

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRK REPORT N° 24209.

Ship's Name POWELL.	Official Number 184305	Nationality and Port of Registry BRITISH LONDON.	Gross Tonnage 11708 11,000	Date of Build 1950	Port of Survey GREENHOCK
Moulded Dimensions: Length 510'-0" Breadth 70'-0" Depth 37'-2" A.P. 13. At CR of Rudder Stock.					Date of Survey WHILE BUILDING 1950
Moulded displacement at moulded draught = 85 per cent. of moulded depth 23857. tons					Surveyor's Signature <i>Kenneth Inglis</i>
Coefficient of fineness for use with Tables .740					Particulars of Classification *100A1. CARRYING PETROLEUM IN BULK (CONTEMPLATED)

DEPTH FOR FREEBOARD (D). 37'-2" Moulded depth ... 37'-2" Stringer plate ... 1'-07"09 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 37'-26"	DEPTH CORRECTION. (a) Where D is greater than Table depth (D - Table depth) R = 37'-26" - 34'-00" = 3'-26" 3 = + 9.78 ✓ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = 3'-26" ✓ If restricted by superstructures ✓	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 70'-0" Standard Round of Beam = $\frac{B \times 12}{50} = \frac{840}{50} = 16.80$ ✓ Ship's Round of Beam = 17½ ✓ Difference = + 0.70 ✓ Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.70}{4} \times .6135 = -.11$ ✓
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	117'-00"	117'-00"	7'-6"	✓	117'-00"
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	44'-61"	44'-61"	7'-6"	✓	44'-61"
" overhang					
" overhang forward					
F'cle enclosed	35'-50"	35'-50"	7'-6"	✓	35'-50"
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	197'-11"	197'-11"			197'-11"

Standard Height of Superstructure **7'-50"** ✓
" " R.Q.D. ✓
Deduction for complete superstructure **42'-00"** ✓
Percentage covered $\frac{S}{L} =$
" " $\frac{S_1}{L} =$ **38.65** ✓
" " $\frac{E}{L} =$
Percentage from Table, Line A. **TANKER. 29.65** ✓
(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" x .2965 = -12.45** ✓
NOTE. BRIDGE SIDES. 12" INBOARD FROM SHIPS SIDE ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	61'-00"	1	61'-00"	61"	61'-00"	1	61'-00"
¼L from A.P.	27'-14"	4	108'-56"	27¾"	27'-37½"	4	109'-50"
¾L	6'-71"	2	13'-42"	6¼"	6'-81"	2	13'-62"
Amidships		4		0		4	
¾L from F.P.	13'-42"	2	26'-84"	13¾"	13'-56"	2	27'-12"
¼L	54'-28"	4	217'-12"	54¼"	54'-25"	4	217'-00"
F.P.	122'-00"	1	122'-00"	122	122'-00"	1	122'-00"
Total			548'-94"				550'-24"

Mean actual sheer aft
Mean standard sheer aft = } *excess*
Mean actual sheer forward
Mean standard sheer forward = }
Length of enclosed superstructure forward of amidships = } *Tanker.*
" " aft of " = }
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.3 \times (.75 - .1933)}{18} = \frac{.5567}{18} = -.04$ ✓
If limited on account of midship superstructure. 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 = 37'-26" Summer freeboard = 7'-58" Moulded draught (d) = 29'-68" Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7'-42" = 7½" Addition for Winter North Atlantic Freeboard (if required) = 7'-42" + 5'-10" = 12'-52" = 12½"	Deduction for Fresh Water. Displacement in salt water at summer load water line 29-21704-22375 Tons per inch immersion at summer load water line 29-71-92 30-72-58 72.43 Deduction = $\frac{\Delta}{40 T}$ inches = 7'-72" ✓ = 7¾" ✓	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{740 + .68}{1.36} = \frac{1.420}{1.36}$ <table><tr><th></th><th>+</th><th>-</th></tr><tr><td>Depth Correction</td><td>9.78</td><td>✓</td></tr><tr><td>Deduction for superstructures</td><td>12.45</td><td>✓</td></tr><tr><td>Sheer correction</td><td>0.04</td><td>✓</td></tr><tr><td>Round of Beam correction</td><td>0.11</td><td>✓</td></tr><tr><td>Correction for Thickness of Deck amidships</td><td></td><td>✓</td></tr><tr><td>Other corrections, scantlings, etc.</td><td></td><td>✓</td></tr><tr><td></td><td>9.78</td><td>12.60</td></tr></table> - 2.82 ✓ Summer Freeboard = 90'-94" ✓		+	-	Depth Correction	9.78	✓	Deduction for superstructures	12.45	✓	Sheer correction	0.04	✓	Round of Beam correction	0.11	✓	Correction for Thickness of Deck amidships		✓	Other corrections, scantlings, etc.		✓		9.78	12.60
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	15¼" ✓
Fresh Water Line	7¾" ✓
Tropical Line	7½" ✓
Winter Line below	7½" ✓
Winter North Atlantic Line	12½" ✓

Tropical Fresh Water Freeboard	6'-3¾" ✓
Fresh Water	6'-11¼" ✓
Tropical	6'-11½" ✓
Winter	8'-2¾" ✓
Winter North Atlantic	8'-7½" ✓

Powell.

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.

PLANS. FORWARDED WITH THIS REPORT (TO BE RETURNED).

MIDSHIP SECTION.

PROFILE DECKS.

UPPER DECK PLAN.

AMENDED BRIDGE SHOWING OMISSION OF STRINGER BAR.

$$\begin{aligned} \text{Poof length at side} &= 114 \checkmark \\ + \frac{2}{3} \times 4.5 \checkmark &= \frac{3 \checkmark}{117 \checkmark} = \text{equiv. length} \end{aligned}$$

$$\begin{aligned} \text{Bridge length at side} &= 41.92 \checkmark \\ + \frac{2}{3} \times 6.0 \checkmark &= \frac{4.00 \checkmark}{45.92 \checkmark} \times \frac{68 \checkmark}{70} \\ &= 44.61 = \text{equiv. length.} \end{aligned}$$

Trade of ship INTERNATIONAL.

Names of sister ships ✓

Builder's name and yard number LITHGOWS LTD YARD NO 1046

Owners HECTOR TANKERS LTD

APPROX.

Fee £ 36 : 0 : 0

TO BE RENDERED WITH FIRST ENTRY



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