Amended computation for alteration to forecastle.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, ~~SAILING SHIP,~~ TANKER.)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
GLENGARRIFF.	165154	British Belfast		1936

Port of Survey ____

Date of Survey 23·10·42

Surveyor's Signature ____

Particulars of Classification + 100 A1.

Moulded Dimensions: Length 197·33' Breadth 30·5' Depth 14·33

Moulded displacement at moulded draught = 85 per cent. of moulded depth 1556 tons

Coefficient of fineness for use with Tables ·743

Depth for Freeboard (D).

Moulded depth	14·33
Stringer plate	·03
Sheathing on exposed deck $T\left(\dfrac{L-S}{L}\right)=$	✓
Depth for Freeboard (D) =	14·36

Depth correction.

(a) Where D is greater than Table depth
$\dfrac{(D-\text{Table depth})}{1·21}R=$ $\dfrac{(14·36-13·15)1·518}{1·21}=+1·84''$

(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)	30·5
Standard Round of Beam = $\dfrac{B\times12}{50}=$	7·32
Ship's Round of Beam =	8·00
Difference	·68
Restricted to	✓
Correction = $\dfrac{\text{Diff}^n}{4}\times\left(1-\dfrac{S_1}{L}\right)$	$=·17\times·2229=-·04''$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang ...					
R.Q.D. enclosed ...	112·42	112·42	4·0'	✓	112·42
„ overhang					
Bridge enclosed...	11·00	11·00	7·0'	✓	11·00
„ overhang aft					
„ overhang forward					
F'cle enclosed Equiv.	29·50	29·50	7·0'	✓	29·50
„ overhang	·83	·42			·42
Trunk aft					
„ forward ...					
Tonnage opening aft					
„ „ forward					
Total	153·75	153·34			153·34

Standard Height of Superstructure	6·00'
„ „ R.Q.D.	3·649'
Deduction for complete superstructure	25·73''
Percentage covered $\dfrac{S}{L}=$	77·92
„ „ $\dfrac{S_1}{L}=$	77·71
„ „ $\dfrac{E}{L}=$	77·71
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	✓
Percentage from Table, Line B.	72·48
(corrected for absence of forecastle (if required))	✓
Interpolation for bridge less than ·2L (if required)	✓
Deduction = $25·73\times·7248=$	$-18·65$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate +4·2	Effective Ordinate	S M	Product
A.P. ...	29·73	1	29·73	35·5	39·70	1	39·70
¼L from A.P. ...	13·23	4	52·92	16·0	17·67	4	70·68
½L „ ...	3·27	2	6·54	4·5	4·37	2	8·74
Amidships ...	—	4	—	—	—	4	—
½L from F.P. ...	6·54	2	13·08	9·25	9·25	2	18·50
¼L „ ...	26·46	4	105·84	32·5	32·50	4	130·00
F.P. ...	59·46	1	59·46	72·5	72·50	1	72·50
Total ...			267·57				340·12

$\dfrac{\text{Mean actual sheer aft}}{\text{Mean standard sheer aft}}=$ Excess.

$\dfrac{\text{Mean actual sheer forward}}{\text{Mean standard sheer forward}}=$ Excess.

$\dfrac{\text{Length of enclosed superstructure}}{L}$ forward of amidships $=>·1L$

„ „ „ aft of „ $=>·1L$

Actual height of R.Q. Dk = 4·00'
Standard „ „ „ = 3·65
Difference = ·35 = 4·2''

Correction = $\dfrac{\text{Difference between sums of products}}{18}\left(·75-\dfrac{S}{2L}\right)=\dfrac{72·55}{18}(·75-·3896)=-1·45''$ $·3654$

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.

R.Q.
		Ft.
Depth to Freeboard Deck =	18·36	
Summer freeboard =	4·46	
Moulded draught (d) =	13·90	

Deduction for Tropical freeboard and addition for
Winter freeboard = $\dfrac{d}{4}$ inches = 3·48 = 3½''

Addition for Winter North Atlantic Freeboard (if required) = 5½''

Deduction for Fresh Water.

Displacement in salt water at summer load water line
$\Delta =$ 1838

Tons per inch immersion at summer load water line
T = 12·18

Deduction = $\dfrac{\Delta}{40\,T}$ inches = 3·77 = 3¾''

TABULAR FREEBOARD corrected for Flush Deck (if required) 22·65 23·70

Correction for coefficient $\dfrac{·743+·68}{1·36}=\dfrac{1·423}{1·36}$

	+	−
Depth Correction ...	1·84	
Deduction for superstructures		18·65
Sheer correction ...		1·45
Round of Beam correction...		·04
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc. height of Raised Quarter Deck	48·00	
	49·84 20·14	+29·70

Summer Freeboard = 53·40

27 OCT 1942

28·10·42

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

Tropical Fresh Water Line above Centre of Disc	7¼''	Tropical Fresh Water Freeboard ...	4'-5½''
Fresh Water Line „	3¾''	Fresh Water	4'-10¼''
Tropical Line „	3½''	Tropical	4'-1¾''
Winter Line below „	3½''	Winter	4'-2''
Winter North Atlantic Line „	5½''	Winter North Atlantic ...	4'-11''

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.
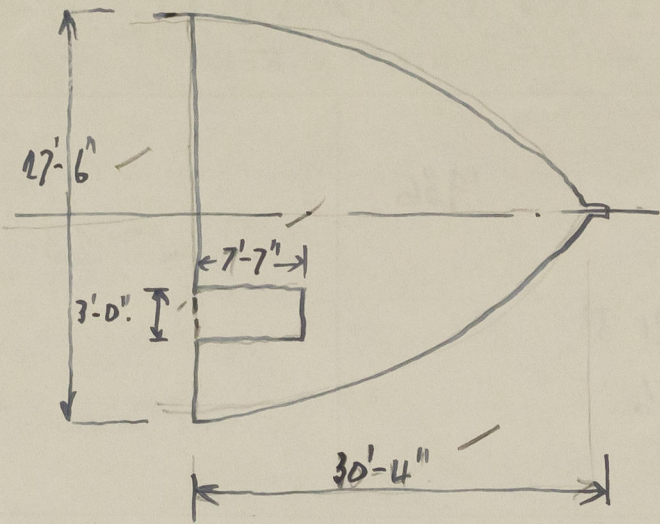
$$\text{Recess } \frac{7.58 \times 3.0}{27.5} =$$

.83" equiv. overhang.
30.33 — total length.
29.50 equiv enclosed.

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____