

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>HITACHI 3752.</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>147.00</b> Breadth <b>26.400</b> Depth <b>14.000</b>					Date of Survey <b>11/3/55</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables <b>.788</b>					Particulars of Classification <b>T 100 AT (CONT.)</b>

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	14.000	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	26.4
Stringer plate	31	8.33 (14.031 - 13.155) 30 = +22.4		Standard Round of Beam = $\frac{B \times 12}{50}$	528
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	550
$T \left( \frac{L-S}{L} \right) =$				Difference	22
Depth for Freeboard (D) =	14.031	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$\frac{22}{4} \times \frac{5809}{4} = -3.7$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	41.918	41.918	2.600	✓	41.918
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	13.990	13.990	"	✓	13.990
" overhang aft					
" overhang forward					
Fore enclosed	26.320	26.320	"	✓	26.320
" overhang	680	340		✓	340
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	82.908	82.568			82.568

Standard Height of Superstructure	2.290 M
" " R.Q.D.	✓
Deduction for complete superstructure	1067 7/8
Percentage covered $\frac{S}{L} =$	42.09
" " $\frac{S_1}{L} =$	
" " $\frac{E}{L} =$	41.91
Percentage from Table, Line A.	32.91
(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 =	1067 x .3291 = 351 7/8

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	1895	1	1895	910	910	1	910
1/8 L from A.P.	842	4	3368	90	90	4	360
2/8 L	211	2	422	0	✓	2	✓
Amidships	✓	4	✓	0	✓	4	✓
2/8 L from F.P.	421	2	842	0	✓	2	✓
1/8 L	1684	4	6736	50	50	4	200
F.P.	3790	1	3790	1930	1930	1	1930
Total			17053				3400

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 =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{13653}{18} \left( .75 - \frac{2105}{2105} \right) = 409 \frac{1}{2}$   
If limited on account of midship superstructure.

## Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 14.031  
Summer freeboard = 3485  
Moulded draught (d) = 10546  
Keel allowance =

Extreme draught =

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 ... 224  
Deduction for superstructures ... 351  
Sheer correction ... 409  
Round of Beam correction ... 3  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...

2970	✓
788 + 68 = 1468	✓
1.36	✓
3206	✓
+	-
224	-
-	351
409	-
-	3
633	354
+ 279	✓
Summer Freeboard =	3485 1/2

## 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 " ...



HITACHI

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.

Poop.

$$\begin{aligned} \text{Length @ side} &= 40.580 \checkmark \\ + \frac{26.24 + 8 \times 20.50}{2} &= 1.338 \checkmark \\ \hline &41.918 \checkmark \end{aligned}$$

Bridge

ORD	S.M	F(A)	ORD	S.M	F(A)
2.150	1	2.150	0	1	0
3.930	4	15.720	1.720	4	6.880
4.400	1	4.400	2.150	1	2.150
		<u>22.270</u>			<u>9.030</u>

$$\therefore \text{Area} = \frac{22.270 \times 5.732}{3} + \frac{9.030 \times 5.732}{3 \times 8}$$

$$= 42.550 + 2.157 \checkmark$$

$$= 44.707 \checkmark$$

$$\text{Equip. Length} = 10.850 + \frac{44.707}{12.900} \checkmark$$

$$= 10.850 + 3.465 \checkmark$$

$$= 14.315 \checkmark$$

$$14.315 \times \frac{25.800}{26.400} = 13.990 \checkmark$$

Trade of ship .....

Names of sister ships .....

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

Owners .....

Fee £ .....



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