

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 38380

Port of Glasgow. Date of First Survey 27/11/18 Date of Last Survey 5/12/18 No. of Visits 4
 No. in on the Steel Dredger "KAIONE" Port belonging to
 Reg. Book Built at Paisley. By whom Messrs Fleming & Ferguson When built 1918.
 Owners Wangani Harbour Board. Owners' Address
 Yard No. 429. Electric Light Installation fitted by Messrs Jas. Kilpatrick & Sons. When fitted 1918.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 Abbey Engine. 5 1/2" x 5" Open type Driving. 4 h.p.
dynamo at 350 R.P.M.

Capacity of Dynamo 61 Amperes at 65. Volts, whether continuous or alternating current Cont. ✓

Where is Dynamo fixed Engine Room. Start Platform. Whether single or double wire system is used double ✓

Position of Main Switch Board Below Dynamo. having switches to groups 4 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Fuse Boards are situated in, Engine Room
Cabin Accommodation. Wheel House, and, Boiler Room

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 54 arranged in the following groups:—

A	<u>15.</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15</u>	Amperes
B	<u>19</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>19</u>	Amperes
C	<u>4</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6</u>	Amperes
D	<u>12</u>	lights each of	<u>16.</u>	candle power requiring a total current of	<u>12.</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>✓</u>	Mast head light with <u>✓</u> lamps each of <u>✓</u>		candle power requiring a total current of <u>✓</u>		Amperes
	<u>✓</u>	Side light with <u>✓</u> lamps each of <u>✓</u>		candle power requiring a total current of <u>✓</u>		Amperes
	<u>2.</u>	Cargo lights of <u>64. each.</u>		candle power, whether incandescent or arc lights <u>Incandescent.</u>		

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

Where are the switches controlling the masthead and side lights placed ✓. (Oil lamps.)

DESCRIPTION OF CABLES.

Main cable carrying 61. Amperes, comprised of 19. wires, each 16 S.W.G. diameter, .06. square inches total sectional area
 Branch cables carrying 19. Amperes, comprised of 7. wires, each 16 S.W.G. diameter, .0222. square inches total sectional area
 Branch cables carrying 15. Amperes, comprised of 7. wires, each 17. S.W.G. diameter, .017. square inches total sectional area
 Leads to lamps carrying 3. Amperes, comprised of 3. wires, each 20 S.W.G. diameter, .003. square inches total sectional area
 Cargo light cables carrying 4 Amperes, comprised of 3. wires, each 20 S.W.G. diameter, .003. square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables in V.I.R. 600 meg: grade Cable. Cases in Pressed Steel Conduit. except. Wheel House & Cabin Accommodation where wiring is Lead Covered run on Surface.

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

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 See above. (In screwed steel conduit).

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 W.T. Tubing.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat W.T. Tubing.

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

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

How are cables carried through beams under Beams in Tubes: through bulkheads, &c. W.T. Tube glands.

How are cables carried through decks 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 no.

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 Permanent.

How fixed inside tubes

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 yes:

Is the installation supplied with a voltmeter yes:, and with an amperemeter yes.

fixed at Bulkhead

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.

W. T. Tubing & Co. Ltd. Electrical Engineers

Date 9th Dec 1918.

COMPASSES.

Distance between dynamo or electric motors and standard compass 48'-0"

Distance between dynamo or electric motors and steering compass 44'-0"

The nearest cables to the compasses are as follows:—

A cable carrying 1 Amperes 3'-0" feet from standard compass

one. feet from steering compass

A cable carrying Amperes feet from standard compass

feet from steering compass

A cable carrying Amperes 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 nil course in the case of the

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

R. J. T. O'Connell Builder's Signature. Date 10th Dec 1918.

GENERAL REMARKS.

This installation has been fitted on board under special survey. Tested under full working conditions for a period of six hours found satisfactory.

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

W. T. Tubing & Co. Ltd. 13/12/18.

J. Stanley Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 17 DEC 1918

FRI 11 JUN 1937

Elec. Light.

W. T. Tubing



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

14.12.18

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