

24 SEP 1932

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Rpt. C.11.

Index. No.
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>London</u>
having <u>POOP, BRIDGE & F'CLE</u>					Date of Survey <u>20th & 21st Feb 1932</u>
(Type of Superstructures.)					Name of Surveyor <u>W. T. Hudson</u>
Ship's Name <u>P.T.S. "LONGWOOD"</u>	Nationality and Port of Registry <u>BRITISH LONDON</u>	Official Number <u>162473</u>	Gross Tonnage <u>9463</u>	Date of Build <u>1930-8</u>	Particulars of Classification <u>+100A1.</u> <u>Carrying Petroleum & bulk</u> <u>OIL ENG</u> ✓
Moulded Dimensions: Length <u>475.0'</u> Breadth <u>66.0'</u> Depth <u>35.42'</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>21325</u> tons					
Coefficient of fineness for use with Tables <u>.791</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>35.42'</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(35.48 - 31.67) 3 = + 11.43</u>	Moulded Breadth (B) <u>66.0</u>
Stringer plate <u>3/4"</u> <u>.06</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 15.84$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>16"</u>
Depth for Freeboard (D) = <u>35.48</u>		Difference <u>.16</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.16}{4} \times .5797 = .02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	106.00	106.00	7.6		106.00	Standard Height of Superstructure <u>7.6</u>
" overhang			+ 2 1/2 wood			" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure <u>42.0</u>
" overhang						Percentage covered $\frac{S}{L} = 43.74$
Bridge enclosed	36.00	36.00	7.6		36.00	" " $\frac{S_1}{L} = 42.03$
" overhang aft	4.00	3.00	+ 2 1/2 wood		3.00	" " $\frac{E}{L} = 42.03$
" overhang forward	4.00	2.00			2.00	Percentage from Table, Line A.
F'cle enclosed	47.50	47.50	7.6		47.50	(corrected for absence of forecastle (if required))
" overhang	10.25	5.13	+ 2 1/2 wood		5.13	Percentage from Table, <u>Line B</u> <u>Santer</u> <u>33.03</u>
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction = <u>42.0 x .3303 = - 13.87</u>
" " forward						
Total	207.75	199.63			199.63	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	57.50	1		57.50	57.00	57.00	1		57.00	Mean actual sheer aft = <u>Deficient .775%</u>
1/2 L from A.P.	25.59	4		102.36	24.69	24.69	4		98.76	Mean actual sheer forward = <u>Excess</u>
3/8 L "	6.32	2		12.64	6.17	6.17	2		12.34	Mean standard sheer forward
Amidships		4					4			Length of enclosed superstructure forward of amidships = <u>Santer</u>
3/8 L from F.P.	12.65	2		25.30	12.89	12.89	2		25.78	" " aft of " =
1/2 L "	51.18	4		204.72	51.55	51.55	4		206.20	
F.P.	115.00	1		115.00	114.00	114.00	1		114.00	
Total				517.52					514.08	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{3.44}{18} (.75 - .2187) = + .10$$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 35.48
Summer freeboard = 7.14
Moulded draught (d) = 28.34

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 7.08 : 7Addition for Winter North Atlantic Freeboard (if required) = 4.75

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 20047$

Tons per inch immersion at summer load water line

T = 64.5Deduction = $\frac{\Delta}{40T}$ inches= 7.77= 7 3/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.791 + .08}{1.36} = \frac{.871}{1.36}$

	+	-
Depth Correction	11.43	
Deduction for superstructures		13.87
Sheer correction10	
Round of Beam correction02
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	11.53	13.89

Summer Freeboard = 8SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	14 3/4	Tropical Fresh Water Freeboard	5 -
Fresh Water Line " "	7 3/4	Fresh Water " "	6 -
Tropical Line " "	7	Tropical " "	7
Winter Line below " "	7	Winter " "	7
Winter North Atlantic Line " "	11 3/4	Winter North Atlantic " "	7

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
FREEBOARD DECK										
Description of Hatchway	No. 1 (To Forward)	8 HATCHES To COFFERDAMS	8 HATCHES To CENTRE TANKS	16 HATCHES To SIDE TANKS	4 HATCHES To D.F. BUNKER	2 HATCHES To COFFERDAMS	HATCH To ENGINEER'S STORE	HATCH To STEERING ENGINE	No. 1	HATCH To FORWARD
Dimensions of Hatchway	9'-0" x 13'-0"	2'-1" x 2'-1"	6'-0" x 6'-0"	4'-0" x 4'-0"	2'-6" x 3'-0"	2'-0" x 2'-3"	3'-0" x 3'-0"	3'-0" x 3'-0"	9'-0" x 13'-0"	2'-4" x 2'-4"
COAMINGS	Height above Deck	2'-6"	9"	12"	12"	12"	15"	2'-6"	2'-6"	2'-6"
	Thickness	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
	Sides	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
	Stiffeners	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
FOOT DECK										
HATCH BEAMS	Number	ONE							ONE	
	Spacing	4'-6"							4'-6"	
	Scantling and Sketch	11" to 6" x 30"							11" to 6" x 30"	
	Bearing Surface	3							3	
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch									
HATCH COVERS	Material	W. WOOD	44 STEEL	50 STEEL	50 STEEL	50 STEEL	44 STEEL	W. WOOD	W. WOOD	W. WOOD
	Thickness	3"	RIVETED W.T. COVER	O.T. COVER	O.T. COVER	O.T. COVER	RIVETED W.T. COVER	3"	3"	3"
	How fitted	F.A.A.	W.T. MANHOLE IN TOP PLATE	3"	3"	3"	W.T. MANHOLE IN TOP PLATE	3"	3"	3"
	Bearing Surface	3								
Spacing of Cleats	24"		BUTTERFLY BOLTS 12" APART	BUTTERFLY BOLTS 12" APART	BUTTERFLY BOLTS 12" APART		24"	24"	24"	24"
Number of Tarpaulins	2						2	2	2	2
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes</i></p>										

Particulars of fiddley, funnel and ventilator coamings:—

Fiddley vents & funnel in efficient condition
Engine skylight of steel strongly constructed.
Gratings fitted with hinged steel covers.

Particulars of Flush Bunker Scuttles:—

Flush scuttle on poop deck (18x15) strongly constructed.

Particulars of Companionways:—

Entrances to accommodation through casing side

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *File 12 2-94 x 9" to 14" D x 38"*

FREEBOARD DECK (FOR OF BRIDGE) 2 2-3-0 x 10" D x 34" (TO FORWARD COFFERDAM) 2 2-10-0 x 24" D x 42" (TO PUMP ROOM EFFICIENTLY STAYED)

BRIDGE 3 2-2-4 x 7" D x 34"

FREEBOARD DECK (AFT OF BRIDGE) 2 2-16-0 x 24" D x 42" (TO PUMP ROOM, EFFICIENTLY STAYED) 2 2-3-0 x 10" D x 34" (TO AFTER COFFERDAM)

POOP DECK 16 2-2-4 x 6" to 9" D x 34"

VENTS TO PUMP ROOMS FITTED WITH STRONG WIRE MESH IN WAY OF COWL OPENINGS, OTHER VENT COAMINGS FITTED WITH WOOD BLOCS & CANVAS COVERS

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

Air pipes to peaks, d. b. tanks etc 24" to 24" HIGH x 2 1/2" to 4" D, strongly constructed. Air pipes to oil tanks 2 1/2" x 3" diam, led up masts

No closing appliances fitted to air pipes leading to W.B. spaces. ~~ce wood plugs~~
Several gauges to oil tank air pipes require to be removed.

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes:—

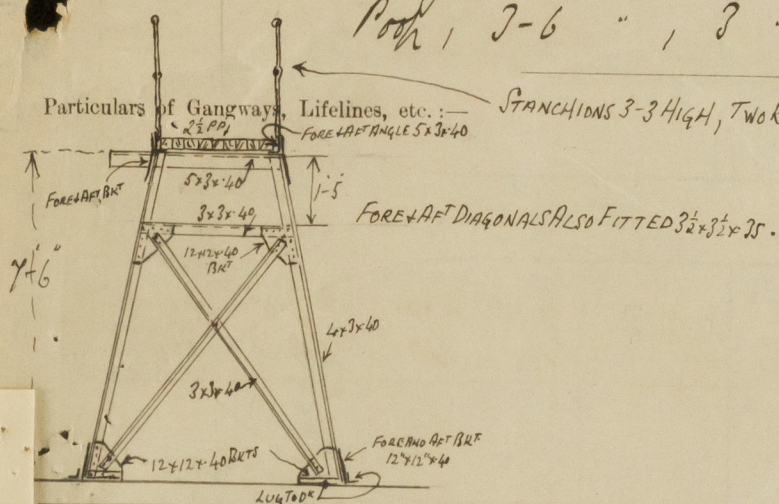
Scuppers through sheerstrake, as per plan.
All sanitary discharge pipes fitted with storm valves at ship's side & efficient traps at inner end.

Particulars of Side Scuttles:—

All side scuttles of substantial construction & fitted with hinged deadlights

Particulars of Guard Rails:—

7' cle, 3-6 4:44, 3 rails, stanchions spaced about 4-0 apart.
Bridge, 3-6 " " " " " " 4-0 "
Poop, 3-6 " " " " " " 4-0 "



Fore & aft gangway fitted as per sketch between poop & bridge and bridge & 7' cle.
Supports spaced 6-6 to 8-0 apart.

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 ...	148'-4" (LESS 74'-0" OPEN RAILS)	4'-0"	2-6 x 1-9 (NEXT BRIDGE FRONT) 4-3 x 1-9	1 2	19.23 Sq. FT. + 50% open rails	
Forward Well ...	138'-0" (CLEFRONT TO BRIDGE FRONT) (LESS 67'-0" OPEN RAILS)	4'-0"	2-6 x 1-9 (NEXT BRIDGE FRONT) 4-3 x 1-9	1 1	11.8 Sq. FT. + 50% open rails	
State position of each freeing port (F. and A. position and height above deck edge) } After Well:— Forward Well:— } SEE PLAN. HEIGHT ABOVE DECK 11". OPEN RAILS AS PER PLAN.						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— NO SHUTTERS, TWO BARS FITTED						
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 ...	46	40	9x32x50 RA	30"	RA TO T & B	NONE	—	7'-6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	✓	36	4x3x38 PA	30"	RA TO T & B	1 RA S. 4-10 x 3-1	18"	7'-6"
Bridge, Forward Bulkhead ...	44	40	9x32x50 RA	30"	LOG TOP RA TO BTM.	4-10 x 2-3	18"	7'-6"
Forecastle Bulkhead ...	✓	30	3x22x30	30"	NONE	4-10 x 2-0	18"	7'-6"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	34	30	4x3x34 PA	24"	RA TO TOP	5-0 x 2-0 4-5-0 x 3-0	16" ABOVE WOOD DECK	8'-0"
Exposed Machinery Casings on Superstructure Decks (INTERIOR PAIR) ...	34	28	4x3x34 PA	24"	"	4-0 x 2-0	10"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Pump Room Forward Aft Deckhouses on Flush Deck Ships ...	38	30	4x3x34 PA	26"	RA TO T & B	4-9 x 2-1 (AT AFT END OF HOUSE)	18"	6'-6"

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

Poop Bulkhead ...	No openings in poop bulkhead
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	Weather boards in riveted channels full height of openings
Bridge, Forward Bulkhead ...	Two steel hinged W.T. doors operated from both sides
Forecastle Bulkhead ...	Steel hinged doors in after bulkhead, teak wood door in fore & aft bulkheads, all doors operated from both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Steel hinged door to E Room, Galley & DB space, other doors teak wood, all doors operated from both sides
Exposed Machinery Casings on Superstructure Decks (INTERIOR PAIR) ...	Teak wood panel doors (2 5/8 x 1 1/8) to E Room, operated from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Pump Room Forward Aft Deckhouses on Flush Deck Ships ...	Steel hinged door in after end, operated from both sides

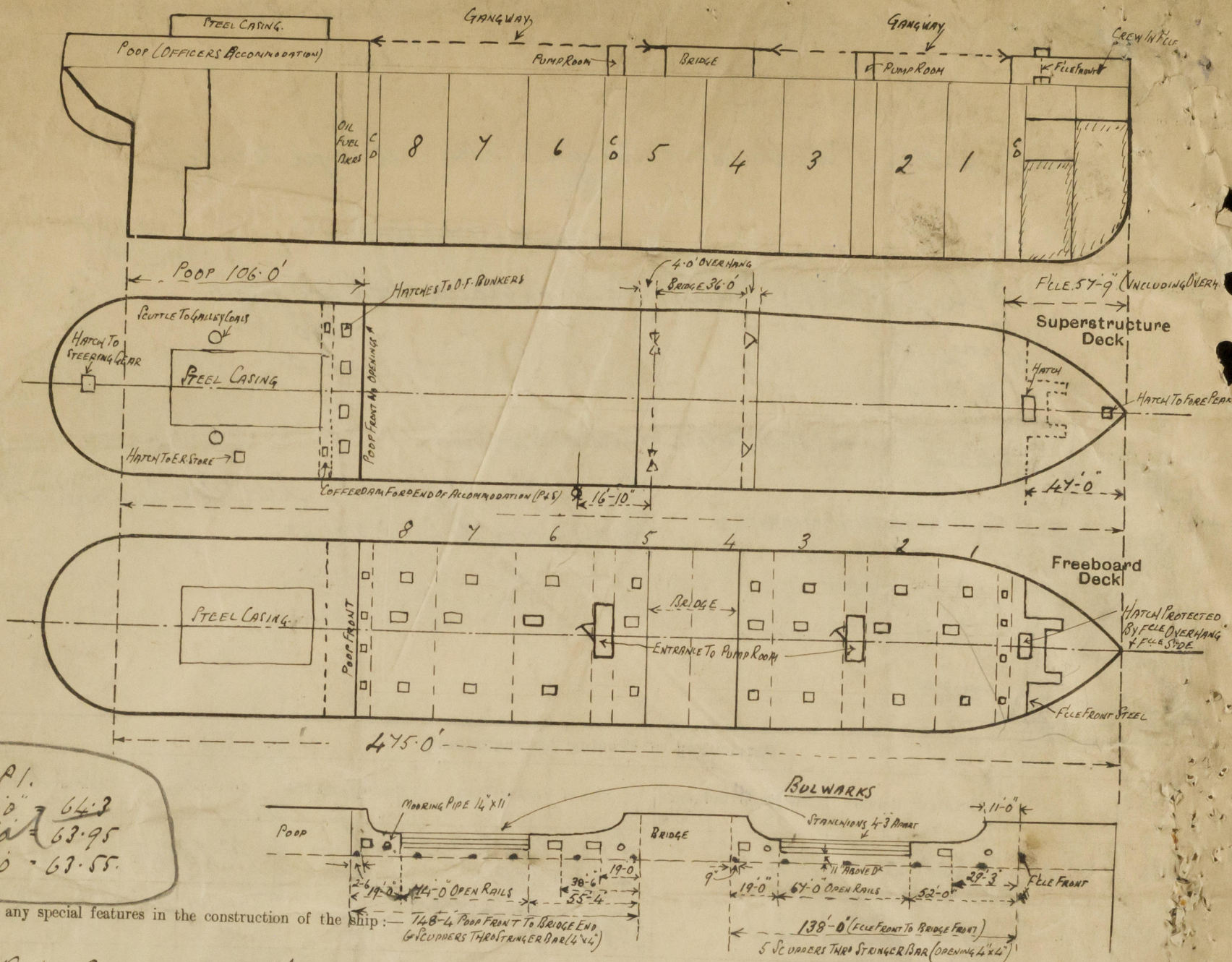


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the foreboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the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



T.P.I.

27-0 64.3
25-0 63.95
25-0 63.55

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

Poop, Bridge & Foremast sheathed with 2 1/2" P.P. Freeboard deck, steel only.

Survey confined to above. Vessel afloat & laid up off West Mersea.

27 - 3 3/4 = 140 50
1 - 3 x 64 1/2 = 967
25 - 6 3/4 = 20047

Builder's name and yard number Sir James Laing & Sons Ltd 20912

Names of sister ships

Owners Oil & Molasses Tanker, Ltd (L. & Jacobs & Co. Ltd. Regd)

Fee £ 17 : 0 : 0

Received by me

EXPENSES £ 2 : 0 : 0

21 SEP 1932



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