 2 | 2 |

Particulars of fiddle, funnel and ventilator coamings:—

Stockhold gratings covered by strong steel hinged covers.
Fidly and funnel ventilators in efficient condition.
Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

One on Forecastle deck steel, height 5'-9" breadth 4'-3" (opening in deck 50"x28 1/2"), thickness .38.
One 1 1/2" thick wood door 50" x 24" sill 6" high x .38 thick, leading to Forecastle.
One on Poop, height 6'-0" breadth 5'-5" (opening deck 61"x 64 1/2") thickness .38
Two wood doors 1 1/2" thick 53"x 24" sill 6" high .38 thick, leading to Crews quarters.

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

Poop Deck:— 4 vents 12" dia to crew space and after hold coaming 33" high x 5/16 thick.
3 " " " stores & tunnel coamings 33" high x 5/16 thick.
4 mushroom vents 6" dia to crews toilet spaces.

Bridge Deck:— 1 vent 9" dia to bunker coaming 30" high x .30 thick.

Foc'le Deck:— 1 vent 12" dia to fore hold coaming 36" high x .30 thick, and 1 vent 9" dia to foc'le coaming 36" high x .30 thick.

All ventilators fitted with wood plugs and canvas covers.

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

1 @ 3 1/2" dia to F.P.tank 21" above Forecastle deck.
1 @ 2 1/2" dia to D.B.tank in No.1 hold 21" above Forecastle deck.
1 @ 4" dia to engine tank 12" above bridge deck.
3 @ 2 1/2" dia to engine & boiler tanks 21" above bridge deck.
1 @ 2 1/2" dia to D.B.tank in after hold 20" above poop deck
1 @ 3 1/2" dia to aft peak tank 20" above poop deck.

All air pipes fitted with wood plugs & canvas covers. Air pipes to cargo oil tanks 3" dia fitted with wire gauze at opening.

Particulars of Gangway Cargo and Coaling Ports:—

None fitted.

Particulars of Scuppers and Sanitary Discharge Pipes:—

2 pipes 4" dia from Crews toilet and 3 pipes 2 1/2" dia from crews wash places in Poop.
above pipes pass through shell plating about 3'-0" below freeboard deck in after hold.
3 pipes 3 1/2" dia from officers toilets and 3 pipes 2 1/2" dia from officers pantry & wash places
fitted through bridge side plating above freeboard deck.
All scupper pipes fitted with gunmetal storm valves on ship side & traps at toilets.

Particulars of Side Scuttles:—

No sidelights fitted below freeboard deck.
Sidelights fitted in Poop & Forecastle spaces provided with hinged deadlights.
All scuttles of substantial construction.

Particulars of Guard Rails:—

Guard rails on poop, bridge, trunk and harbour deck, 3'-3" high with 2 rails and stanchions spaced about 5'-0" apart.

Particulars of Gangways, Lifelines, etc.:—

Access to Poop and Forecastle from Bridge deck by means of trunk deck with Guard rails as above.

| 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 ... | | | Open Rails fitted. | | | |
| Forward Well ... | | | | | | |

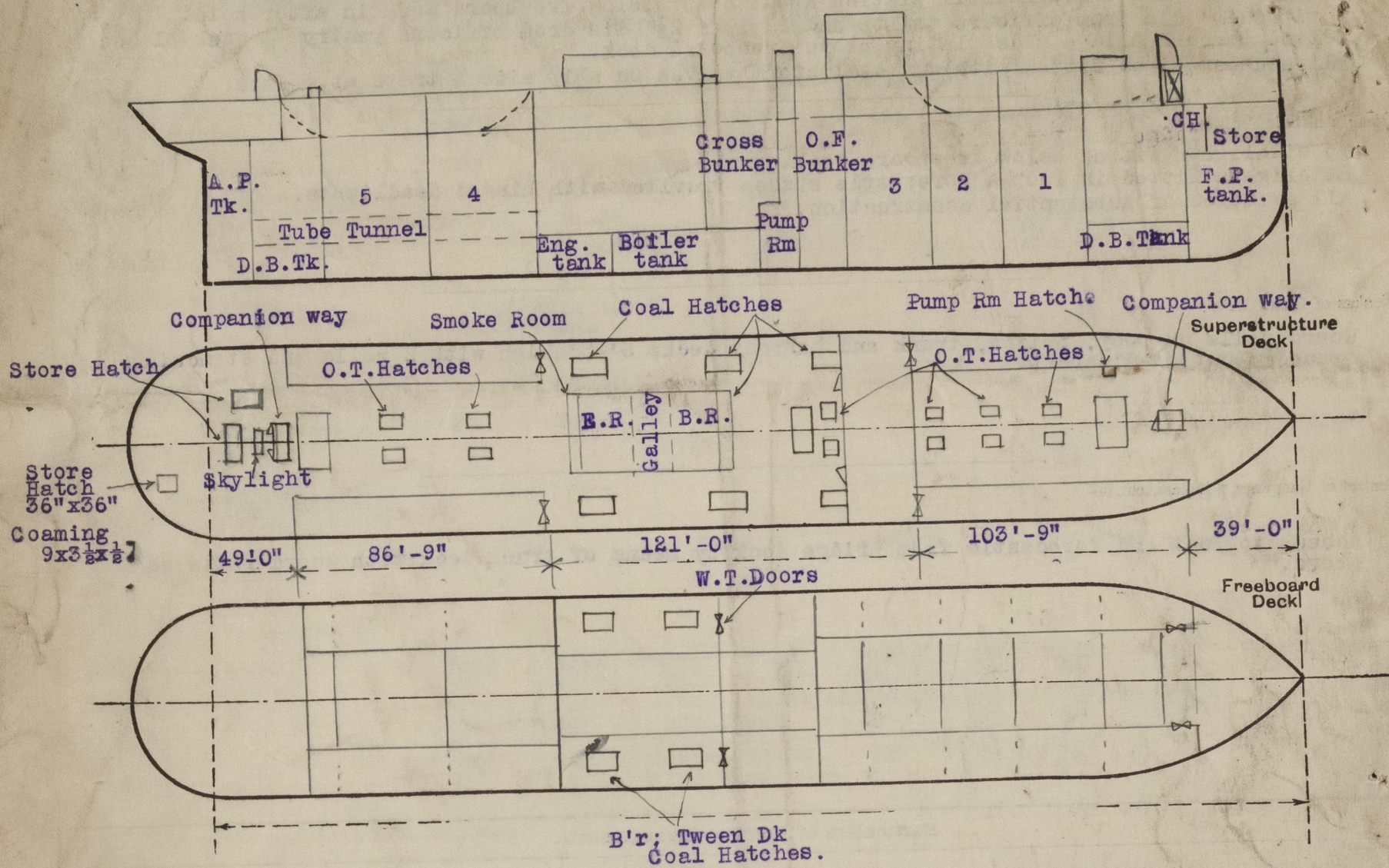
State position of each freeing port ... After Well:—
(F. and A. position and height above deck edge) Forward Well:—
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
Additional area where sheer is less than standard.

| 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 ... | .40" | .30" | 7x3x3/8" 4x4x3/8" | 30" 72" | Bracketed | None fitted | - | 7'-3" |
| Raised Quarter Deck Bulkhead ... | | | | | | | | |
| Bridge, After Bulkhead ... | .40" | .30" | 4 x 4 x 3/8" | 44" | Bracketed | 60"x 37" | 18" | 7'-6" |
| Bridge, Forward Bulkhead ... | .50" | .50" | 8x3x7/16" | 39" | " | 60"x 39" | 18" | 7'-6" |
| Forecastle Bulkhead ... | .44" | .44" | 3x3x3/8" | 30" | Free | -- | - | 7'-3" |
| Trunk, Aft ... | 5/8" | 5/8" | 9x3x7/16" | 30" | Bracketed | -- | - | 7'-6" |
| Trunk, Forward ... | " | " | " | " | " | 60"x 40" | 18" | 7'-6" |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ... | | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks ... | .40" | .40" | 3x3x3/8" | 30" | Free | 60"x 24" | 18" | 7'-6" |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... | .40" | .40" | 7x3x7/16" | 45" | Bracketed | None | - | 7'-6" |
| 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 ... | Bolled steel plates W.T. Port & Starboard. |
| Bridge, Forward Bulkhead ... | " " " " " " |
| Forecastle Bulkhead ... | No openings |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ... | - |
| Exposed Machinery Casings on Superstructure Decks ... | Hinged steel doors operated from both sides. |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... | No openings |
| 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 shown on the following sketches:—



State any special features in the construction of the ship:—

Tanker, One steel deck and web frames, Longitudinal framing.

Vessel surveyed in drydock, Bottom, rudder, stern frame & stem cleaned and examined.
Decks, hatches, hatchways and supports, tarpaulins, ventilators, coamings and covers.
Holds, Cargo oil & Bunker tanks, machinery space and equipment examined.
Cables ranged and freeboard verified.
For particulars of freeboard, see verification form herewith.
All cargo oil and bunker tanks, and fresh water tank under boilers tested.

Builder's name and yard number Palmer's Co. Ltd. Newcastle.

Names of sister ships /

Owners Tonnevolds Rederi A/S (Th.O. Tonnevold & Olaf Tonnevold, Mgrs).

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Received by me ASB



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