

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8463

Port of Belfast Date of First Survey 14/4/22 Date of Last Survey 27/6/22 No. of Visits Twelve
 No. in on the Iron or Steel T.S.S. Port Campbell Port belonging to London
 Reg. Book Built at Belfast By whom Warkman Clark & Co. Ltd When built 1922
 Owners Commonwealth & Dominion Traders Address London
 Yard No. 383 Electric Light Installation fitted by The Sunderland Forge Coy. Ltd When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two - 26 K.W. Compound wound multipolar dynamos direct coupled to Open type Steam engine with governor.

Capacity of Dynamo 260 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In Main Engine Room Whether single or double wire system is used double

Position of Main Switch Board In Main Engine Room having switches to groups Eight of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in Wheelhouse - 11 switches
One in Engine room - 10 switches
One in Boiler Room - 8 switches

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-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		398		arranged in the following groups :-	
G. Lath Motor		requiring a total current of	40.0	amperes	
A Nav. & Saloon	76 lights each of 16 & 3 @ 32	candle power requiring a total current of	27.9	Amperes	
B Wireless	lights each of -----	candle power requiring a total current of	30.0	Amperes	
C Crew & Engrs.	121 lights each of 16 @ 4 @ 32	candle power requiring a total current of	41.1	Amperes	
D Cargo Ford.	50 lights each of 16	candle power requiring a total current of	30.0	Amperes	
E Cargo Aft	35 lights each of 16	" " " " " "	21.0	Amperes	
F Engine & Blr. room	109 lts. 16	" " " " " "	42.6	Amperes	
2 Mast head lights	with 1 lamp each of 32	candle power requiring a total current of each	1.2	Amperes	
2 Side lights	with 1 lamp each of 32	candle power requiring a total current of each	1.2	Amperes	
18 Cargo lights	of each 5 lights @ 16	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 Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 232.6 Amperes, comprised of 61 wires, each .093" S.W.G. diameter, .4 square inches total sectional area
 Branch cables carrying 42.6 Amperes, comprised of 19 wires, each .064" S.W.G. diameter, .06 square inches total sectional area
 Branch cables carrying 30.0 Amperes, comprised of 7 wires, each .064" S.W.G. diameter, .022 square inches total sectional area
 Leads to lamps carrying 0.9 Amperes, comprised of 3 wires, each .029" S.W.G. diameter, .002 square inches total sectional area
 Cargo light cables carrying 3.0 Amperes, comprised of 72 wires, each .0076" S.W.G. diameter, .003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Timed copper conductors insulated with pure and vulcanised india rubber, taped, braided and the whole vulcanised together and finished - In Accommodation - Lead covered & braided In Machinery Spaces - Lead covered armoured and braided.

Joints in cables, how made, insulated, and protected None fitted

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 Main cables lead covered armoured and braided run along upper deck and secured by substantial galvanised saddles.



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 armoured and braided cables

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered armoured & braided.

What special protection has been provided for the cables near boiler casings None fitted near casings

What special protection has been provided for the cables in engine room Lead covered armoured and braided

How are cables carried through beams Holes bushed with fibre through bulkheads, &c. Watertight packing glands

How are cables carried through decks In deck tubes made watertight

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected _____

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 _____

Where are the main switches and fuses for these lights fitted _____

If in the spaces, how are they specially protected _____

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed In watertight boxes

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

How are the returns from the lamps connected to the hull _____

Are all the joints with the hull in accessible positions _____

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 _____

Are any switches, fuses, or joints of cables fitted in the pump room or companion _____

How are the lamps specially protected in places liable to the accumulation of vapour or gas _____

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.

P. Pro The Sunderland Forge & Engineering Co. Ltd. Electrical Engineers Date 28th June, 1922.
R. N. Gaugh

COMPASSES.

Distance between dynamo or electric motors and standard compass 120 feet

Distance between dynamo or electric motors and steering compass 116 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6.2</u>	Ampères	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>.2</u>	Ampères	<u>2</u>	feet from standard compass	<u>2</u>	feet from steering compass
A cable carrying		Ampères		feet from standard compass		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 all courses in the case of the standard compass and Nil degrees on all courses in the case of the steering compass.

W. J. ... Builder's Signature. Date 30th June 1922

GENERAL REMARKS.
This installation is of good description and has been fitted in accordance with the Rules

It is submitted that this vessel is eligible for THE RECORD. Elec. Light.
L. J. 5/7/22

R. J. ... Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

