

THU. 11 SEP. 1919

RP 8.

Received at London Office 19

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17508.

Port of Greenock. Date of First Survey 19th June 1919. Date of Last Survey 13th August 1919. No. of Visits 11.
 No. in Reg. Book on the ~~Iron~~ Steel S.S. Backworth Port belonging to Newcastle.
 Built at Port Glasgow. By whom Messrs. Dunlop, Brewster When built 1919.
 Owners The Robert Stanley Shipping Co. Ltd. Owners' Address R. S. Dalgleish, Newcastle on Tyne.
 Yard No. 335 Electric Light Installation fitted by Claud Hamilton Ltd When fitted 1919.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open type steam engine direct coupled to compound wound ship lighting dynamo
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used double
 Position of Main Switch Board Engine Room having switches to groups 5 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none

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 104 - 16 C.P. arranged in the following groups :-
5 - 32 C.P.

Group	No. of lights	Candle power each	Total current (Amperes)
A	49	16	29.4
B	5	32	6
C	24	16	14.4
D	26	16	13.2
E			
2 Mast head light with / lamps each of		32	2.4
2 Side light with / lamps each of		1-16 / 1-32	1.8
4 Cargo lights of each		6-16	

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

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .093 square inches total sectional area
 Branch cables carrying 29 Amperes, comprised of 4 wires, each 16 S.W.G. diameter, .082 square inches total sectional area
 Branch cables carrying 14 Amperes, comprised of 4 wires, each 22 S.W.G. diameter, .004 square inches total sectional area
 Leads to lamps carrying 6.4 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 40 wires, each 40 S.W.G. diameter, .002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Copper wire insulated with pure and vulcanized india rubber taped and lead covered. (Engine Room holds armoured)
 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 — Are all joints in accessible positions, none being made in bunks, 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 held by means of clips to bulkheads and under decks



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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 cover

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

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

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

How are cables carried through beams Lead bushes through bulkheads, &c. W. T. Glands

How are cables carried through decks W. T. Deck Tubes

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

If so, how are they protected Armoured

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 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 Engine Room

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 2500 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.

for Claud Hamilton Ltd Electrical Engineers Date 22nd Aug 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 48 feet

Distance between dynamo or electric motors and steering compass 53 "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
3.6	16	10	10
2.4	10	7	7
6	3	3	3

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

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

Geo. G. Parker Builder's Signature. Date 26 August 1919

GENERAL REMARKS.

Director
The material and workmanship are good, and on completion the installation was tested under full power with satisfactory results and appears to be in accordance with the Society's requirements.

It is submitted that this vessel is eligible for THE RECORD ELEC. LIGHT

Graham Robertson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1.0 SEP. 1919

Elec. Light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



Handwritten notes:
JC.
2.9.19

Im. 11.13.—Transfer.