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Index No. _____
(For London Office only.)

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name CALIFORNIA MARU (ex. KYOKUTO MARU) LENGTHENED	Official Number 68763	Nationality and Port of Registry 10KYO. JAPAN	Gross Tonnage 10510	Date of Build Rebuilt. 7/1952.	Port of Survey Kobe (OSAKA)
Moulded Dimensions: Length 158.42 Breadth 19.81 Depth 11.30					Date of Survey 7/52
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 23670 KT. tons					Surveyor's Signature <i>Revised Sign. K. Grayson</i>
Coefficient of fineness for use with Tables .768					Particulars of Classification +100 A1 carrying Petroleum in Bulk. contemplated.

DEPTH FOR FREEBOARD (D).				
Moulded depth	11.30
Stringer plate02
Sheathing on exposed deck	$T \left(\frac{L-S}{L} \right) =$			
Depth for Freeboard (D) =	11.32			

DEPTH CORRECTION.	
(a) Where D is greater than Table depth (D - Table depth) R =	$833/11.32 - 10.56/30 = 190$
(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	75
If restricted by superstructures	

ROUND OF BEAM CORRECTION.	
Moulded Breadth (B)	19.81
Standard Round of Beam = $\frac{B \times 12}{50}$	39.6
Ship's Round of Beam	419
Difference	23
Restricted to	
Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{23^2}{4} \times 4626 = 3$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed	49.28		2.362		
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	12.53		2.362		
" overhang aft					
" overhang forward					
Fore enclosed	23.32		2.362		
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	85.13				

Standard Height of Superstructure	2290
" " R.Q.D.	1067
Deduction for complete superstructure	
Percentage covered $\frac{S}{L} =$	
" " $\frac{S_1}{L} =$	53.74
" " $\frac{E}{L} =$	
Percentage from Table, Line A. <i>Tamlin 45.11</i>	
(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 = $1067 \times .4511 =$	481

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	...	1			121.9	121.9	1		121.9
$\frac{1}{8}L$ from A.P.	...	4			22.4	22.4	4		89.6
$\frac{3}{8}L$ "	...	2					2		
Amidships	...	4					4		
$\frac{5}{8}L$ from F.P.	...	2					2		
$\frac{7}{8}L$ "	...	4			50.8	50.8	4		203.2
F.P.	...	1			274.3	274.3	1		274.3
Total	...			141.67					689.0

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

If limited on account of midship superstructure.

Mean actual sheer aft
Mean standard sheer aft =

Mean actual sheer forward
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

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.

Depth to Freeboard Deck =	Ft.
Summer freeboard =	
Moulded draught (d) =	
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

$\Delta =$ **21,604 Tons**

Tons per inch immersion at summer load water line

$T =$ **68.1 Tons**

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	190	
Deduction for superstructures		491
Sheer correction	116	
Round of Beam correction		3
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		

Summer Freeboard = **2308**

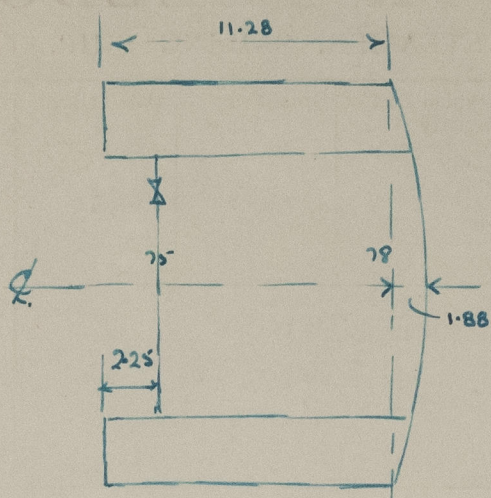
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	...	Fresh Water	...
Tropical Line	...	Tropical	...
Winter Line below	...	Winter	...
Winter North Atlantic Line	...	Winter North Atlantic	...

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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.



Trade of ship International.

Names of sister ships /

Builder's name and yard number _____

Owners NIPPON OIL TANKER Co. TOKYO.

Fee £ _____



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