

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25009

Port of S/S "Karauda" Date of First Survey 28 Jan Date of Last Survey 14 March No. of Visits 7
 No. in Reg. Book on the Iron-Steel Port belonging to Mr A. Mc Millan
 Built at Gumbul By whom Mr A. Mc Millan When built
 Owners Mr J. A. Holmes & Co. Owners' Address
 Yard No. 410 Electric Light Installation fitted by Mr J. A. Holmes & Co. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1. $8\frac{1}{4} \times 6$ Open Air Engine 20 H.P. @ 275 Revs. coupled to
 1. $17\frac{1}{4}$ Saddle dynamo 4 Pole compound 100 V. 130 Amps
 Capacity of Dynamo 130 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Shaking Platform Whether single or double wire system is used Double
 Position of Main Switch Board Next dynamo having switches to groups A, B, C, D, E of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1-4 Way D.P. in Thrust, 1-5, 1-6, 1-9 Way in Engine room, 2-9 Way in
 Installable aft, 1-5 Way in Foremast aft, 1-9 Way in Mast, 1-2, 1-3, 1-9 Way in Saloon, 1-9 Way in 3rd Eng. bulk, 1-12 Way in 3rd bulk,
 1-6 Way in Foremast bulk, 2-6 Way in Foremast, 1-9 Way in Foremast, 1-12 Way in Foremast

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidisable metal yes and constructed to fuse at an excess of 25 per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 201 arranged in the following groups:—

A forward	25	lights each of	16	candle power requiring a total current of	14	Amperes
B midships	93	lights each of	16	candle power requiring a total current of	52	Amperes
C aft	43	lights each of	16	candle power requiring a total current of	24	Amperes
D Engines	28	lights each of	16	candle power requiring a total current of	14	Amperes
E Navigation	15	lights each of	16	candle power requiring a total current of	8.4	Amperes
2 Mast head lights with	1	lamp each of	32	candle power requiring a total current of	2.24	Amperes
2 Side lights with	1	lamp each of	32	candle power requiring a total current of	2.24	Amperes
12 Cargo lights of		8 x 16		candle power, whether incandescent or arc lights	Incandescent	

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

Where are the switches controlling the masthead and side lights placed 6 ft from

DESCRIPTION OF CABLES.

2 Main cable carrying 112.5 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .061 square inches total sectional area
 Branch cables carrying 52 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .061 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .028 square inches total sectional area
 Leads to lamps carrying 56 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 4.48 Amperes, comprised of 7 wires, each 21.5 L.S.G. diameter, square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered & armoured cable.

Joints in cables, how made, insulated, and protected No joints

Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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 Lead covered - Armoured cables throughout

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

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

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

What special protection has been provided for the cables in engine room W.I. glands

How are cables carried through beams through bulkheads, &c.

How are cables carried through decks In dark tubes

Are any cables run through coal bunkers yes or cargo spaces - or spaces which may be used for carrying cargo, stores, or baggage -

If so, how are they protected Lead - 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 cut outs for these lights fitted -

If in the spaces, how are they specially protected -

Are any switches or cut outs 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 -

The installation is - supplied with a voltmeter and - an amperemeter, fixed -

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas -

Are any switches, cut outs, 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 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

J. H. HOLMES & CO.

Electrical Engineers

Date 4-3-07

COMPASSES.

Distance between dynamo or electric motors and standard compass 107 feet

Distance between dynamo or electric motors and steering compass 158 "

The nearest cables to the compasses are as follows:—

Cable	Amperes	Distance from standard compass	Distance from steering compass
A cable carrying <u>8.4</u>	<u>15</u>	<u>12</u> feet from standard compass	<u>12</u> feet from steering compass
A cable carrying <u>.56</u>	<u>4</u>	<u>3</u> feet from standard compass	<u>3</u> feet from steering compass
A cable carrying <u>.56</u>	<u>6</u>	<u>4</u> feet from standard compass	<u>4</u> 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 - degrees on - course in the case of the standard compass and - degrees on - course in the case of the steering compass.

ARCHER, MILLAR & SON, LTD.

Builder's Signature.

Date

19th. March 1907

GENERAL REMARKS.

The insulation of this vessel has been fitted on board under survey & tested under full working load with satisfactory results

Wm Gordon Muirhead

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

Glasgow 25 MAR 1907
Record "Electric Light."

It is submitted that the Record Rec. Light be noted in the Reg. Book
Lloyd's Register Foundation
10.4.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

FROM

J. H. HOLMES & Co.,

NEWCASTLE-ON-TYNE.

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Messrs.

Lloyd's Register
Aigyle St. Glasgow

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