

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 38226.

Port of Glasgow Date of First Survey Aug 28th 1918 Date of Last Survey Oct 4th 1918 No. of Visits 5
 No. in Reg. Book 205 on the Iron or Steel 'War Cateran' Port belonging to London
 Built at Sertatorm By whom Wm Ch Connell & Co When built 1915
 Owners The Shipping Controller Owners' Address _____
 Card No. 385 Electric Light Installation fitted by A. J. Robertson & Co When fitted 1915

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One compound wound Dynamo, multipolar type, coupled direct to an enclosed local lubrication engine, having cylinder 3 1/2" x 5" stroke @ 520 rev.
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine room, starting platform Whether single or double wire system is used Double wire
 Position of Main Switch Board near Dynamo having switches to groups A. B. C. D. E. F. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each No auxiliary switch boards

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes
 If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes
 Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 50 per cent over the normal current
 Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions wire If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit yes
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 167 arranged in the following groups:—

Group	Description	Number of Lights	Candle Power	Current (Amperes)
A	Navigation	4	16	4.5
B	Wireless	3	8	20
C	Cargo	36	16	21.6
D	Midships	16	30 W	19.2
E	Peep	31	30 W	15.5
F	Engine room	39	16	25.4
one	Must head light with 1 lamps each of	1	16	included in A
two	Side light with 1 lamps each of	2	-	" " "
five	Cargo lights of	96	incandescent or arc lights	incandescent

If arc lights, what protection is provided against fire, sparks, &c. No Arcs

Where are the switches controlling the masthead and side lights placed In bridge wheel house under switch on bridge

DESCRIPTION OF CABLES.

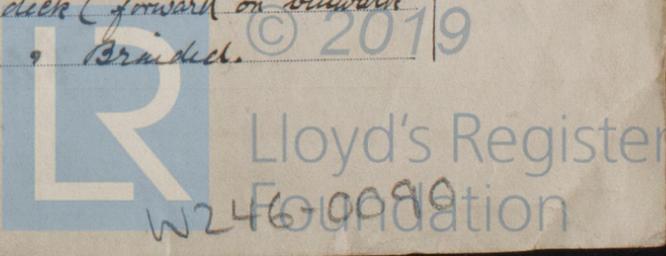
Carrying Capacity	Number of Wires	S.W.G. Diameter	Total Sectional Area
Main cable carrying 100 Amperes	19	13	.126 square inches
Branch cables carrying 20 Amperes	7	16	.0225 square inches
Branch cables carrying 10 Amperes	4	18	.0124 square inches
Leads to lamps carrying 6 Amperes	1	14	.00246 square inches
Cargo light cables carrying 7.6 Amperes	119	38	.00322 square inches

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure india-rubber the vulcanising india-rubber & rubber coated tape, the whole vulcanised together, taped & lead covered in midship accommodation, elsewhere armoured & normally braided
 Joints in cables, how made, insulated, and protected No joints

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No joints Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage No joints
 Are there any joints in or branches from the cable leading from dynamo to main switch board No

Are the cables led through the ship, and how protected Forward thro beams under Bridge deck (forward on bulwark in gals) thru tube aft thro tunnel to Peep Armoured & Braided.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered wire in galv^d steel tube*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armoured & Braided*

What special protection has been provided for the cables near boiler casings *Armoured & Braided*

What special protection has been provided for the cables in engine room *Armoured & Braided*

How are cables carried through beams *In lead bushes* through bulkheads, &c. *Water tight glands*

How are cables carried through decks *In galv^d iron pipes & glands*

Are any cables run through coal bunkers *No* or cargo spaces *etc* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Armoured & Braided*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *No*

If so, how are the lamp fittings and cable terminals specially protected *No*

Where are the main switches and fuses for these lights fitted *No*

If in the spaces, how are they specially protected *No*

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *No*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double wire*

How are the returns from the lamps connected to the hull *No*

Are all the joints with the hull in accessible positions *No*

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed on switch board

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas *Yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *No*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *Long glass rubber jointed & guarded air tight fittings*

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *2.500* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

A. J. Robertson & Co. Electrical Engineers Date *4/11/18*

COMPASSES.

Distance between dynamo or electric motors and standard compass *10 1/2 Feet*

Distance between dynamo or electric motors and steering compass *10 1/2 Feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>4.5</i>	Amperes	<i>7</i>	feet from standard compass	<i>7</i>	feet from steering compass
A cable carrying	<i>6</i>	Amperes	<i>4</i>	feet from standard compass	<i>4</i>	feet from steering compass
A cable carrying	<i>3</i>	Amperes	<i>into</i>	feet from standard compass	<i>3 into</i>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power *Yes*

The maximum deviation due to electric currents, etc., was found to be *Nil* degrees on *on very* course in the case of the standard compass and *Nil* degrees on *very* course in the case of the steering compass.

For CHARLES COUNELL & CO., Limited. Builder's Signature. Date *11 Nov. 1918*

GENERAL REMARKS.

This installation has been fitted on board under special survey tested under full working conditions for a period of six hours + found satisfactory

It is submitted that this vessel is eligible for THE RECORD. Elec. Light.

H.W.D. 20/11/18

J. Stanley Rantieri
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 19 NOV 1918*

Elec. Light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

AC. 16-11-18

56,717.—Transcriber.