

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 on the Iron or Steel 'War Cateran' Port belonging to London
 Reg. Book 205 Built at Bertholm By whom Mr 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:—

A Navigation	4	lights each of	16	candle power requiring a total current of	4.5	Amperes
B Wireless	2	lights each of	8	candle power requiring a total current of	20.	Amperes
C Cargo	36	lights each of	16	candle power requiring a total current of	21.6	Amperes
D Amidships	16	lights each of	30 W	candle power requiring a total current of	19.2	Amperes
E Poop	21	lights each of	30 W	candle power requiring a total current of	15.3	Amperes
F Engine room	39	lights each of	16	candle power requiring a total current of	23.4	Amperes
one Mast head light with	1	lamps each of	16	candle power requiring a total current of	included in A.	Amperes
two Side light with	1	lamps each of	-	candle power requiring a total current of	" " "	Amperes
five Cargo lights of	96			candle power, whether 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, master switch on bridge

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 13 S.W.G. diameter, .126 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 10 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .0124 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .00246 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 119 wires, each 38 S.W.G. diameter, .00322 square inches total sectional area

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 & usually 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 galv^d steel tube aft thro tunnel to Poop 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 *No* 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 with 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 ft*

Distance between dynamo or electric motors and steering compass *10 ft*

The nearest cables to the compasses are as follows:—

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

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 *every* course in the case of the standard compass and *Nil* degrees on *every* course in the case of the steering compass.

For *CHARLES CUNNELL & 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.

AWD
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.



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