. C.11 (Comp.).

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

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
H E L L E	7020	Swedish Malmö	866	1902 8

Port of Survey **Gothenburg.**

Date of Survey **6th October 1944.**

Surveyor's Signature *Bertrand Green*

Particulars of Classification **+100A1**

Moulded Dimensions: Length **215.3'** Breadth **35.125'** Depth **14.77'**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **2713** tons

Coefficient of fineness for use with Tables **.732**

Depth for Freeboard (D).

Moulded depth ....

Stringer plate ....

Sheathing on exposed deck

$T\left(\dfrac{L-S}{L}\right) =$

Depth for Freeboard (D) = **14.81**

Depth correction.

(a) Where D is greater than Table depth
(D—Table depth) R =

+ .76

(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)

Standard Round of Beam = $\dfrac{B \times 12}{50}$ =

Ship's Round of Beam =

Difference

Restricted to

Correction = $\dfrac{Diff^e}{4} \times \left(1 - \dfrac{S_1}{L}\right)$ = **− .01**

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
» overhang					
R.Q.D. enclosed	65.46	65.46	3.5	3.5/3.77	60.77
» overhang					
Bridge enclosed	57.58	55.56	7.0	---	55.56
» overhang aft					
» overhang forward					
F'cle enclosed } equiv.	27.39	27.39	6.96	---	27.39
» overhang }					
Trunk aft					
» forward					
Tonnage opening aft ...					
» » forward					
Total	150.43	148.41			143.72

Standard Height of Superstructure **6.00**

» » R.Q.D. **3.77**

Deduction for complete superstructure **27.53**

Percentage covered $\dfrac{S}{L}$ = **69.87**

» » $\dfrac{S_1}{L}$ = **68.93**

» » $\dfrac{E}{L}$ = **66.75**

Percentage from Table, ~~Steel~~ Timber **79.5**
(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 = **27.53 × .7955 = 21.90"**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.		1				1	
from A.P. ...		4				4	
» »		2				2	
Midships		4				4	
from F.P. ...		2				2	
» »		4				4	
F.P.		1				1	
Total ...							

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

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

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

» » aft of

Correction = $\dfrac{\text{Difference between sums of products}}{18}\left(.75 - \dfrac{S}{2L}\right)$ = **+ 1.81"**

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 = **14.81** Ft.

Summer freeboard = **.67**

Moulded draught (d) = **14.14**

Deduction for Tropical freeboard ~~xxxxxxxxxxx~~
~~xxxxxxxxx~~ = $\dfrac{d}{4}$ inches = **3.53" = 90 mm.**

Addition for Winter ~~xxxxxxxxx~~ Freeboard (if required) = d/3 = **4.71" = 120 mm.**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\triangle =$

Tons per inch immersion at summer load water line

$T =$

Deduction = $\dfrac{\triangle}{40\,T}$ inches
= **90 mm.**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **26.73**

	+	−
Depth Correction	.76	−
Deduction for superstructures	−	21.90
Sheer correction	1.81	−
Round of Beam correction ...	−	.01
Correction for Thickness of Deck amidships ...	−	−
Other corrections, ~~xxxxxxxxxxx~~ for omission of poop	.60	−
	3.17	21.91

14
5·10·44

−18.74

Summer Freeboard = **7.99**

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

Timber Tropical Fresh Water Line above Centre of Disc .... **319** mm.
" Fresh Water Line » .... **229** mm.
" Tropical Line » .... **229** mm.
" Winter Line above » .... **19** mm.
" Winter North Atlantic Line below » .... **138** mm.
Summer Line above .... **139** mm.

Tropical Fresh Water Freeboard .... **203** mm.
Fresh Water .... **23** mm.
Tropical .... **113** mm.
Winter .... **113** mm.
Winter North Atlantic .... **323** mm.
.... **480** mm.

9. 3025. 6-42. (8 W)

004971- 004981- 0178

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 ....

Names of sister ships ....

Builder's name and yard number **A/S Burmeister & Wain, Köpenhamn.**

Owners **Svenska Sockerfabriks A-B. (C.F.Tranchell, Mgr.), Malmö.**

Fee £ ....