

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 74221.

Port of *Newcastle Tyne* Date of First Survey *7/1/21* Date of Last Survey *24/2/21* No. of Visits *7*
 No. in *on the* *Steel* *Eastney* Port belonging to *London*
 Reg. Book Supp. *78772* Built at *Newcastle* By whom *Northumberland S.B.C. Ltd* When built *1920*
 Owners *Romney S.S. Co. Ltd* Owners' Address
 Yard No. *256* Electric Light Installation fitted by *Campbell & Sherwood & Co.* When fitted *1920*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo makers *Campbell & Sherwood & Co.* single cylinder wound multipolar coupled direct to a *Robey* steam engine single cylinder open type.

Capacity of Dynamo *100* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *engine room starboard side* Whether single or double wire system is used *double*

Position of Main Switch Board *engine room on aft bulkhead* Having switches to groups *6* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *6-way D.Box on starboard side of aft bulkhead of engine room, 6-way D.Box in steering engine recess, 3-way S.Box + 1-6-way D.Box in pantry, 1-6-way D.Box in crew quarters aft.*

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 cessel 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-oxidizable metal *yes* and constructed to fuse at an excess of *100* per cent over the normal current

Are all fuses fitted in easily accessible positions *yes* Are the fuses of standard dimensions *yes* 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 *137* arranged in the following groups:—

A Saloon	56	lights each of 48-30 watt, 6-32	candle power requiring a total current of 21.12.	Amperes
B Marconi		lights each of	candle power requiring a total current of 15	Amperes
C Aft	25	lights each of 30 watt	candle power requiring a total current of 7.5	Amperes
D Engineers	27	lights each of 30 watt	candle power requiring a total current of 8.1	Amperes
E Engine room	31	lights each of 30 watt	candle power requiring a total current of 9.3	Amperes
F Spare				
2 Mast head light with 1		lamps each of 32	candle power requiring a total current of 2.24	Amperes
2 Side light with 1		lamps each of 32	candle power requiring a total current of 2.24	Amperes
5-6 light		Cargo lights of 30 watt	candle power, whether incandescent or arc lights incandescent	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed *in chart house.*

DESCRIPTION OF CABLES.

Main cable carrying	100	Amperes, comprised of	19	wires, each .083	S.W.G. diameter, .100	square inches total sectional area
Branch cables carrying	21.12	Amperes, comprised of	7	wires, each .036	S.W.G. diameter, .007	square inches total sectional area
Branch cables carrying	15.0	Amperes, comprised of	7	wires, each .036	S.W.G. diameter, .007	square inches total sectional area
Leads to lamps carrying	.54	Amperes, comprised of	3	wires, each .029	S.W.G. diameter, .002	square inches total sectional area
Cargo light cables carrying	1.8	Amperes, comprised of	40	wires, each .0076	S.W.G. diameter, .0017	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Dynamo leads are V.I.R. Engine room V.I.R. in conduit. Main leads through cargo spaces, holds etc are V.I.R. in conduit. Lead covered cables in cabins & saloon.

Joints in cables, how made, insulated, and protected *none made*

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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 —

Are there any joints in or branches from the cable leading from dynamo to main switch board *no*

How are the cables led through the ship, and how protected *V.I.R. in conduit securely clipped to beams & girders.*

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 *V.I. Cable run in conduit*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *no*

What special protection has been provided for the cables near boiler casings *no*

What special protection has been provided for the cables in engine room *no*

How are cables carried through beams *lead hatched holes* through bulkheads, &c. *waterlight glands.*

How are cables carried through decks *waterlight iron deck pipes*

Are any cables run through coal bunkers *yes* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *V.I. R cables in conduit*

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 *flexible from waterlight sockets* How fixed *clipped to bulkhead*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *no*

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 main switchboard*

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 *no*

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 *no*

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 *600* 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.

CAMPBELL & ISHERWOOD, LTD.

Electrical Engineers

Date *10th March 1924*

COMPASSES.

Distance between dynamo or electric motors and standard compass *86 feet*

Distance between dynamo or electric motors and steering compass *82 feet*

The nearest cables to the compasses are as follows:—

Cable	Amperes	Distance from standard compass	Distance from steering compass
A cable carrying <i>6.72</i>	<i>11</i>	<i>7</i> feet	<i>7</i> feet
A cable carrying <i>.54</i>	<i>on the</i>	<i>4</i> feet	<i>4</i> feet
A cable carrying <i>.54</i>	<i>4</i>	<i>on the</i>	<i>on the</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 *all* course in the case of the standard compass and *nil* degrees on *all* course in the case of the steering compass.

FOR THE NORTHUMBRIA SHIPBUILDING CO., LTD.

J. Murray Jellicoe Builder's Signature.

Date *21/3/21*

GENERAL REMARKS.

The above installation is in accordance with the Society's Rules. This vessel is eligible in my opinion for notation Elec light, wireless.

It is submitted that this vessel is eligible for the Electric Light

Bell *23/3/21*

B.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

