

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 86684

Port of London Date of First Survey _____ Date of Last Survey 30 May 1919 No. of Visits _____
 To in _____ on the ~~Iron or Steel~~ Iron WANGARATTA Port belonging to Flag
 Rg. Book 4489 Built at Belfast By whom Hortman Clarke & Co. When built 1919
 Owners British India Steam Navigation Co. Ltd. Owners' Address _____
 Card No. 440 Electric Light Installation fitted by Henderson & Co. Ltd. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC. A Combined generating Plant consisting of open type single cylinder steam engine direct coupled to compound wound multipolar dynamo in combined bed plate

Capacity of Dynamo 12.10 KW. 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Recess top of main engine room Whether single or double wire system is used Double
 Position of Main Switch Boards 3 having switches to groups thoroughness of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 in wheel house for navigation lights

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 cables are 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 _____ arranged in the following groups:—

	lights each of	candle power requiring a total current of	Amperes
A			
B			
C			
D			
E			

1 Mast head light with 1 lamps each of 32 candle power requiring a total current of _____ Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of _____ Amperes

6 clusters Cargo lights of 1000 watt candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed on bridge

DESCRIPTION OF CABLES.

	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Main cable carrying <u>100</u>	<u>19</u>	<u>14</u>	<u>29.5/2</u>	
Branch cables carrying _____	_____	_____	_____	_____
Branch cables carrying _____	_____	_____	_____	_____
Leads to lamps carrying _____	_____	_____	_____	_____
Cargo light cables carrying _____	_____	_____	_____	_____

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Twined copper conductors insulated with pure & vulcanized rubber, taped & the whole vulcanized together. Leads in pipes & casings, braided & compounded overall. In accommodation spaces lead covered & braided. Engine room: lead covered & braided & compounded.

Joints in cables, how made, insulated, and protected no joints junction boxes only

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

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 Lead covered & braided secured by brass saddles. Leads in heavy wood casing or vulcanized tubing



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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 covered & banded*

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

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

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

How are cables carried through beams *fibre bushes* through bulkheads, &c. *glass water tight glands*

How are cables carried through decks *water tight deck lute*

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 *do* whether portable or permanently fixed *portable* How fixed *bracket*

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 *2 Yes* and with an amperemeter *2 Yes*

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 petrol *✓*

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 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 *megohms per statute mile* after 24 hours' immersion in water, the test being made after one minute's electrification at not less than *1000 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 that it is at this date in good order and safe working condition.

Fitted by the Sunderland Rope & Spig Co.

Electrical Engineers

Date *1919*

COMPASSES.

Distance between dynamo or electric motors and standard compass *do*

Distance between dynamo or electric motors and steering compass *do*

The nearest cables to the compasses are as follows:—

A cable carrying	Ampères	feet from standard compass	feet from steering compass
A cable carrying	Ampères	feet from standard compass	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 *Stated all in order*

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

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

Builder's Signature. Date

GENERAL REMARKS. *This installation appears to have been well fitted & was working satisfactorily when examined on several occasions. In my opinion the vessel is eligible to have the record of Elec light retained in the Register Book.*

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

J. J. Stoddart

J. W. D. 8/6/1923

Elec. Lt. FRI. JUN. 18 1923

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 4 OCT 1921 FRI. 12 MAR 1920

FRI. 23 NOV. 1923

TUE. DEC. 18 1923

20 JUN 1924

25 NOV 1924

TUES. 18 AUG 1925

FRI. 26 FEB 1924

FRI. 15 JAN 1926



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