

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>HAWTHORN LESLIE'S</b> <b>YARD N° 700.</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>430.83</b> Breadth <b>61.00</b> Depth <b>31.00</b> <i>To centre of Rudder Stock.</i>					Date of Survey <b>26-5-48</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables <b>775 (as per Builders)</b>					Particulars of Classification <b>100 A1</b> <i>Carrying Volumes of Petroleum</i>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>31.00</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(31.07 - 28.72) 3 = +7.05</b>	Moulded Breadth (B) <b>61.00</b>
Stringer plate ... <b>76 + .05 ... 07</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>2.35</b>	Standard Round of Beam = $\frac{B \times 12}{50} = 14.64$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>15.00</b>
Depth for Freeboard (D) = <b>31.07</b>		Difference = <b>+ 36</b>
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{36}{4} \times 5709 = -05$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Equival</i>	107.66	107.66	8.00	✓	107.66
„ overhang	0.17	.08			.08
R.Q.D. enclosed					
„ overhang					
Bridge enclosed <i>Equival</i>	35.17	35.17	8.00	✓	35.17
„ overhang aft	3.50	2.63			2.63
„ overhang forward	0.33	.16			.16
F'cle enclosed	35.17	35.17	8.00	✓	35.17
„ overhang	4.00	4.00			4.00
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	186.00	184.87			184.87

Standard Height of Superstructure **7.50**

„ „ R.Q.D. ✓

Deduction for complete superstructure **42.00**

Percentage covered  $\frac{S}{L} = 43.17$

„ „  $\frac{S_1}{L} =$

„ „  $\frac{E}{L} = 42.91$

Percentage from Table, Line A. *Tanker* **33.91**

(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 = **42.00 × 33.91 = 14.24**

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	53.08	1	53.08	52.00	52.00	1	52.00
$\frac{1}{8}$ L from A.P. ...	23.62	4	94.48	24.00	24.00	4	96.00
$\frac{3}{8}$ L „ ...	5.84	2	11.68	6.00	6.00	2	12.00
Amidships ...	—	4	—	—	—	4	—
$\frac{5}{8}$ L from F.P. ...	11.68	2	23.36	12.00	12.00	2	24.00
$\frac{7}{8}$ L „ ...	47.245	4	188.98	48.00	48.00	4	192.00
F.P. ...	106.17	1	106.17	105.00	105.00	1	105.00
Total ...			477.75				481.00

Mean actual sheer aft = *Excess* ✓

Mean standard sheer aft = *Excess* ✓

Mean actual sheer forward = *Excess* ✓

Mean standard sheer forward = *Excess* ✓

Length of enclosed superstructure forward of amidships = *Tanker*

„ „ aft of „ =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{3.25}{18} (.75 - .2158) = -.10$

If limited on account of midship superstructure. ✓

5342 If limited to maximum allowance of 1½ ins. per 100 ft. ✓

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **31.07**

Summer freeboard = **5.65**

Moulded draught (d) = **25.42**

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **6.35 = 6¼**

Addition for Winter North Atlantic Freeboard (if required) = **6.35 + 4.31 = 10.66 = 10¾**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

$\frac{d}{4} = 6¼$

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

Correction for coefficient  $\frac{775 + .68}{1.36} = \frac{1.455}{1.36}$

	+	-
Depth Correction	7.05	—
Deduction for superstructures	—	14.24
Sheer correction	—	.10
Round of Beam correction	—	.05
Correction for Thickness of Deck amidships	—	—
Other corrections, scantlings, etc.	—	—
	7.05	14.39

Summer Freeboard = **67.67**

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

Tropical Fresh Water Line above Centre of Disc	12½
Fresh Water Line	6¼
Tropical Line	6¼
Winter Line below	6¼
Winter North Atlantic Line	10¾

Tropical Fresh Water Freeboard	4.7½
Fresh Water	5.1½
Tropical	8.1½
Winter	6.3½
Winter North Atlantic	16.6½



Ed No 700.

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.

Prop. Length at side

$\frac{1}{2}$  of R. Stock to AP = 0.83 ✓

AP to FRD = 1.00 ✓

FRD - 9 = 18.00 ✓

" 9 - 40 = 77.50 ✓

" 40 - Prop front = 7.00 ✓

104.33 ✓

$\frac{2}{3} \times 5 = 3.33$  ✓

107.66 equivalent length. ✓

Change at side = 3.50  
3.33

1.17 equivalent change

Bridge length at side = 32.00'

$\frac{2}{3} \times 4.75 = 3.17$  ✓

35.17 equivalent length. ✓

Forward change at side = 3.50

3.17

.33 Equival change

Lowermaste length

FR 84 - 90 = 13.5 ✓

FR 90 - FP = 21.67 ✓

35.17 equivalent length

Trade of ship .....

Names of sister ships .....

Builder's name and yard number .....

Owners .....

Fee £.....



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