

No. 1565

TRANSFERRED TO:  
L R. SYSTEM

THE BRITISH CORPORATION FOR THE SURVEY

AND  
REGISTRY OF SHIPPING.  
**RETAIN**

Report No.

1460

No. in Register Book

2613

TRANSFERRED TO:  
L R. SYSTEM

S.S.

"ARANDMORE"

M.M. "CHARINA"

Makers of Engines HAWTHORNS & CO. LTD.

Works No. 178

Makers of Main Boilers J.G. KINCAID & CO. LTD.

Works No. 69

Makers of Donkey Boiler

Works No.

MACHINERY.



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Lloyds Register  
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002024-002037-0141



No.

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. *1460* No. in Register Book *2613*

Received at Head Office *25<sup>th</sup> January 1921*

Surveyor's Report on the *Detw* Engines, Boilers, and Auxiliary  
Machinery of the *Single Triple* Screw "*ARANMORE*"  
*Twin Quadruple*

Official No.

Port of Registry *Glasgow.*

Registered Owners

*Clyde Shipping Co Ltd.*

Engines Built by

*Hawthorns & Co. Ltd.*

at

*Leith.*

Main Boilers Built by

*J. G. Kincaid & Co. Ltd.*

at

*Greenock.*

Donkey " "

at

Date of Completion

*6-1-21.*

First Visit

*20-3-19.*

Last Visit

*6-1-21.*

Total Visits *76.*

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## RECIPROCATING ENGINES.

Works No. 178

No. of Sets One Description Triple

Expansion Surface Condensing

No. of Cylinders each Engine One

No. of Cranks Three

Diams. of Cylinders

20", 33" 53"

Stroke 39"

Cubic feet in each L.P. Cylinder

49.5

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cyl.? Yes.

each Receiver? Top &amp; bottom of In P. &amp; L.P.

Type of H.P. Valves, Piston valve.

1st I.P. Andrews &amp; Cameron Patent Double Balanced Slide Valve.

2nd I.P. —

L.P. Double Ported Slide Valve.

Valve Gear Stephenson's Double Bar Link Gear.

Condenser Cylindrical Steel Cooling Surface 1,600 sq. ft.

Diameter of Piston Rods (plain part) 5 1/4" Screwed part (bottom of thread) 3.93"

Material Mild Steel.

Diam. of Connecting Rods (smallest part) 5"

Material Mild Steel

Crosshead Gudgeons 5 1/2" Length of Bearing 6 1/8" Material Mild Steel

No. of Crosshead Bolts (each) 2 Diam. over Thrd. 2 1/4" Thrds. per inch 6 Material Steel

Crank Pin 2 3" 6 Steel

Main Bearings 6 6 Lengths 11 1/2"

Bolts in each 2 Diam. over Thread 2 1/4" Threads per inch 6 Material Steel

Holding Down Bolts, each Engine 84 Diam. 1 3/8" No. of Metal Chocks 84

Are the Engines bolted to the Tank Top or to a Built Seat?

Tank Top.

Are the Bolts tapped through the Tank Top and fitted with Nuts Inside?

Yes.

If not, how are they fitted? —

Connecting Rods, Forged by Messrs Steel Peach &amp; Leger Ltd.

Piston " " " " " "

Crossheads, " " " " " "

Connecting Rods, Finished by Messrs Hawthornes &amp; Co Ltd.

Piston " " " " " "

Crossheads, " " " " " "

Date of Harbour Trial 24-12-20.

Trial Trip 27-12-20.

Trials run at Fifth of North.

Were the Engines tested to full power under Sea-going conditions? Light Draught.

If so, what was the I.H.P.? 1480. Revols. per min. 88.

Pressure in 1st I.P. Receiver, 60 lbs., 2nd I.P., — lbs., L.P., 9.5 lbs., Vacuum, 26 ins.

Speed on Trial 12.76.

If the Conditions on Trial were such that full power records were not obtained give the following estimated data:—

Builders' estimated I.H.P. 1500 Revols. per min. 90

Estimated Speed 13.5 knots.



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## TURBINE ENGINES.

Works No. \_\_\_\_\_ Type of Turbines \_\_\_\_\_  
 No. of H.P. Turbines \_\_\_\_\_ No. of L.P. \_\_\_\_\_ No. of L.P. \_\_\_\_\_ No. of Astern \_\_\_\_\_

Are the Propeller Shafts driven direct by the Turbines or through Gearing? \_\_\_\_\_

Is Single or Double Reduction Gear employed? \_\_\_\_\_

Revs. per min. of H.P. Turbines at Full Power \_\_\_\_\_

" " I.P. " " \_\_\_\_\_

" " L.P. " " \_\_\_\_\_

" " 1st Reduction Shaft \_\_\_\_\_

" " 2nd " \_\_\_\_\_

" " Propeller Shaft \_\_\_\_\_

Total Shaft Horse Power \_\_\_\_\_

Date of Harbour Trial \_\_\_\_\_

" Trial Trip \_\_\_\_\_

Trials run at \_\_\_\_\_

Speed on Trial \_\_\_\_\_

Turbine Spindles forged by \_\_\_\_\_

" Wheels forged or cast by \_\_\_\_\_

Reduction Gear Shafts forged by \_\_\_\_\_

" Wheels forged or cast by \_\_\_\_\_

DESCRIPTION OF INSTALLATION.



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## TURBINE ENGINEER

No. of Turbine \_\_\_\_\_  
 Type of Turbine \_\_\_\_\_  
 No. of H.P. Turbines \_\_\_\_\_  
 No. of I.P. \_\_\_\_\_  
 No. of A.S.T. \_\_\_\_\_

Are the Propeller Shafts driven direct by the Turbine or through Gearings?

Indicate or describe location from engine.

Specify position of H.P. Turbine as follows:

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

Total Shaft Horse Power

Total of Turbine Total

" " " " " "

" " " " " "

" " " " " "

Turbine Shafts driven by

" " " " " "

" " " " " "

" " " " " "

DESCRIPTION OF INSTALLATION

## TURBO-ELECTRIC PROPPELLING MACHINERY

No. of Turbo-propelling sets \_\_\_\_\_

Type of Turbine engine \_\_\_\_\_

Description of installation \_\_\_\_\_

Is shaft driven direct?

Is there a propeller shaft?

Is there a propeller shaft?

Is there a propeller shaft?

No. of Motors driving propeller shafts

Are the Propeller Shafts driven direct by the Motors or through Gearings?

Is single or double reduction gear employed?

Description of Motors

Horse power of Generator or Full Power

" " " " " "

" " " " " "

Total Shaft Horse Power

Date of Report Filed



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## TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets — Capacity of each —  
 Type of Turbines employed —  
 Description of Generators —

No. of Motors driving Propeller Shafting —  
 Are the Propeller Shafts driven direct by the Motors or through Gearing? —  
 Is Single or Double Reduction Gear employed? —  
 Description of Motors —

Revs. per min. of Generators at Full Power —  
 " " Motors " —  
 " " Propellers " —  
 Total Shaft Horse Power " —  
 Date of Harbour Trial —  
 " Trial Trip —  
 Trials run at —

## Makers of Turbines

" Generators —  
 " Motors —  
 " Reduction Gear —

## Turbine Spindles forged by

" Wheels forged or cast by —

## Reduction Gear Shafts forged by

" Wheels forged or cast by —



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## SHAFTING.

Are the Crank Shafts Built or Solid?

*Built.*

No. of Lengths in each

*2*

Angle of Cranks

*120°*

Diar. by Rule

*10.46"*

Actual

*10.75"*

In Way of Webs

*11.25"*

" of Crank Pins

*10.75"*

Length between Webs

*12.25"*

Greatest Width of Crank Webs

*19.75"*

Thickness

*7"*

Least

*" "**19.75"**" "**7"*

Diar. of Keys in Crank Webs

*1.75"*

Length

*5 1/2"*

" Dowels in Crank Pins

*1.5"*

Length

*4"*

Screwed or Plain

*Plain*

No. of Bolts each Coupling

*6*

Diar. at Mid Length

*2 11/16"*

Diar. of Pitch Circle

*16 1/2"*

Greatest Distance from Edge of Main Bearing to Crank Web

*3/8"*

Type of Thrust Blocks

*Horse shoe*

No.

" Rings

*5*

Diar. of Thrust Shafts at bottom of Collars

*10 3/4"*

No. of Collars

*5*

" " Forward Coupling

*10 3/4"*

At Aft Coupling

*10 3/4"*

Diar. of Intermediate Shafting by Rule

*9.937"*

Actual

*10 1/4"*

No. of Lengths

*3*

No. of Bolts, each Coupling

*6*

Diar. at Mid Length

*2 11/16"*

Diar. of Pitch Circle

*16 1/2"*

Diar. of Propeller Shafts by Rule

*10.93*

Actual

*11 1/4"*

At Couplings

*10 3/4"*

Are Propeller Shafts fitted with Continuous Brass Liners?

*Yes.*

Diar. over Liners

*12 5/8"*

Length of After Bearings

*4-0"*

Of what Material are the After Bearings composed?

*Lignum vitae*

Are Means provided for lubricating the After Bearings with Oil?

*No.*

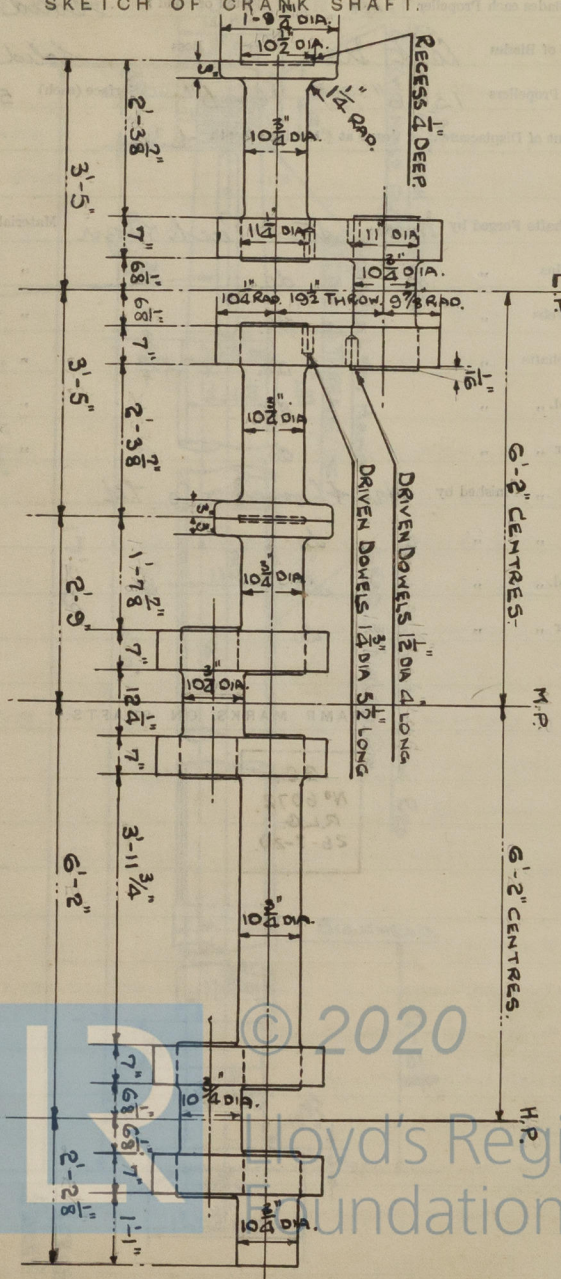
" " to prevent Sea Water entering the Stern Tubes?

*No.*

If so, what Type is adopted?

## SKETCH OF CRANK SHAFT.

SEQUENCE OF CRANKS H.P., L.P. &amp; M.P.









## PUMPS, ETC.

No. of Air Pumps /      Diar. 18"      Stroke 20"  
 Worked by Main or Independent Engines? *Main Engines.*

No. of Circulating Pumps 1      Diar. -      Stroke -  
 Type of " *Boon Accord Independent Centrifugal.*  
 Diar. of " Suction from Sea 9"  
 Has each Pump a Bilge Suction with Non-return Valve? *Yes.*      Diar. 6"  
 What other Pumps can circulate through Condenser? *Ballast Pump.*

No. of Feed Pumps on Main Engine 2      Diar. 3"      Stroke 20"  
 Are Spring-loaded Relief Valves fitted to each Pump? *Yes.*  
 Can one Pump be overhauled while the others are at work? *Yes.*  
 No. of Independent Feed Pumps 2      Diar. 6"      Stroke 21"  
 What other Pumps can feed the Boilers? *General Service Pump.*

No. of Bilge Pumps on Main Engine 2      Diar. 3"      Stroke 20"  
 Can one Pump be overhauled while the others are at work? *Yes.*  
 No. of Independent Bilge Pumps *No.*  
 What other Pumps can draw from the Bilges? *Ballast & General Service.*

Are all Bilge Suctions fitted with Roses? *Yes.*  
 Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges? *Yes.*  
 Are all Sea Connections made with Valves or Cocks next the Ship's sides? *Valves & cocks.*  
 Are they placed so as to be easily accessible? *Yes.*  
 Are the Discharge Chests placed above or below the Deep Load Line? *Below.*  
 Are they fitted direct to the Hull Plating and easily accessible? *Yes.*  
 Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges on the Outside? *Yes.*

## BOILERS

*Boiler No. 1*  
*Boiler No. 2*  
*Boiler No. 3*  
*Boiler No. 4*  
*Boiler No. 5*  
*Boiler No. 6*  
*Boiler No. 7*  
*Boiler No. 8*  
*Boiler No. 9*  
*Boiler No. 10*  
*Boiler No. 11*  
*Boiler No. 12*  
*Boiler No. 13*  
*Boiler No. 14*  
*Boiler No. 15*  
*Boiler No. 16*  
*Boiler No. 17*  
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*Boiler No. 97*  
*Boiler No. 98*  
*Boiler No. 99*  
*Boiler No. 100*



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Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars? *Fitted to Pillars.*

Are the Water Gauge Pillars fitted direct to the Boiler Shells or connected by Pipes? *Boiler shells*

Are these Pipes connected to Boilers by Cocks or Valves? —

Are Blow-off Cocks or Valves fitted on Boiler Shells? *Valves*

No. of Strakes of Shell Plating in each Boiler

" Plates in each Strake

Thickness of Shell Plates Approved

" " in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

Are the Double Butt Straps of equal width?

Thickness of outside Butt Straps

" inside "

Are Longitudinal Seams Hand or Machine Riveted?

Are they Single, Double, or Treble Riveted?

No. of Rivets in a Pitch

Diar. of Rivet Holes  $1\frac{7}{32}$ " Pitch

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes — Pitch

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams Hand or Machine riveted?

Diar. of Rivet Holes  $1\frac{7}{32}$ " Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes  $1\frac{7}{32}$ " Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings

1  
2  
 $1\frac{7}{32}$ "

Steel.  
Butt.  
Double.  
Yes.  
 $15\frac{1}{16}$ "  
 $15\frac{1}{16}$ "

Machine.  
Treble.  
5  
 $8\frac{5}{8}$ "

2  
machine.  
3.519.

2  
machine.  
3.519.

$16" \times 12"$   
 $2'-9\frac{1}{2}" \times 2'-5\frac{1}{2}"$



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Thickness of End Plates in Steam Space Approved

 $1\frac{9}{32}$ "

" " " " " in Boilers

Pitch of Steam Space Stays

 $1'-8\frac{1}{8}"$ Diar. " " " " Approved  $3\frac{5}{8}"$  Threads per Inch 8

" " " " " in Boilers

Material of " " "

Steel.

How are Stays Secured?

Nuts loose washers both sides.

Diar. and Thickness of Loose Washers on End Plates

 $10\frac{1}{8}" \times \frac{1}{8}"$ 

" " Riveted " " "

Width " " Doubling Strips " "

(none.)

Thickness of Middle Back End Plates Approved

(see below.)

" " " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

(none.)

Pitch of Stays at

" " " "

Diar. of Stays Approved

—

Threads per Inch

—

" " in Boilers

—

"

—

Material "

Are Stays fitted with Nuts outside?

—

Thickness of Back End Plates at Bottom Approved

 $\frac{1}{8}"$ 

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

(none.)

Thickness of Front End Plates at Bottom Approved

 $1\frac{3}{32}"$ 

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

3 (each space.)



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Diar. of Screwed Stays Approved

 $1\frac{1}{8}"$  Threads per Inch 11

" " " in Boilers

Material " "

Wrought iron.

Thickness of Combustion Chamber Sides Approved

 $\frac{11}{16}"$ 

" " " " in Boilers

Pitch of Screwed Stays in C.O. Sides

 $10\frac{1}{4}"$ 

Diar. " " Approved

 $1\frac{1}{8}"$  Threads per Inch 11

" " " in Boilers

Material " "

Wrought iron.

Thickness of Combustion Chamber Backs Approved

 $2\frac{1}{32}"$ 

" " " in Boilers

Pitch of Screwed Stays in C.O. Backs

 $9\frac{1}{8}" \times 8"$ 

Diar. " " Approved

 $1\frac{3}{4}" 1\frac{7}{8}" 2\frac{1}{4}"$  Threads per Inch 11  
(Margin) (Top Corner.)

" " " in Boilers

Material " "

Wrought iron.

Are all Screwed Stays fitted with Nuts inside C.O.?

Yes:  
 $\frac{11}{16}"$ 

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

3

" " " Centre "

2

Depth and Thickness of Girders

 $11\frac{3}{8}" \times 1\frac{5}{16}"$  plates.

Material of Girders

Steel.

No. of Stays in each

4.

No. of Tubes, each Boiler

238

Size of Lower Manholes

 $16" \times 12"$ 

## VERTICAL DONKEY BOILERS

## SUPERHEATERS



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## VERTICAL DONKEY BOILERS.

No. of Boilers — Type —

Greatest Int. Diar. — Height —

Height of Boiler Crown above Fire Grate —

Are Boiler Crowns Flat or Dished? —

Internal Radius of Dished Ends — Thickness of Plates —

Description of Seams in Boiler Crowns —

Diar. of Rivet Holes — Pitch — Width of Overlap —

Height of Firebox Crowns above Fire Grate —

Are Firebox Crowns Flat or Dished? —

External Radius of Dished Crowns — Thickness of Plates —

No. of Crown Stays — Diar. — Material —

External Diar. of Firebox at Top — Bottom — Thickness of Plates —

No. of Water Tubes — Ext. Diar. — Thickness —

Material of Water Tubes —

Size of Manhole in Shell —

Dimensions of Compensating Ring —

Heating Surface, each Boiler — Grate Surface —

## SUPERHEATERS.

Description of Superheaters —

Where situated? —

Which Boilers are connected to Superheaters? —

Can Superheaters be shut off while Boilers are working? —

No. of Safety Valves on each Superheater — Diar. —

Are " " fitted with Easing Gear? —

Date of Hydraulic Test — Test Pressure —

Date when Safety Valves set — Pressure on Valves —

## MAIN STEAM PIPES



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*how many. x*

## MAIN STEAM PIPES.

No. of Lengths	2	2
Material	Copper	Copper
Brazed, Welded or Seamless	Solid drawn	Solid drawn
Internal Diam.	4 1/2"	4 1/2"
Thickness	6 SWG.	6 SWG.
How are Flanges secured?	Brazed.	Brazed.
Date of Hydraulic Test	13-12-20	17-12-20
Test Pressure	360 lbs.	360 lbs.

No. of Lengths	
Material	
Brazed, Welded or Seamless	
Internal Diam.	
Thickness	
How are Flanges secured?	
Date of Hydraulic Test	
Test Pressure	

No. of Lengths	
Material	
Brazed, Welded or Seamless	
Internal Diam.	
Thickness	
How are Flanges secured?	
Date of Hydraulic Test	
Test Pressure	



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## EVAPORATORS.

No.	—	Type	—	Tons per Day	—
Makers	—				
Working Pressure	—	Test Pressure	—	Date of Test	—
Date of Test of Safety Valves under Steam —					

## FEED WATER HEATERS.

No.	One.	Type	Direct Contact Low pressure.
Makers	Messrs G. F. Weir Ltd.		
Working Pressure	—	Test Pressure	—
		Date of Test	27-12-20.

## FEED WATER FILTERS.

No.	1	Type	Suction.	Size	100 galls.
Makers	Hawthornes & Co. Ltd.				
Working Pressure	Atmospheric	Test Pressure	—	Date of Test	27-12-20.

## LIST OF DONKEY PUMPS.

<u>PUMPS</u>	<u>MAKERS</u>	<u>N<sup>o</sup></u>	<u>SIZE</u>
FEED INDEP. (2)	G. & F. WEIR LTD.	60435.	8" x 6" x 21"

Suctions :- Tank, Boiler, Sea, Heater, Condenser.

Discharge :- Main feed & aux feed to boilers.

<u>GENERAL SERVICE</u>	DAWSON & DOWNIE LTD.	3981.	7" x 4 1/2" x 8"
------------------------	----------------------	-------	------------------

Suctions :- Main Bilge line, Filter, Condenser, Ballast, Boilers.

Discharge :- Deck, Overboard, Sanitary, Boilers, Ash Ejector.

<u>BALLAST.</u>	DAWSON & DOWNIE LTD.	3891.	7" x 8" x 8"
-----------------	----------------------	-------	--------------

Suctions :- Engine Room Bilge, aft Ballast, Fore Ballast, Main Bilge line, Sea.

Discharge :- Deck, aft Peak Tank, Fore Peak Tank, Condenser, Overboard.

<u>CIRCULATING.</u>	DRYSDALE & CO.	12467.
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<u>DYNAMO.</u>	W. H. ALLEN & CO. LTD.	40542/19.	8" x 7"
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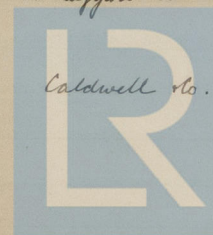
<u>FRESH WATER.</u>	DAWSON & DOWNSIE LTD.	3205.	4" x 4" x 5"
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Suction :- Fresh Water Tanks.

Discharge :- Filter & Deck.

<u>Reversing Engine.</u>	Mr. Taggart Scott Ltd.	R1221
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<u>Steering Engine.</u>	Caldwell & Co.	2281.
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## SPARE GEAR.

No. of Top End Bolts.	No. of Bot. End Bolts.	No. of Cylinder Cover Studs
2	2	6
" Coupling Bolts 12	" Main Bearing Bolts 2	" Valve Chest " 6
" Junk Ring Bolts 12	" Feed Pump Valves 2	" Bilge Pump Valves 2
" H.P. Piston Rings -	" L.P. Piston Rings -	" L.P. Piston Rings -
" " Springs -	" " Springs -	" " Springs -
" Safety Valve " 2	" Fire Bars -	" Feed Check Valves 2
" Piston Rods -	" Connecting Rods -	" Valve Spindles -
" Air Pump Rods -	" Air Pump Buckets -	" Air Pump Valves -
" Cir. " -	" Cir. " -	" Cir. " -
" Crank Shafts -	" Crank Pin Bushes -	" Crosshead Bushes -
" Propeller Shafts -	" Propellers -	" Propeller Blades -
" Boiler Tubes -	" Condenser Tubes 24	" Condenser Ferrules 24

## OTHER ARTICLES OF SPARE GEAR:—

- 2 Feed pump valve seats.
- 2 Valves & seats for Wier's Feed Pump.
- 2 Bilge pump valve seats.
- 24 Gauge Glasses with washers.
- 1 Spring for ash ejector pump (General Service Pump)
- 1/2 set of firebars.

## REFRIGERATORS



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## REFRIGERATORS.

No. of Machines \_\_\_\_\_ Capacity of each \_\_\_\_\_

Makers \_\_\_\_\_

Description																																				
Description																																				

No. of Steam Cylinders, each Machine — No. of Compressors — No. of Cranks —

Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines  
or Independently \_\_\_\_\_

### System of Refrigeration

Insulation

Are Brine and other Regulating Valves placed so as to be accessible without entering the Insulated Spaces?

Are all Pipes, Air Trunks, &c., well secured and protected from risk of damage? \_\_\_\_\_

Are all Bilge, Sounding, and Air Pipes in Insulated Spaces properly insulated?

Are Thermometer Tubes so arranged that Water cannot enter and freeze in them ? \_\_\_\_\_

Date of Test under Working Conditions \_\_\_\_\_

### RESULTS OF TRIALS.

Articles of Spare Gear for Refrigerating Plant carried on board:—

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## ELECTRIC LIGHTING.

Installation Fitted by *Grindlay Ross & Co Ltd.*No. and Description of Dynamos *One.*Makers of Dynamos *W. H. Allen & Co Ltd. No 40541/19.*Capacity " *140.* Amperes, at *100.* Volts. *250* Revols. per Min. *141 Rev.*Current Alternating or Continuous *Continuous.*Single or Double Wire System *Double Wire.*Position of Dynamos *Starting Platform Starboard side Engine Room*  
" Main Switch Board " *aft bulkhead.* " "No. of Circuits to which Switches are provided on Main Switch Board *Seven.*

Particulars of these Circuits:—

Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
<i>Engine Room, Stike<sup>d</sup></i>	<i>28.</i>	<i>16</i>	<i>17</i>	<i>7/16</i>	<i>750</i>	<i>100%</i>	<i>2000-2</i>
<i>Large Charters</i>	<i>2.</i>	<i>1000.</i>	<i>10</i>	<i>7/8</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Saloon &amp; Accom.</i>	<i>30</i>	<i>16</i>	<i>19</i>	<i>7/16</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Fore holds.</i>	<i>21</i>	<i>16</i>	<i>13</i>	<i>7/17</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Aft holds.</i>	<i>25</i>	<i>16</i>	<i>16</i>	<i>7/17</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Navigation</i>	<i>6</i> <i>4</i>	<i>32</i> <i>5</i>	<i>7</i>	<i>7/18</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Forecastle.</i>	<i>12.</i>	<i>16.</i>	<i>7</i>	<i>7/18.</i>	<i>"</i>	<i>"</i>	<i>"</i>

Total No. of Lights *128* No. of Motors driving Fans, &c. — No. of Heaters

Current required for Motors and Heaters —



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Positions of Auxiliary Switch Boards, with No. of Switches on each

Steering Engine House 1 Board with 4 switches  
 Tween decks (forward) 1 " " 8 "  
 " " (aft) 1 " " 8 "

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

On Aux. " " each Auxiliary Circuit

Wherever a Cable is reduced in size

To each Lamp Circuit

To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted

Are the Fuses of Standard Sizes?

Are all Switches and Cut-outs constructed of Non-inflammable Material?

Are they placed so as to be always and easily accessible?

Smallest Single Wire used, No. 18. S.W.G., Largest, No. 15. S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

" Saloons, State Rooms, &amp;c., " ?

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

(2) " passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads

by Armoured wires.  
 by lead sheathing

wires in galvanised pipes.  
 Armoured cables  
 Holes bushed.

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables

is unimpaired?

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces?

Are all Hull Connections for Single-Wire Systems made with Screws of large Surface?

Are the Dynamos, Motors, Main and Branch Cables, so placed that the Compasses are not injuriously affected by them?

Have Tests been made to prove that this condition has been satisfactorily fulfilled?

Has the Insulation Resistance over the whole system been tested?

What does the Resistance amount to?

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter?

Date of Trial of complete Installation 30-12-20 Duration of Trial 6 hours

Robert A. Craig.  
 Surveyor.



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## GENERAL CONSTRUCTION.

Have the Machinery and Boilers been constructed in accordance with the requirements of the Rules and the

Approved Plans? *Yes.*

If not, give details of the points of difference, and state when these were sanctioned by the Chief

Surveyor.

Are the Materials used in the Construction of Engines and Boilers, so far as could be seen sound and

trustworthy? *Yes.*

Is the Workmanship throughout thoroughly satisfactory? *Yes.*

The above correctly describes the Machinery of the S.S. "ARANMORE"

as ascertained by <sup>me</sup> from personal examination

*Robert H. Craig*

Engineer Surveyor to the British Corporation for the  
Survey and Registry of Shipping.

## Fees—

## MAIN BOILERS.

		£	s.	d.
H.S.	Sq. ft.	:	:	:
G.S.	"	:	:	:

## DONKEY BOILERS.

H.S.	Sq. ft.	:	:	:
G.S.	"	:	:	:
	£	:	:	:

## ENGINES.

L.P.O.	Cub. ft.	:	:	:
	£	:	:	:
Testing, &c. ...		:	:	:
	£	:	:	:
Expenses ...		:	:	:
Total ...	£	:	:	:

It is submitted that this Report be approved,

Chief Surveyor.

Approved by the Committee for the Class of M.B.S.\* on the

Fees advised

Fees paid



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Secretary.



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