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# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Gulfstream T. E. GAMBICA</i> <b>"HERMANN ANDERSEN"</b>	Official Number	Nationality and Port of Registry <i>German</i> <i>Hamburg</i>	Gross Tonnage <i>1171</i>	Date of Build <i>1936</i>	Port of Survey <i>Greider, Als district</i>
Moulded Dimensions: Length <i>69 m.</i> <i>226.3</i> Breadth <i>10.54 m.</i> <i>34.6'</i> Depth <i>4.2</i> <i>13.8' .78</i>					Date of Survey <i>4/10 - 31/10 . 1945</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature <i>Plude</i>
Coefficient of fineness for use with Tables <i>.70 (assumed)</i>					Particulars of Classification <i>Perm. Lloyd's</i> <i>For sea &amp; river service</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... .. <i>13.78</i>	(a) Where D is greater than Table depth (D - Table depth) R =	Moulded Breadth (B) <i>34.6</i>
Stringer plate ... .. <i>.03</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>(15.09 - 13.81) x 1.74 = - 2.23</i> <i>1.28</i>	Standard Round of Beam = $\frac{B \times 12}{50} = 8.30$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures <i>2.23 x 4/6 = - 1.49</i>	Ship's Round of Beam = <i>8.27</i>
Depth for Freeboard (D) = <i>13.81</i>		Difference <i>.03</i>
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.03}{4} \times 17.25 = .128$

### DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... .. <i>55.0'</i>	<i>55.00</i>	<i>7.6"</i>	-	<i>55.00</i>
" overhang ... ..				
R.Q.D. enclosed ... ..				
" overhang ... ..		<i>9.08</i>		
Bridge enclosed ... .. <i>33.0'</i>	<i>33.00</i>	<i>4.0"</i>	<i>- x .9</i>	<i>29.70</i>
" overhang aft ... ..				
" overhang forward ... ..				
Fore enclosed ... .. <i>34.0'</i>	<i>34.00</i>	<i>4.0"</i>	<i>x 4/6</i>	<i>22.66</i>
" overhang ... ..				
Trunk aft <i>54.2 x 21.15</i> <i>34.6</i>	<i>33.91</i>	<i>4.0"</i>	<i>x 4/6 x .9</i>	<i>20.35</i>
" forward <i>52.1 x 21.65</i> <i>34.6</i>	<i>31.35</i>	<i>4.0"</i>	<i>x 4/6</i>	<i>20.90</i>
Tonnage opening aft ... ..				
" forward ... ..				
Total ... .. <i>226.3</i>	<i>187.26</i>			<i>148.61</i>

Standard Height of Superstructure <i>6.0</i>	
" " R.Q.D. <i>1</i>	
Deduction for complete superstructure <i>28.63</i>	
Percentage covered $\frac{S}{L} = \frac{53.91}{103.9}$	
" " $\frac{S_1}{L} = \frac{82.75}{103.9}$	
" " $\frac{E}{L} = \frac{65.66}{103.9}$	
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<i>55.62</i>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = <i>28.63 x .5562 = - 15.93</i>	

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... .. <i>32.63</i>	<i>1</i>	<i>32.63</i>	<i>18.5</i>	<i>18.5</i>	<i>18.5</i>	<i>18.5</i>	<i>1</i>	<i>18.5</i>	
1/4 L from A.P. ... .. <i>14.52</i>	<i>4</i>	<i>58.08</i>	<i>6.25</i>	<i>25.00</i>	<i>6.25</i>	<i>6.25</i>	<i>4</i>	<i>25.00</i>	
1/2 L " ... .. <i>3.59</i>	<i>2</i>	<i>7.18</i>	<i>0.75</i>	<i>1.50</i>	<i>0.75</i>	<i>0.75</i>	<i>2</i>	<i>1.50</i>	
Amidships ... ..	<i>4</i>	-	-	-	-	-	<i>4</i>	-	
3/4 L from F.P. ... .. <i>7.18</i>	<i>2</i>	<i>14.36</i>	<i>7.18</i>	<i>14.36</i>	<i>7.18</i>	<i>7.18</i>	<i>2</i>	<i>14.36</i>	
1/4 L " ... .. <i>29.04</i>	<i>4</i>	<i>116.16</i>	<i>29.04</i>	<i>116.16</i>	<i>29.04</i>	<i>29.04</i>	<i>4</i>	<i>116.16</i>	
F.P. ... .. <i>65.26</i>	<i>1</i>	<i>65.26</i>	<i>65.26</i>	<i>65.26</i>	<i>65.26</i>	<i>65.26</i>	<i>1</i>	<i>65.26</i>	
Total ... .. <i>293.67</i>				<i>240.78</i>					

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{52.89}{18} \left( .75 - \frac{2695}{4805} \right) = +1.41$

If limited on account of midship superstructure.

Mean actual sheer aft = *Deficient: less than .5*  
Mean standard sheer aft = *2.00*

Mean actual sheer forward = *2.00*  
Mean standard sheer forward = *2.00*

Length of enclosed superstructure forward of amidships = *11.3*  
aft of " = *33*

Shear figures

7.18	3	21.54	11	3	33
29.04	3	87.12	29	3	87
65.26	1	65.26	55	1	55
		<i>173.92</i>			<i>175</i>

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flank Deck (if required)	<i>27.80</i>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.70 + .68}{1.36} = \frac{1.38}{1.36}$	<i>28.21</i>
Depth to Freeboard Deck = <i>13.81</i>	$\Delta =$	Depth Correction ... ..	<i>1.49</i>
Summer freeboard = <i>1.02</i>	Tons per inch immersion at summer load water line	Deduction for superstructures ... ..	<i>15.93</i>
Moulded draught (d) = <i>12.79</i>	T =	Sheer correction ... ..	<i>1.41</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>3.20 = 3 1/4</i>	Deduction = $\frac{\Delta}{40 T}$ inches = <i>3 1/4</i>	Round of Beam correction ... ..	-
Addition for Winter North Atlantic Freeboard (if required) = <i>5 1/4</i>		Correction for Thickness of Deck amidships ... ..	-
		Other corrections, scantlings, etc. ... ..	-
		Summer Freeboard = <i>12.20</i>	<i>16.01</i>

### SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Water~~, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ... .. <i>6 1/2"</i>	Tropical Fresh Water Freeboard ... .. <i>0.5 3/4</i>
Fresh Water Line " " " " " " <i>3 1/4"</i>	Fresh Water " " " " " " <i>0.9</i>
Tropical Line " " " " " " <i>3 1/4"</i>	Tropical " " " " " " <i>0.9</i>
Winter Line below " " " " " " <i>3 1/4"</i>	Winter " " " " " " <i>0.3 1/2</i>
Winter North Atlantic Line " " " " " " <i>5 1/4"</i>	Winter North Atlantic " " " " " " <i>1.5 1/2</i>

6-12-45

Lloyd's Register Foundation



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

Owners

Fee £



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