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13 MAY 1932

Index. No. 33077
(For London Office only.)WRECK SECTION
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

No 100312

502

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having POOP, BRIDGE AND FORECASTLE.

Port of Survey LIVERPOOL.

(Type of Superstructures.)

Date of Survey APRIL, 1932.

Name of Surveyor R. M. Scott.

Particulars of Classification 100 A.1.
WITH FREEBOARD.

Ship's Name *MS. "INNISFALLEN"* Nationality and Port of Registry *BRITISH CORK* Official Number *152222* Gross Tonnage *3071 3049* Date of Build *1930-6 MONTHS*

Moulded Dimensions: Length *220 FT.* Breadth *45.5 FT.* Depth *19'0" TO UPP. DK.*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *4288* tons

Coefficient of fineness for use with Tables *.638 .68 correct*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	19'0"	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	45.5 FT.
Stringer plate	50"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	10.92
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = 125 \left(\frac{28}{320} \right)$	.01	(21.33 - 19.05) 2.461 = 5.61		Ship's Round of Beam	4"
Depth for Freeboard (D) =	19.05	If restricted by superstructures	NIL	Difference	Deficient 6.92
				Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{6.92}{4} (1 - .60) = +.69$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	33.00	33.00	8'0"		33.00
" overhang	26.00	13.00			13.00
R.Q.D. enclosed					
" overhang					
Bridge enclosed	160 FT.	80.00	8'0"		80.00
" overhang aft					
" overhang forward	59.00	59.00	8'0"		59.00
Fore enclosed	43 FT.	59.00	8'0"		59.00
" overhang	14.00	7.00			7.00
Trunk aft					
" forward					
Tonnage opening aft	14 FT.				
" forward	14 FT.				
Total	292.00	192.00			192.00

Standard Height of Superstructure	6.70
" " R.Q.D.	
Deduction for complete superstructure	36.67
Percentage covered $\frac{S}{L} =$	91.26
" $\frac{S_1}{L} =$	60.00
" $\frac{E}{L} =$	60.00
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	46.00
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	$.46 \times 36.67 = 16.87$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	42.00	1		42.00	41"	42.00	1		42.00
$\frac{1}{2}$ L from A.P.	18.69	4		74.76	18 $\frac{1}{2}$ "	18.96	4		74.76
$\frac{3}{8}$ L	4.62	2		9.24	4 $\frac{1}{2}$ "	4.74	2		9.24
Amidships		4					4		
$\frac{3}{8}$ L from F.P.	9.24	2		18.48	9"	8.88	2		17.76
$\frac{1}{2}$ L	37.38	4		149.52	35"	35.55	4		142.20
F.P.	84.00	1		84.00	78"	78.00	1		78.00
Total				378.00					363.96

Mean actual sheer aft =	Even
Mean standard sheer aft =	
Mean actual sheer forward =	Deficient
Mean standard sheer forward =	
Length of enclosed superstructure forward of amidships =	$\frac{47}{320} = .147$
" " aft of " =	$\frac{33}{320} = .103$

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{14.04}{18} (.75 - .4563) = +.23$

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 = 19.16
Summer freeboard = 4.10
Moulded draught (d) = 15.06

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.76 = 3 $\frac{3}{4}$

Addition for Winter North Atlantic Freeboard (if required) =

2

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 3960$

Tons per inch immersion at summer load water line

T = 26.7

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

= 3.71

: 3 $\frac{3}{4}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Nil

	+	-
Depth Correction		
Deduction for superstructures		16.87
Sheer correction	.23	
Round of Beam correction	.69	
Correction for Thickness of Deck amidships	1.38	
Other corrections, scantlings, etc.	15.42	
approved draught of 14'-9" minimum for all summer (Winter)	17.72	16.87
Summer Freeboard =	49.25	

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

Tropical Fresh Water Line above Centre of Disc	7 $\frac{1}{2}$	Tropical Fresh Water Freeboard	4-1 $\frac{1}{4}$
Fresh Water Line	3 $\frac{3}{4}$	Fresh Water	3-5 $\frac{3}{4}$
Tropical Line	3 $\frac{3}{4}$	Tropical	3-9 $\frac{1}{2}$
Winter Line below	3 $\frac{3}{4}$	Winter	4-5
Winter North Atlantic Line	5 $\frac{3}{4}$	Winter North Atlantic	4-7

5m, 8.32.

A passenger loading to be marked 3 $\frac{3}{4}$ " below the

centre of disc

MARKING FORM

13 MAR 1932

2 JUN 1932

RECEIVED

RECEIVED 24 JUN 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS													
← FREEBOARD DECK → SUPERSTRUCTURE "B" DECK →													
Description of Hatchway			No. 1.	No. 2	No. 3	No. 4	No. 1.	TONNAGE HATCHES.		No. 4.			
Dimensions of Hatchway			8'-0" x 14'-0"	14'-0" x 14'-0"	14'-0" x 14'-0"	8'-0" x 14'-0"	8'-0" x 14'-0"	14'-0" F&A	14'-0" F&A	8'-0" x 14'-0"			
COAMINGS	{	Height above Deck ...	6 1/2" x 3" B.A.	12"	12"	INSULATED	21" ABOVE WOOD DK.	FLUSH	FLUSH	15 1/2" ABOVE WOOD DK.	✓		
		Thickness ...	✓	44"	44"	HATCH	44"	WITH WOOD DECK	WITH WOOD DECK	44"	✓		
		Sides ...	✓	44"	44"	TRUNKED	44"			44"	✓		
		Ends ...	✓			SIDES	7 x 3" B.A. AT AFT-END.			✓			
HATCH BEAMS	{	Number ...	1.	2	2	NONE.	1			1			
		Spacing ...	4'-0"	4'-8"	4'-8"		4'-0"			4'-0"	✓		
		Scantling and Sketch ...											
			12' x 6' x 72" F 42" W	SAME AS No. 1.	SAME AS No. 1.		12' x 6' x 72" F 42" W	NONE.	NONE.	12' x 6' x 72" F 42" W	✓		
	Bearing Surface ...	3 1/2" ✓	3 1/2" ✓	3 1/2" ✓		4" ✓	-	-	4" ✓				
FORE AND AFTERS	{	Number ...				NONE FITTED.							
		Spacing ...											
		Unsupported Lengths ...											
		Scantling* and Sketch ...											
		Bearing Surface ...											
HATCH COVERS	{	Material ...	PINE	PINE	SAME AS No. 2.	INSULATED	PINE	PINE	PINE	PINE			
		Thickness ...	3" ✓	3" ✓		COVERS.	3" ✓	2 1/2" ✓	2 1/2" ✓	3" ✓			
		How fitted ...	F&A	F&A			F&A	F&A	F&A	F&A			
		Bearing Surface ...	3 1/2" ✓	3" ✓			3" ✓	3" ✓	3" ✓	3" ✓			
Spacing of Cleats			22" ✓	26" SIDES 22" ENDS.	26" SIDES 22" ENDS.	NONE.	21" ✓	NONE.	NONE.	22" ✓			
Number of Tarpaulins			2 ✓	2 ✓			3 ✓	NONE.	NONE.	3 ✓			
*Are wood fore and afters steel shod at all bearing surfaces? NONE FITTED. ✓													
Are battens and wedges efficient and in good condition? YES. ✓													
Are tarpaulins in good condition and in accordance with rule requirements? YES. ✓													
Are lashings provided in accordance with rule requirements? AT Nos. 2 & 3 ON F&B. DK. ✓													

Particulars of fiddley, funnel and ventilator coamings :—

FUNNEL & VENT. COAMINGS ON MOTOR ROOM CASING TOP, IN EFFICIENT CONDITION. ✓

NO ENGINE ROOM SKYLIGHT ON MOTOR ROOM CASING TOP. ✓

Particulars of Flush Bunker Scuttles:—

NONE. ✓

Particulars of Companionways :—

Particulars of Companionways:—

ENTRANCE P&S AT POOP FRONT, ON "B" DECK	TO 3 RD CLASS ACC ^M —	HINGED WOOD DOOR P&S 5'-5" x 2'-3 1/2"	SILL—12" ABOVE WOOD DK.	OPERATED FROM BOTH SIDES.	✓
ENTRANCE P&S AT BRIDGE AFT END, ON "B" DK.	TO FBD DK & BAGE ROOM—	" " P&S 5'-8" x 1'-10"	SILL—12" " " " " " "	" " " "	✓
ENTRANCE AT BRIDGE AFT END, " " "B" DK.	TO PANTRY & 1 ST CL. SALOON—	" " 5'-9" x 2'-2"	SILL—12" " " " " " "	" " " "	✓
{ STEEL BUILT COMPANION ON "B" DK FORD DK TO FREEBOARD DK		{ HINGED STEEL DOOR—5'-6" x 1'-9" SILL—12" " " " " " "			
(2'-3" x 4'-0" x 6'-9" HIGH)		{ THIS IS A W.T. DOOR, RUBBER JOINTED, WITH TURNBUCKLE HANDLES ON EACH SIDE			
ENTRANCE AT FILE FRONT ON "B" DK	LEADING TO STAIRWAYS TO FBD DK—	HINGED WOOD DOOR 5'-6" x 2'-1"	SILL 10 1/2" ABOVE WOOD DECK,	OPERATED FROM BOTH SIDES.	✓

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

POOP DECK: 3 YENTS 15 DIA. COAM. 29" x 36" TO PASS. ACC. ✓
5 " 8 1/2 " 29" x 32" TO STE. ENB. & PASS. ACC. ✓
1 SHEET METAL YENT 12" x 4 1/2" - HEIGHT TO TOP 21" TO AFT PK. STORE. ✓

"B" DK. (FORD) - 4 SHEET METAL BENTS. 12"x4 1/2" - HEIGHT TO TOP 36", TO HOLD.

SHEET METAL VENTS.

"B" DX. (AFT) 1 VENT. 14" DIA. COAM. 34"x36" TO PASS. ACC. ✓
1 " 12" " " 34"x34" = TUNNEL ESCAPE. ✓
1 SHEET METAL VENT 16"x4 1/2" - HEIGHT TO TOP 36" TO HOLD. ✓

FORECASTLE DK:- 1 VENT. 12" DIA. COAM. 33" x 34" TO F'CLE ALLEYWAY.

2 SHEET METAL VENTS. 12" x 4 1/2" - HEIGHT TO TOP 2'-10", TO F.P. STORE.

1 " " " 16" x 4 1/2" " " " 2'-10" " LOW. F.C.E.

12" x 4 1/2" - " " " 2-10" " No. 1 HOLD.

1	"	"	"	12" x 4 1/2" =	"	"	"	2-10"	"	"	"
1	"	"	"	16" x 4 1/2" =	"	"	"	2-10"	"	"	"

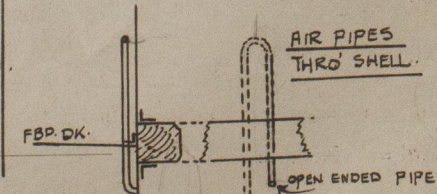
8" x 4 1/2" - " " " 2'-10" " TWEEN D

VENT. COAMINGS PROVIDED
WITH WOOD PLUGS AND
CANVAS COVERS.

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

X 1 AIR PIPE 3" DIA. LED ABOVE FB.DK & RETURNED DOWN AND THRO SHELL ABOVE BELTING, from F.P.TANK.
X 1 " " 2 1/2" " " " " " " " " IMMED. BELOW BELTING, from D.B.TANK.
X 4 " " 2 1/2" " ON "B" DK - 23" To LIP, from D.B.TANK. *filled with screwed cap*
X 6 " " 2 1/2" " LED ABOVE FB.DK & RETURNED DOWN AND THRO SHELL IMMED. BELOW BELTING, from D.B.TANKS.
X 6 " " 1 1/4" " " " " " " " " " (Cofferdams).
X 2 " " 2 1/2" " ON BOAT DK - 26" To LIP, from D.B.TANKS. *filled with screwed cap*
X 2 " " 1 1/4" " LED ABOVE FB.DK & THROUGH SHELL, BELOW "B" DK, from D.B.TANKS. (Cofferdam).
X 2 " " 2 1/2" " " " " " " " " " "
X 4 " " 3" " LED TO CASINE TOP AND INSIDE FUNNEL, from D.B. LUB.TANKS. *filled w. bot. drilled w. rubber band*

3 AIR PIPES, 3" DIA. LED ABOVE FWD DR. & RETURNED DOWN AND
THRO' SHELL IMMER. BELOW BELTING, from D.B. TANKS &
AFT. PK. TANK.



Particulars of Gangway Cargo and Coaling Ports:—

GANGWAY DOOR P&S, ABREAST NO. 2 HATCH ON FBD-DK. 12'0" x 6'9" EFFICIENTLY CONSTRUCTED, WITH ONE FREEING PORT IN AFTER SECTION OF DOOR P&S, 2'6"x12", EDGE 14" ABOVE DECK COMPOSITION, - F.P.-HINGED STEEL SHUTTER. ✓

GANGWAY DOOR P&S, ABREAST MOTOR CASING DOOR, 6'0" x 4'9" EFFICIENTLY CONSTRUCTED. ✓

GANGWAY DOOR P&S, ABREAST NO. 3 HATCH ON FBD-DK, 12'0" x 6'9" EFFICIENTLY CONSTRUCTED, WITH ONE FREEING PORT IN FWD. SECTION OF DOOR P&S, 2'6"x12", EDGE 14" ABOVE DECK COMPOSITION - F.P.-HINGED STEEL SHUTTER. ✓

TWO W.T. DOORS, P&S, ON SHIP'S SIDE, BETWEEN "A" & "B" DECKS, TO 1ST CLASS ENTRANCE, EFFICIENTLY CONSTRUCTED. ✓

Immsfallen

Particulars of Scuppers and Sanitary Discharge Pipes:—

SANITARY DISCHARGE PIPES FITTED WITH STORM VALVES.

SCUPPERS ON FBD DK LED THROUGH SHIP'S SIDE, BELOW FBD DK FITTED WITH STORM VALVES.

Particulars of Side Scuttles:—

SIDE SCUTTLES BET FBD DK & "B" DECK IN CATTLE SPACE, FITTED WITH HINGED DEADLIGHTS.

SIDE " TO LOWER & UPPER CREW'S QUARTERS, FLES, " " " " " "

SIDE " BELOW FBD DK (AFT PK STORE) FITTED WITH HINGED DEADLIGHTS.

SIDE " TO PASS. ACC. BETWEEN FBD DK & "B" DECK, ALSO MIDSHIP PASS. ACCM - PORTABLE DEADLIGHTS.

Particulars of Guard Rails:—

POOP DECK: GUARD RAILS, 3'6" HIGH, 5 RAILS, WITH STANCHIONS SPACED 4'0".

F'CLE " : GUARD " , 3'6" " , 3 " , " " " 4'3".

Particulars of Gangways, Lifelines, etc.:—

FIXED STANCHIONS AT AFTER & FORD ENDS OF NOS 2 & 3 HATCHES ON "B" DECK, 3 ROWS OF RAILS, WITH CHAINS AT PORT & STARP. SIDES OF HATCHES, ALSO PORTABLE STANCHIONS WITH CHAINS ROUND NOS 1 & 4 HATCHES ON "B" DECK.

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	14.0	8.0	2.5 x 1.0	1	2.5	7.9
Forward Well	14.0	8.0	2.5 x 1.0	1	2.5	7.9

State position of each freeing port } After Well:—
(F. and A. position and height above deck edge) } 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	✓	.20"	PLATES FLANGED 3" IN LIEU. ✓	33"	NONE.	5'10" x 2'0" ✓	14" ABOVE D ^K COMPO.	8'0"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead ... ..	.30" ✓	.20"	2½" x 2½" x 28"	34"	NONE.	5'9" x 2'3" 5'9" x 4'0"	14" ABOVE D ^K COMPO.	8'0"
Bridge, Forward Bulkhead ON "B" DECK	.30"	.25"		30"		NONE.	NONE.	7'9"
Forecastle Bulkhead	✓	.30" ✓	3" x 2½" x 25"	28"	NONE.	6'2" x 2'6"	7½" AB. STEEL D ^K	8'0"
Trunk, Aft FORD FAN ROOM, FORD BMD (FREEBOARD DECK)	✓	.20" ✓	3" x 3" x 25" ✓	36" ✓	NONE.	NONE.	NONE.	8'0"
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	✓	.20" ✓	2½" x 2½" x 25" ✓	29" ✓	NONE. ✓	5'8" x 2'3" ✓	14" ABOVE WOOD D ^K	7'4" ABOVE WOOD D ^K ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	.30" ✓	.25" ✓	2½" x 2½" x 30" ✓	24" ✓	NONE.	5'7" x 4'10" ✓	14" ABOVE D ^K COMPO.	8'0"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	✓ W.T. DOOR, PORT SIDE.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	W.T. DOOR TO ALLEYWAY.
Bridge, Forward Bulkhead ON "B" D ^K	W.T. " (DOUBLE DOORS) TO BAGGAGE ROOM. <i>Open</i>
Forecastle Bulkhead	No OPENINGS. <i>Open</i>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	HINGED WOOD DOOR P&S. TO MOTOR ROOM.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	" " " P&S " AUXY. MOTOR ROOM. } OPERATED FROM BOTH SIDES. ✓
Deckhouses on Flush Deck Ships	✓

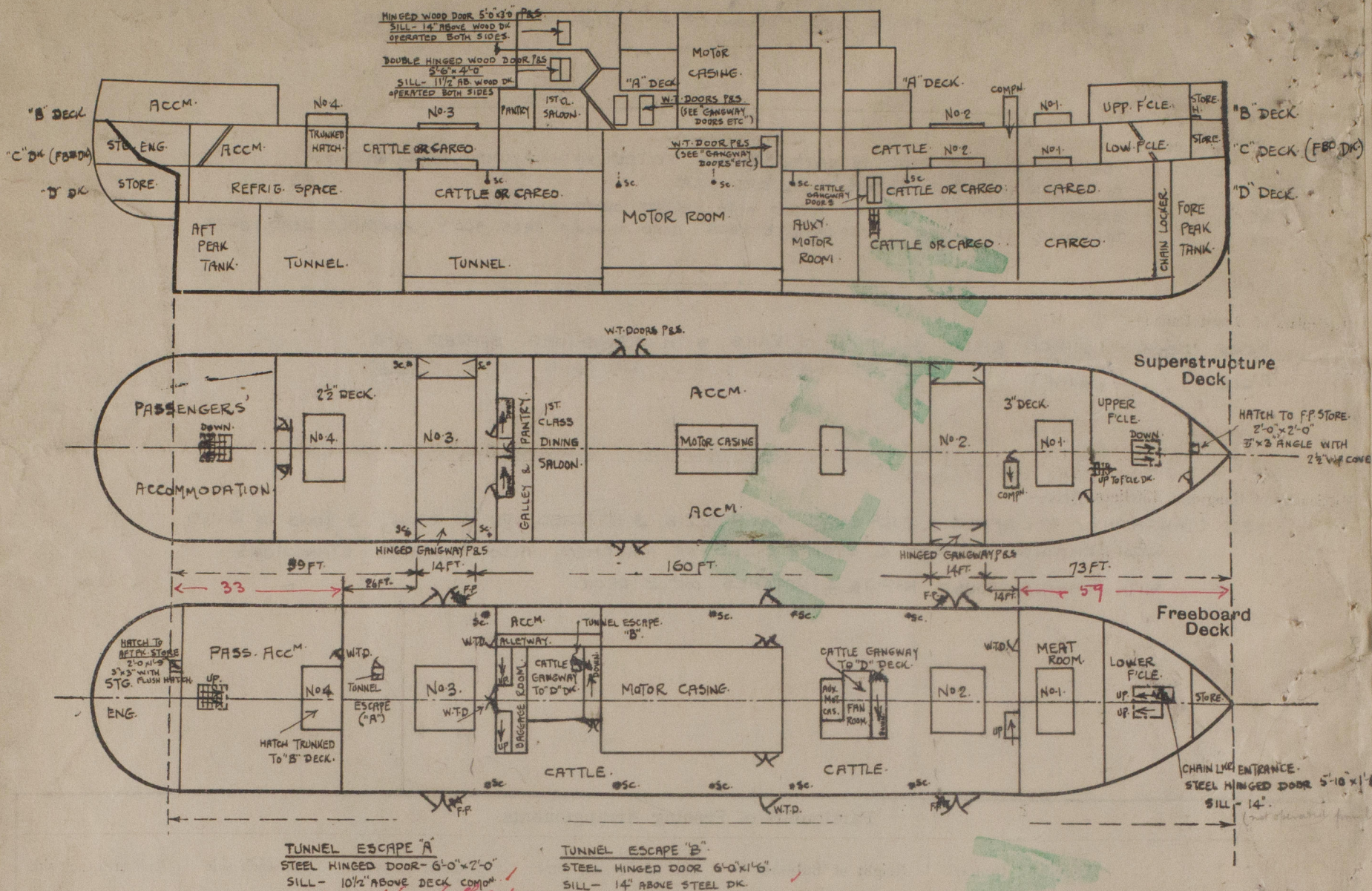


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1904-002672

Innisfallen

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:—



TUNNEL ESCAPE "A"
STEEL HINGED DOOR - 6'-0" x 2'-0"
SILL - 10 1/2" ABOVE DECK COMPON.
opened from both sides

TUNNEL ESCAPE "B"
STEEL HINGED DOOR 6'-0" x 1'-6"
SILL - 14" ABOVE STEEL DK.

CATTLE GANGWAY AT AFT END & FORE END OF MOTOR CASING
DOUBLE STEEL HINGED DOOR - 5'-0" x 4'-0" (FBD DK)
SILL - 18" ABOVE DECK COMPON.

THERE IS ALSO A SIMILAR
CATTLE GANGWAY ON "D" DK. (FORE END MOTOR CASING),
LEADING TO HOLD (SEE SKETCH).
DOUBLE STEEL DOORS ETC., SAME
AS DOORS ON FBD DK.

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

VESSEL EXAMINED IN DRYDOCK FOR ANNUAL SURVEY
AND FREEBOARD ASSIGNMENT.

DMT

Builder's name and yard number HARLAND & WOLFF, LTD. BELFAST, YARD NO. 870.

Names of sister ships

Owners CITY OF CORK STEAM PACKET CO. LTD.

Fee £ 11 : 10 : 0.

Received by me

DMT



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