

T.O. CLOSED. (W.E.)

Spt. C.11 (Comp.).

Everleigh 33473.
Haden 33511
leigh

Index. No. 33035.
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name APPLE DORE	Official Number 161611	Nationality and Port of Registry British, Bideford	Gross Tonnage 1929	Date of Build 12 mo.	Port of Survey 23.4.41.
Moulded Dimensions: Length 405.0' Breadth 55.75' Depth 37.92'			Surveyor's Signature		
Moulded displacement at moulded draught = 85 per cent. of moulded depth			Particulars of Classification +100A1.		
Coefficient of fineness for use with Tables .819 (estimated)			with freeboard.		

Depth for Freeboard (D). 37.92	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = (37.92 - 37.00) = +0.92 (b) Where D is less than Table depth (if allowed) (Table depth - D) R = 10.98	Round of Beam correction. Moulded Breadth (B) 55.75' Standard Round of Beam = $\frac{B \times 12}{50} = 13.38"$ Ship's Round of Beam = 13.50" Difference excess Restricted to Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{12}{4} \times 9167 = -.03"$
Stringer plate		
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		
Depth for Freeboard (D) = 37.98	If restricted by superstructures	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Forecastle enclosed ...	33.5	33.50	7.5	✓	33.50
" overhang29	.24			.24
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	33.79	33.74			33.74

Standard Height of Superstructure **7.50'**
" " R.Q.D. **✓**
Deduction for complete superstructure **42.00"**
Percentage covered $\frac{S}{L} = 8.33$
" $\frac{S_1}{L} = 8.33$
" $\frac{E}{L} = 8.33$
Percentage from Table, Line A. **4.17**
(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 0.417 = -1.75"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	50.50	1		50.50	46.50	46.50	1		46.50
$\frac{1}{4}$ L from A.P. ...	11.42	4		89.88	16.59	16.59	4		66.36
$\frac{2}{8}$ L " ...	5.55	2		11.10	4.14	4.14	2		8.28
Amidships ...		4					4		
$\frac{2}{8}$ L from F.P. ...	11.11	2		22.22	8.27	8.27	2		16.54
$\frac{1}{4}$ L " ...	44.94	4		179.76	33.18	33.18	4		132.72
F.P. ...	101.00	1		101.00	96.50	96.50	1		96.50
Total ...				174.46					366.90

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{82.56}{18} = 4.58$
If limited on account of midship superstructure.

Mean actual sheer aft = **Deficient**
Mean standard sheer aft
Mean actual sheer forward = **Deficient**
Mean standard sheer forward
Length of enclosed superstructure forward of amidships = **Deficient**
aft of " = **Deficient**
Standard **For Sheers**
Actual **Actual**
11.11 3 33.33 8.27 3 24.81
44.94 3 134.82 33.18 3 119.54
101.00 1 101.00 96.50 1 96.50
269.15 220.85

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **37.98**
Summer freeboard = **11.29**
Moulded draught (d) = **26.69**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6.67 = 6 $\frac{3}{4}$ "**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40T}$ inches = **7 $\frac{1}{2}$ "**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **1.36**

Depth Correction ... **32.94**

Deduction for superstructures ... **3.45**

Sheer correction ... **.03**

Round of Beam correction ... **1.26**

Correction for Thickness of Deck amidships ... **1.78**

Other corrections, scantlings, etc. **to Summer immersed draught**

Summer Freeboard = **135.50**

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

Tropical Fresh Water Line above Centre of Disc ...	14 $\frac{1}{4}$"
Fresh Water Line " " ...	7 $\frac{1}{2}$"
Tropical Line " " ...	6 $\frac{3}{4}$"
Winter Line below " " ...	6 $\frac{3}{4}$"
Winter North Atlantic Line " " ...	✓

Tropical Fresh Water Freeboard ...	11'-3 $\frac{1}{2}$"
Fresh Water " " ...	10'-1 $\frac{1}{4}$"
Tropical " " ...	10'-8"
Winter " " ...	10'-8 $\frac{3}{4}$"
Winter North Atlantic " " ...	11'-10 $\frac{1}{4}$"

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