

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 76296

Port of *NEWCASTLE ON TYNE* Date of First Survey *26/4/22* Date of Last Survey *15/11/22* No. of Visits *4*
 No. in *39136* on the *Rallus* Steel *Rallus* Port belonging to *London*
 Reg. Book *39136* Built at *Sunderland* By whom *Swan Hunter & Wigham Richardson* When built *1922*
 Owners *Cook S. S. Co Ltd* Owners' Address _____
 Yard No. *1167* Electric Light Installation fitted by *J. H. Holmes & Co. Newcastle* When fitted *1922*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo multipolar compound wound coupled direct to a single cylinder open type steam engine (Rohy)

Capacity of Dynamo *63* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *engine room at side bottom platform* whether single or double wire system is used *double*

Position of Main Switch Board *on bulkhead of engine store* having switches to groups *A. B. C. D. E. F.* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *3-way 10 B in saloon pantry, 8-way 10 B in chart house, 6-way 5 B in engine room, 4-way 5 B in engine room, 5-way 10 B in 2nd engine cabin, 2-way 10 B in steering gear, 6-way 10 B in engine 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 *137* arranged in the following groups:—

A	<i>21</i>	lights each of <i>17-16cp, 4-32</i>	candle power requiring a total current of	<i>14.0</i>	Amperes
B	<i>4</i>	lights each of <i>36-16cp, 4-32</i>	candle power requiring a total current of	<i>25.64</i>	Amperes
C	<i>27</i>	lights each of <i>2-32, 24-16cp, 1-100W</i>	candle power requiring a total current of	<i>15.82</i>	Amperes
D	<i>28</i>	lights each of <i>16</i>	candle power requiring a total current of	<i>16.68</i>	Amperes
E	<i>28</i>	lights each of <i>14-16cp, 6-60W</i>	candle power requiring a total current of	<i>11.44</i>	Amperes
F	<i>2</i>	Wireless Mast head light with <i>1</i> lamps each of <i>32</i>	candle power requiring a total current of	<i>2.24</i>	Amperes
	<i>2</i>	Side light with <i>1</i> lamps each of <i>32</i>	candle power requiring a total current of	<i>2.24</i>	Amperes
		Cargo lights of <i>2</i> of <i>100 watt half watt</i> , <i>10</i> each of <i>6-16cp</i> , <i>3</i> " <i>2-16cp</i>	candle power, whether incandescent or arc lights	<i>incandescent</i>	

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

Where are the switches controlling the masthead and side lights placed *in chart house.*

DESCRIPTION OF CABLES.

Main cable carrying *63* Amperes, comprised of *19* wires, each *.064* S.W.G. diameter, *.06* square inches total sectional area

Branch cables carrying *14.0* Amperes, comprised of *7* wires, each *.044* S.W.G. diameter, *.01* square inches total sectional area

Branch cables carrying *25.64* Amperes, comprised of *7* wires, each *.064* S.W.G. diameter, *.0225* square inches total sectional area

Leads to lamps carrying *.56* Amperes, comprised of *1* wires, each *.044* S.W.G. diameter, *.0015* square inches total sectional area

Cargo light cables carrying *6.7* Amperes, comprised of *3* wires, each *.036* S.W.G. diameter, *.003* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main cables + cables in engine room are *V.I. R* + armoured + braided over. Lighting in engine room are *V.I. R* cables in conduit (iron pipe).

Joints in cables, how made, insulated, and protected *home made.*

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 *cables lead through conduit clipped to underside of girders + beams.*



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 V.I.R in conduit

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat V.I. Cables in conduit

What special protection has been provided for the cables near boiler casings no

What special protection has been provided for the cables in engine room no

How are cables carried through beams fibre bushes through bulkheads, &c. watertight glands ✓

How are cables carried through decks iron deck tubes watertight ✓

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected V.I.R in conduit

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 cables, whether portable or permanently fixed flexible from watertight sockets How fixed clipped to bulkhead

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 main switchboard.

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 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.

J. H. B. J. J. Mesole Electrical Engineers Date May 5th 1922.

COMPASSES.

Distance between dynamo or electric motors and standard compass 86 feet

Distance between dynamo or electric motors and steering compass 82 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.56</u>	Amperes	<u>on the</u>	<u>feet from</u> standard compass	<u>4</u>	feet from steering compass
A cable carrying	<u>.56</u>	Amperes	<u>4</u>	feet from standard compass	<u>on the</u>	<u>feet from</u> steering compass
A cable carrying	<u>8.96</u>	Amperes	<u>10</u>	feet from standard compass	<u>12.6"</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 nil degrees on each course in the case of the standard compass and nil degrees on each course in the case of the steering compass.

E. J. Ducey Builder's Signature. Date 9 January 1923.

GENERAL REMARKS.

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation Elec. light. wireless

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

£7.0.0 applied for 3/1/23.
Paid 8/1/23.

W.T. Badger.
J.W.D. 19/1/23. Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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