

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26601

Port of Sunderland Date of First Survey 10 Jan Date of Last Survey 18 Jan 16 No. of Visits 3
 No. in Reg. Book 861 on the Iron or Steel S.S. "Kowama" Port belonging to London
 Built at Sunderland By whom Messrs G. Priestman & Co When built 1916
 Owners Australian Steamship (Howard Smith Ltd) Owners' Address _____
 Yard No. 253 Electric Light Installation fitted by G.H. Holmes & Co When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 4 1/2" x 6" open single cylinder engine by Reader & Sons, with "B" governor, coupled to one Holmes 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 near dynamo having switches to groups A.B.C.D. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1-10 way fuse & sw' b'd in Steering Gear Recess, 1-6 way fuse box in Steering Gear Recess, 1-2 way 10amp section box in Steering Gear Recess, 1-9 way fuse & sw' b'd fixed in Eng. Room, 1-6 way fuse box in Mess Rm, forward, 1-6 way fuse box in Saloon entrance, 2 way 10amp in Officer's Cab, 1-9 way fuse & sw' b'd in Chart Room, 1-6 way box in Foremen's Cab, aft.

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 158-162, 15-32 & P arranged in the following groups :-

A	56	lights each of	16	candle power requiring a total current of	31.36	Amperes
B	42	lights each of	16	candle power requiring a total current of	23.52	Amperes
C	5	lights each of	16	candle power requiring a total current of	8.4	Amperes
D	54	lights each of	16	candle power requiring a total current of	43.12	Amperes
E	10	lights each of	32	candle power requiring a total current of		Amperes

2 Mast head lights with 1 lamps each of 32 candle power requiring a total current of 2.24 Amperes

2 Side lights with 1 lamps each of 32 candle power requiring a total current of 2.24 Amperes

4 Cargo lights of 6 x 16 candle power, whether incandescent or arc lights incandescent

2 arc " " 10 amperes each in glazed hexagonal lanterns

included above

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

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 37 wires, each 16 S.W.G. diameter, .114 square inches total sectional area

Branch cables carrying 23.52 Amperes, comprised of 4 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Branch cables carrying 8.4 Amperes, comprised of 4 wires, each 19 S.W.G. diameter, .009 square inches total sectional area

Leads to lamps carrying 56 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 336 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

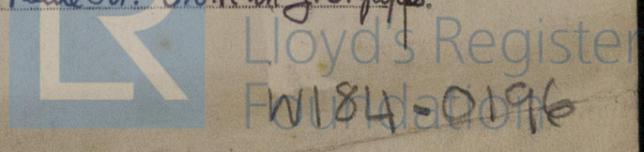
Insulated with pure & vulcanised rubber, and armoured with galvanized iron wires.

Joints in cables, how made, insulated, and protected none, looping-in system carried out, or connection boxes used.

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

How are the cables led through the ship, and how protected Lead covered wires in Accommodation, Armoured wires in Cargo Spaces, Engine Room, Forward Accommodation & Aft Accommodation, 16 wires for Mast Head & Side Str. U.S.R. in G.S. pipes.



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 Armoured.

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

How are cables carried through beams bushed with fibre through bulkheads, &c. stuffing boxes.

How are cables carried through decks in pipes flanged made watertight.

Are any cables run through coal bunkers yes 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 yes.

If so, how are the lamp fittings and cable terminals specially protected Settings in Cargo Spaces are fitted with metal guards slides.

Where are the main switches and fuses for these lights fitted in Steering Engine House.

If in the spaces, how are they specially protected ✓.

Are any switches or fuses fitted in bunkers none.

Cargo light cables, whether portable or permanently fixed portable How fixed socket connection.

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 on main board.

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 2,500 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.

J. H. Holmes & Co Electrical Engineers Date 18/1/16

COMPASSES.

Distance between dynamo or electric motors and standard compass Approx 60ft.

Distance between dynamo or electric motors and steering compass 100ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Location	feet from standard compass	Location	feet from steering compass
56		inside		inside	
8.4	5		160		160
23	11		155		155

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

for John Mierman Builder's Signature. Date 15-6-16

GENERAL REMARKS.

The installation has been satisfactorily fitted in the vessel. Tested at full load and found good.

(This report was delayed through having been mislaid at the builder's.)

It is submitted that this vessel is eligible for THE RECORD Elec. light. JWD 19/6/16

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

