

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 86684

Port of London Date of First Survey _____ Date of Last Survey 30th May 23 No. of Visits _____
 To in _____ on the Iron or Steel Ship WANGARATTA Port belonging to Flagged
 Reg. Book 489 Built at Belfast By whom Hortman Clarke & Co When built 1919
 Owners British India Steam Nav Co. Ltd Owners' Address _____
 Card No. 440 Electric Light Installation fitted by Shelunderland Forge & Eng 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 throughout of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 in wheelhouse 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:—

Group	Description	Lights	Wattage	Candle Power	Current
A	lights each of _____			_____ candle power requiring a total current of _____	_____ Amperes
B	lights each of _____			_____ candle power requiring a total current of _____	_____ Amperes
C	lights each of _____			_____ candle power requiring a total current of _____	_____ Amperes
D	lights each of _____			_____ candle power requiring a total current of _____	_____ Amperes
E	lights each of _____			_____ candle power requiring a total current of _____	_____ Amperes
	<u>1</u> Mast head light with <u>1</u> lamps each of <u>32</u>			_____ candle power requiring a total current of _____	_____ Amperes
	<u>2</u> Side light with <u>1</u> lamps each of <u>32</u>			_____ candle power requiring a total current of _____	_____ Amperes
	<u>6</u> Cluster Cargo lights of <u>1000 watt</u>			_____ candle power, whether incandescent or arc lights <u>incandescent</u>	

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.

Category	Amperes	Wires	S.W.G. diameter	square inches total sectional area
Main cable carrying <u>100</u>	comprised of <u>19</u> wires, each <u>14</u>		S.W.G. diameter, <u>29 5/16</u>	_____ square inches total sectional area
Branch cables carrying _____	comprised of _____ wires, each _____		S.W.G. diameter, _____	_____ square inches total sectional area
Branch cables carrying _____	comprised of _____ wires, each _____		S.W.G. diameter, _____	_____ square inches total sectional area
Leads to lamps carrying _____	comprised of _____ wires, each _____		S.W.G. diameter, _____	_____ square inches total sectional area
Cargo light cables carrying _____	comprised of _____ wires, each _____		S.W.G. diameter, _____	_____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.
Twined copper conductors insulated with pure & vulcanized rubber, taped & the whole vulcanized together. Leads in pipes & casing, 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 galvanic 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 & braided

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

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 tubes

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 no whether portable or permanently fixed portable How fixed Master

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 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 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 10 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 no

Distance between dynamo or electric motors and steering compass no

The nearest cables to the compasses are as follows:—

A cable carrying <u>Amperes</u>	feet from standard compass	feet from steering compass
A cable carrying <u>Amperes</u>	feet from standard compass	feet from steering compass
A cable carrying <u>Amperes</u>	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 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.**

T. J. Stoddart
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

JWD 8/6/1923 **FRI. 11 APR 1923**

Elec Lt **FRI. JUN. 18 1923**

FRI. 15 JAN 1926

TUES. 18 AUG 1925

FRI. 26 FEB 1926

TUES. 4 OCT 1927

FRI. 12 MAR 1926

FRI. 23 NOV. 1923

TUE. DEC. 19 1923

20 JUN 1924

25 NOV 1924