

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Computation of Freeboard for *Steam, Sailing Ship, Tanker*
 having *Poof, Trunk, Forecastle*

(Type of Superstructures.)

Port of Survey *Buracao, S. W. I.*Date of Survey *April 26th - 27th 1932*Name of Surveyor *B. S. Whittham*Particulars of Classification *+100 A1*
carrying petroleum in bulk.
 Ship's Name *T.S.S. "LUCITA"* Nationality and Port of Registry *Dutch Willemstad* Official Number *3551* Gross Tonnage *2604* Date of Build *1926-11*

 Moulded Dimensions: Length *305.0* Breadth *50.2* Depth *15.0*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *4622* tons
 Coefficient of fineness for use with Tables *.832*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>15.0</i>	(a) Where D is greater than Table depth (D - Table depth) R =	Moulded Breadth (B) <i>50.2</i>
Stringer plate <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>(20.33 - 15.04) 2.346</i> <i>5.29 x 2.346 = 12.41</i>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{50.2 \times 12}{50} = 12.048$
Sheathing on exposed deck <i>✓</i> $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures $\times \frac{6.29}{6.55} = 11.92$	Ship's Round of Beam = <i>12.54</i>
Depth for Freeboard (D) = <i>15.04</i>		Difference <i>2.50</i> Restricted to <i>2.50</i> Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.50^2}{4} (1 - .8126) = .02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poof enclosed	<i>88.50</i>	88.50	<i>6.29</i>	<i>6.29</i>	84.98
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	<i>14.0</i>		<i>22.0</i>		
" overhang aft					
" overhang forward	<i>4.0</i>				
F'cle enclosed <i>84.5</i>	<i>41.48</i>	33.33	<i>7.5</i>		33.33
" overhang					
Trunk <i>178.25</i>		126.04	<i>6.29</i>		121.04
" forward <i>126.04</i>					
Tonnage opening aft	<i>56.0</i>		<i>7.5</i>		
" forward					
Total	121.83	247.87			239.35

Standard Height of Superstructure <i>6.55</i>	
" " R.Q.D. <i>✓</i>	
Deduction for complete superstructure <i>35.67</i>	
Percentage covered $\frac{S}{L} = \frac{121.83}{305} = 39.94$	
" " $\frac{S_1}{L} = \frac{247.87}{305} = 81.26$	
" " $\frac{E}{L} = \frac{239.35}{305} = 78.48$	
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. <i>73.43</i> (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $35.67 \times .7343 = 26.19$	

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	40.50	1	40.50	<i>2</i>	<i>7.75</i>	1	7.75
$\frac{1}{2}L$ from A.P.	18.02	4	72.08	0	0	4	0
$\frac{2}{3}L$ "	4.45	2	8.90	0	0	2	0
Amidships	-	4	0	0	0	4	0
$\frac{2}{3}L$ from F.P.	8.91	2	17.82	0	0	2	0
$\frac{1}{2}L$ "	36.05	4	144.20	<i>3.5</i>	<i>1.67</i>	4	6.68
F.P.	81.00	1	81.00	<i>24.00</i>	<i>24.00</i>	1	24.00
Total			364.50				38.43

 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 = *Tanker*
 " " aft of " =

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{326.07}{18} \left(.75 - \frac{.5503}{1.997} \right) = + 9.97$
 If limited on account of midship superstructure. - If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

 Deduction for Tropical Freeboard.
 Addition for Winter and Winter North Atlantic Freeboard.

 Depth to Freeboard Deck = *15.04*
 Summer freeboard = *1.55*
 Moulded draught (d) = *13.49*

 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{13.49}{4} = 3.37 = 9 \text{ cm}$
 Addition for Winter North Atlantic Freeboard (if required) = $3.37 + 3.08 = 6.42 = 16 \text{ cm}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 4925$

Tons per inch immersion at summer load water line

 $T = 31.80$ Deduction = $\frac{\Delta}{40T}$ inches $= 3.87 = 10 \text{ cm}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.68 + .832}{1.36} = \frac{1.512}{1.36}$ Depth Correction
| Deduction for superstructures |
| Sheer correction |
| Round of Beam correction |
| Correction for Thickness of Deck amidships |
| Other corrections, scantlings, etc. |
| 9.97 38.13 28.16 |
| Summer Freeboard = *18.64* |
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *W*, Steel, Deck: - *18.64 = 47 cm*

Tropical Fresh Water Line above Centre of Disc ...	7.24 = 19
Fresh Water Line " " ...	3.87 = 10
Tropical Line " " ...	3.37 = 9
Winter Line below " " ...	3.37 = 9
Winter North Atlantic Line " " ...	6.42 = 16

Tropical Fresh Water Freeboard
| Fresh Water " " ... |
| Tropical " " ... |
| Winter " " ... |
| Winter North Atlantic " " ... |
| 28 " 37 " 38 " 56 " 63 " |

JUN 1932

5 - OCT 1932

1 SEP 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	6. O.T. Hatchway Upper Deck	5. O.T. Hatchway Trunk Top	1. O.T. Hatchway Bunker	1. W.T.H. Hatchway Fore Hold	1. W.T.H. Hatchway Trunk Top	1. W.T.H. Hatchway Fore Hold	1. W.T.H. Hatchway Trunk Top	1. W.T.H. Hatchway Fore Hold	1. W.T.H. Hatchway Trunk Top
Dimensions of Hatchway	6'6" x 2'9"	6'0" x 4'0"	5'0" x 4'0"	10'0" x 6'0"	3'0" x 3'0"	3'0" x 3'0"	3'0" x 3'0"	3'0" x 3'0"	3'0" x 3'0"
COAMINGS	Height above Deck	3'9"	9"	9"	9"	9"	9"	9"	9"
	Thickness	4.8	4.8 BA	4.8 BA	4.8 BA	4.8 BA	4.8 BA	4.8 BA	4.8 BA
	Sides	✓	✓	✓	✓	✓	✓	✓	✓
	Stiffeners	1" end	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS	Number	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top
	Spacing	plate with 2 stiffeners	plate with 2 stiffeners	plate with 2 stiffeners	plate with 11 toggles	plate with 8 toggles	plate with 2 stiffeners	plate with 14 toggles	plate with 2 stiffeners
	Scantling and Sketch	4x3x4.8 with 16 toggles	4x3x4.8 with 18 toggles	4x3x4.8 with 16 toggles	4x3x4.8 with 26 toggles	4x3x4.8 with 26 toggles	4x3x4.8 with 14 toggles	4x3x4.8 with 14 toggles	4x3x4.8 with 14 toggles
	Bearing Surface	steel	steel	steel	steel	steel	steel	steel	steel
FORE AND AFTERS	Number	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top	4.8 top
	Spacing	plate with 2 stiffeners	plate with 2 stiffeners	plate with 2 stiffeners	plate with 11 toggles	plate with 8 toggles	plate with 2 stiffeners	plate with 14 toggles	plate with 2 stiffeners
	Unsupported Lengths	4x3x4.8 with 16 toggles	4x3x4.8 with 18 toggles	4x3x4.8 with 16 toggles	4x3x4.8 with 26 toggles	4x3x4.8 with 26 toggles	4x3x4.8 with 14 toggles	4x3x4.8 with 14 toggles	4x3x4.8 with 14 toggles
	Scantling and Sketch	4x3x4.8 with 16 toggles	4x3x4.8 with 18 toggles	4x3x4.8 with 16 toggles	4x3x4.8 with 26 toggles	4x3x4.8 with 26 toggles	4x3x4.8 with 14 toggles	4x3x4.8 with 14 toggles	4x3x4.8 with 14 toggles
HATCH COVERS	Material	steel	steel	steel	steel	steel	steel	steel	steel
	Thickness	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	How fitted	hinged	hinged	hinged	hinged	hinged	hinged	hinged	hinged
	Bearing Surface	steel	steel	steel	steel	steel	steel	steel	steel
Spacing of Cleats	✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of Tarpaulins	✓	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of fiddle, funnel and ventilator coamings :-

Engine and Fore-room ventilators also funnel and covers for fiddle openings in efficient condition.

Engine Room skylights of steel strongly constructed and in good condition.

Particulars of Flush Bunker Scuttles :-

None

Particulars of Companionways :- one (1) steel companionway on Forecastle Deck 3'0" x 3'9" x 6'0" leading to enclosed Forecastle, door of steel with 15" sill, capable of being manipulated from both sides. one (1) steel companionway on Trunk Top 5'0" x 9'6" x 7'6" leading to pump room, door of steel capable of being manipulated from both sides and sill 18" high.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :-

Forecastle Deck 4" - 8 inch dia. 15" coaming x 1/2" (6") to crew space & store. Poop Deck 2-18" dia. 36" coaming x 3/4" to E.R. store. Trunk Deck 2-14" " " 36" " x 5/16" to Fore Hold and store. 4-8" " 30" " x 1/2" to Refrig. Room. Trunk Deck aft 2-18" " " 36" " x 3/8" to Pump Room. Efficient closing appliances provided.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :-

Forecastle Deck one (1) 6" dia. 6" above deck to Fore Peak. Trunk Top 3-3" dia. 24" above deck to oil fuel tanks. 5-3" dia. 6" " " to W.C. P&S. Poop Deck 2-2 1/2" " 24" " " Fresh Water Tank. Foreboard Deck 6-3" dia. 6'0" above deck from Wing Tanks. 1-4" " 24" " " after Peak Tank. Efficient closing appliances provided.

Particulars of Gangway Cargo and Coaling Ports :-

None

Particulars of Scuppers and Sanitary Discharge Pipes - 2 1/2" and 4" storm discharge valves on ship's side from W.C. all discharges from Wash Basins etc. in Poop, Captain's Quarters and Forecastle fitted with storm valves on ship's side and efficient traps at the inboard end. all scupper and W.C. storm valve chests of cast iron with steel covers, copper valves and pins.

Particulars of Side Scuttles :-

all side scuttles in Forecastle and Poop fitted with efficient hinged dead lights permanently attached.

Particulars of Guard Rails :-

Foreboard Deck 3'6" high - 3 rails stanchions spaced 5 ft. Forecastle Deck (port rails) 3'6" high - 3 rails " " 5 ft. Trunk Top 3'6" high - 3 rails " " 5 ft. Poop Deck 3'6" " - 3 " " 5 to 6 ft.

Particulars of Gangways, Lifelines, etc. :-

The Trunk Top forms a gangway between the Poop and the Forecastle.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	open rails on Foreboard Deck and Trunk Top.					
Forward Well						
State position of each freeing port (F. and A. position and height above deck edge) After Well :- Forward Well :-						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :-						
Additional area where sheer is less than standard.						

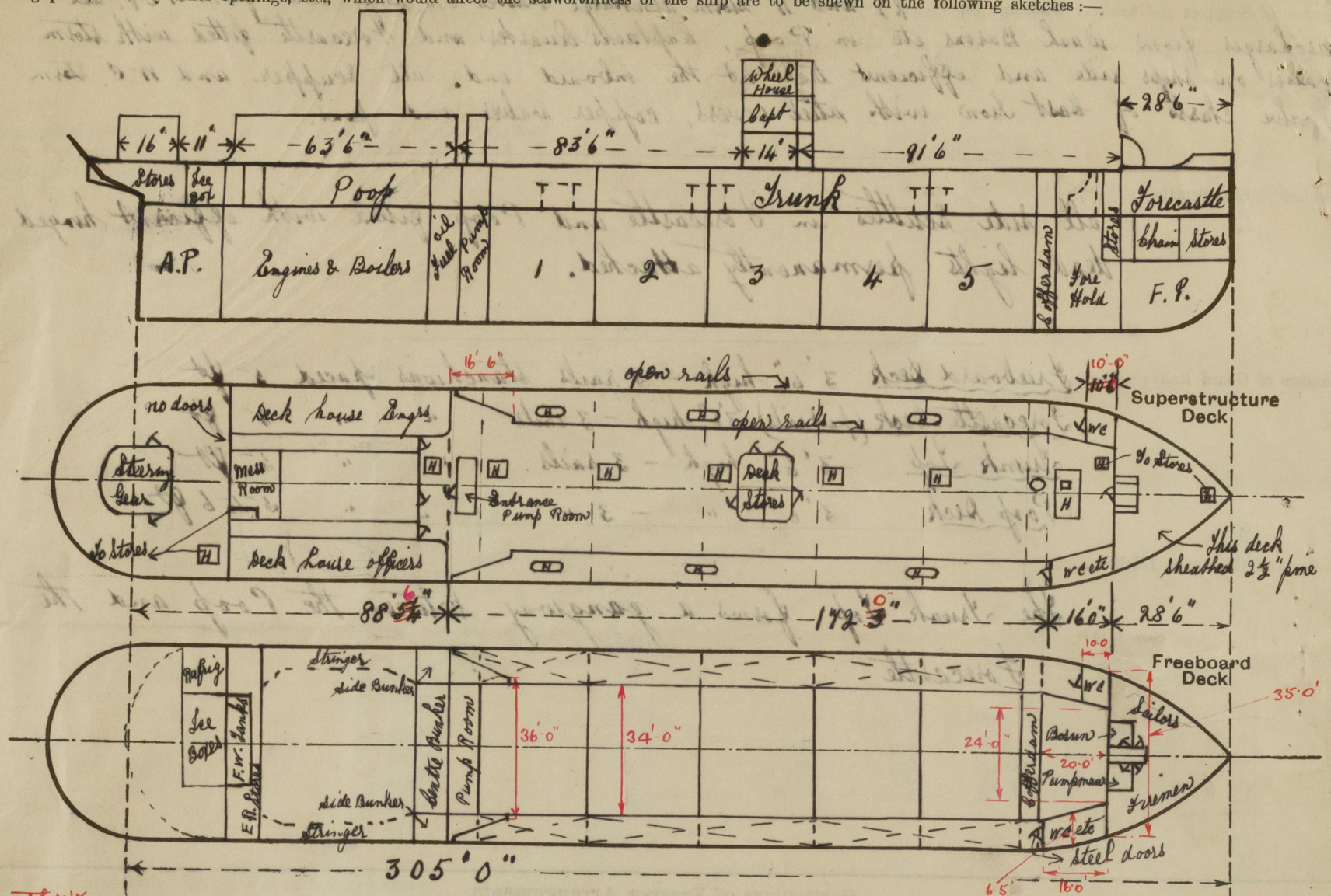
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	34	6x2x5x36 BA	24"	Bkt	✓	✓	✓
Raised Quarter Deck Bulkhead	30	26	4x3x34 A	39" limit	Bkt	2'3"x5'0"	18"	7'6"
Bridge, After Bulkhead	30	26	3x3x34 A	24" to 36"	Bkt	2'0"x5'0"	18"	7'6"
Bridge, Forward Bulkhead	30	26	3x3x34 A	24"	Bkt	2'0"x5'0"	18"	7'6"
Forecastle Bulkhead	30	26	3x3x34 A	24"	Bkt	2'0"x5'0"	18"	7'6"
Trunk, Aft	44	42	5x3x34 BA	24"	Bkt	✓	✓	6'3 1/2"
Trunk, Forward	44	42	5x3x34 BA	24"	Bkt	✓	✓	6'3 1/2"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	34	30	4x3x34	24"	Bkt	2'3"x4'6"	18"	7'6"
Exposed Machinery Casings on Superstructure Decks	34	30	4x3x34	24"	Bkt	2'3"x4'6"	18"	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	No openings.
Raised Quarter Deck Bulkhead	Steel doors 2'0"x5'0" capable of being manipulated from both sides.
Bridge, After Bulkhead	" " 2'0"x5'0" " " " " " "
Bridge, Forward Bulkhead	" " 2'0"x5'0" " " " " " "
Forecastle Bulkhead	No openings. Steel door on companionway capable of being manipulated from both sides. Steel doors on W.C.'s on foreboard deck in same condition.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Steel door capable of being manipulated from both sides.
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



TRUNK

Aft section $16.50 \times 42.0 = 693.0$

Centre " $151.50 \times 34.0 = 5151.0$

Fore " $15.17 \times 30.2 = 458.1$

$500 \mid 6302.1$

$126.04 =$

Equivalents

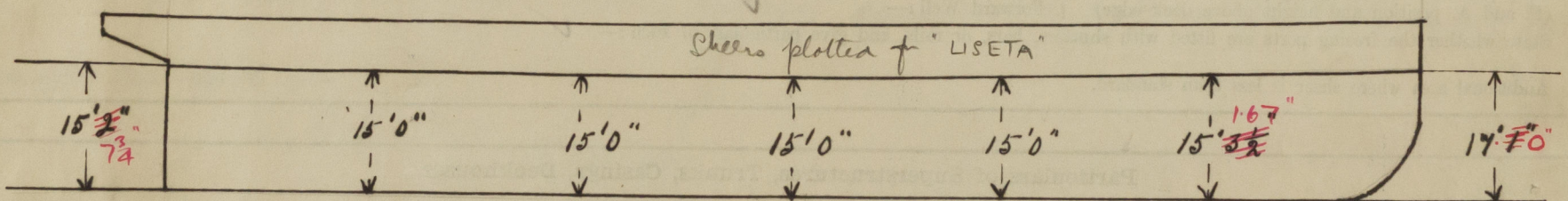
Side Equivalents

Length to bles. 28.50

Sidehouse $\frac{26 \times 6.5}{35} = 4.83$

$33.33 \text{ Equivalents}$

State any special features in the construction of the ship:—



Keel 1 1/2" 85 1/2" mea D = 12-9" = 12' 10 1/2" BK.

f. A. Curve. 2 1/2" A @ 12' 0" BK = 4321 T.P.I. = 31.6

$10.25 \times 31.6 = 324 + 4321 = 4645$

Summe mea D = 13.49 = 13' 5 1/2" = 13' 7" BK. - 12' 0" A = 19" T.P.I. = 31.80 = 604 cm.

$\frac{4321}{4925}$

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Builder's name and yard number *Cantiere Navale Triestino.*

Nº 180.

Names of sister ships *"Liseta"; "Lucrecia"; "Leticia".*

Owners *Curacao'sche Scheepvaart Maatschappij.*

Fee £ *150* Received by me



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