

Empire Dickens
NO. 36527 ETC.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 37039
(For London Office only.)

No. 14361

ADELLEN

(COMPUTATION FOR STEAMER, TANKER.)

Ship's Name FURNESS S.B.C. LTD. NO. 349 EMPIRE NUGGET	Official Number 164860	Nationality and Port of Registry BRITISH. MIDDLESBROUGH (APPROX)	Gross Tonnage 9807 9810	Date of Build WHILE BUILDING	Port of Survey MIDDLESBROUGH.
Moulded Dimensions: Length 476'-4 1/2" Breadth 68'-0" Depth 36'-0" <i>To Centre of rudder stock 476.96'</i>				Date of Survey WHILE BUILDING	
Moulded displacement at moulded draught = 85 per cent. of moulded depth 21480 T.P.L. 66.5 tons MLD. 28'-0" 19415 " 65.4 "				Surveyor's Signature H. b. Young	
Coefficient of fineness for use with Tables .757				Particulars of Classification * 100.A.I. CARRYING PETROLEUM IN BULK LONGITUDINAL FRAMING CLASS CONTEMPLATED	

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 36'-0"	(a) Where D is greater than Table depth (D-Table depth) R = (36.07 - 31.80) x 3 = +12.81	Moulded Breadth (B) 68'-0"
Stringer plate82"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 4.27	Standard Round of Beam = $\frac{B \times 12}{50} = 16.32$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam 17" = 17.00
Depth for Freeboard (D) = 36'-0.68"		Difference .68
		Restricted to <input checked="" type="checkbox"/>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.68}{4} \times .6899 = -.12"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equi.</i> 113.21	113.21	113.21	7'-6"	<input checked="" type="checkbox"/>	113.21
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed	34'-6 1/2"	34.54	7'-6"	<input checked="" type="checkbox"/>	34.54
" overhang	3 1/2"	.15			.15
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	148.04	147.90			147.90

Standard Height of Superstructure **7.5'**

" " R.Q.D. ☒

Deduction for complete superstructure **42.00"**

Percentage covered $\frac{S}{L} = 31.04$

" " $\frac{S_1}{L} = 31.01$

" " $\frac{E}{L} = 31.01$

Percentage from Table, Line **X. Tanker** **22.01**
(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 .2201 = -9.24"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	57.70	1		57.70	45.75	45.75	1		45.75
1/8 L from A.P. ...	25.675	4		102.70	20.75	20.75	4		83.00
2/8 L " ...	6.35	2		12.70	5.625	5.625	2		11.25
Amidships ...		4					4		
2/8 L from F.P. ...	12.695	2		25.39	6.89	6.89	2		13.78
1/8 L " ...	51.35	4		205.40	26.75	26.75	4		107.00
F.P. ...	115.39	1		115.39	61.625	61.625	1		61.63
Total				519.28					322.41

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{196.87}{18} (.75 - .1552) = +6.51"$
If limited on account of midship superstructure. **.5948**

Mean actual sheer aft =
Mean standard sheer aft = } **Deficient**

Mean actual sheer forward =
Mean standard sheer forward = }

Length of enclosed superstructure forward of amidships =
aft of amidships = } **Tanker.**

PRO. SHEERS

Standard	S.M.	Actual	Sheer	S.M.
12.695	3	38.085	6.89	3
51.35	3	154.05	26.75	3
115.39	1	115.39	61.625	1
		307.525		
			162.545	

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **36.07**

Summer freeboard = **8.04**

Moulded draught (d) = **28.03**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **7"**

Addition for Winter North Atlantic Freeboard (if required) = **7.01 + 4.77 = 11.78 = 11 3/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 19538$

Tons per inch immersion at summer load water line

$T = 65.4$

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

= **7.47"**

= **7 1/2"**

TABULAR FREEBOARD

Correction for coefficient **.757 + .68 = 1.437 / 1.36**

	+	-
Depth Correction	12.81	
Deduction for superstructures		9.24
Sheer correction	6.51	
Round of Beam correction		.12
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	19.32	9.36

Summer Freeboard = **96.54"**

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

Tropical Fresh Water Line above Centre of Disc	14 1/2"
Fresh Water Line	7 1/2"
Tropical Line	7"
Winter Line below	7"
Winter North Atlantic Line	11 3/4"

Tropical Fresh Water Freeboard	6'-2 1/2"
Fresh Water	7'-5"
Tropical	7'-5 1/2"
Winter	8'-7 1/2"
Winter North Atlantic	9'-0 1/4"

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.

Length of Poop:

Poop at side

108' 6 1/2"

2/3 x 6' 1 1/2"

4' 1"

112' 7 1/2"

AP to centre of
Rudder stock

7"

omit 113' 2 1/2" = 113.21'

Trade of ship TANKER

Names of sister ships. EMPIRE DICKENS N° 341, EMPIRE NORSEMAN N° 342, EMPIRE LYTTON N° 343
EMPIRE GRENADIER N° 344. FURNESS S.B.C. LTD.

Builder's name and yard number FURNESS. S.B.C. LTD N° 349.

Owners MINISTRY OF WAR TRANSPORT.

Fee £ WILL BE CHARGED ON F.E. REPORT.



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