

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12231

Port of Rotterdam Date of First Survey 24 Aug 22 Date of Last Survey 16 March 22 No. of Visits 4
 No. in Reg. Book on the Iron or Steel Trawlers' SCALA SHELL Port belonging to London
 Built at Dumbarton By whom the firm When built 1912
 Owners Anglo-Siam Co Owners' Address London
 Yard No. Electric Light Installation fitted by Sunderland Fyfe & Co When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound direct coupled steam driven dynamo.

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

Where is Dynamo fixed in engine room Whether single or double wire system is used double

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

Positions of auxiliary switch boards and numbers of switches on each chart room, saloon and forward engine room aft. Misch.

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 133 arranged in the following groups:—

A	<u>navigation</u>	<u>18</u> lights each of <u>9-10-72</u> candle power requiring a total current of <u>10.75</u> Amperes
B	<u>saloon</u>	<u>52</u> lights each of <u>16</u> candle power requiring a total current of <u>26</u> Amperes
C	<u>E.A. aft</u>	<u>63</u> lights each of <u>16</u> candle power requiring a total current of <u>31</u> Amperes
D	<u>Misch.</u>	lights each of candle power requiring a total current of <u>23</u> Amperes
E		lights each of candle power requiring a total current of Amperes
	<u>2 Mast head light</u>	with <u>1</u> lamps each of <u>32</u> candle power requiring a total current of <u>2.34</u> Amperes
	<u>2 Side light</u>	with <u>1</u> lamps each of <u>32</u> candle power requiring a total current of <u>2.34</u> Amperes
	<u>6 Cargo lights</u>	of <u>6-72</u> candle power, whether incandescent or arc lights <u>incandescent.</u>

If arc lights, what protection is provided against fire, sparks, &c. no arc lights

Where are the switches controlling the masthead and side lights placed in chart room

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 17 wires, each .072 S.W.G. diameter, 0.1478 square inches total sectional area
 Branch cables carrying 10.75 Amperes, comprised of 7 wires, each .036 S.W.G. diameter, 0.00701 square inches total sectional area
 Branch cables carrying 26 Amperes, comprised of 7 wires, each .044 S.W.G. diameter, 0.01046 square inches total sectional area
 Leads to lamps carrying 31 Amperes, comprised of 7 wires, each .044 S.W.G. diameter, 0.01046 square inches total sectional area
 Cargo light cables carrying 23 Amperes, comprised of 3 wires, each 0.039 S.W.G. diameter, 0.002 square inches total sectional area

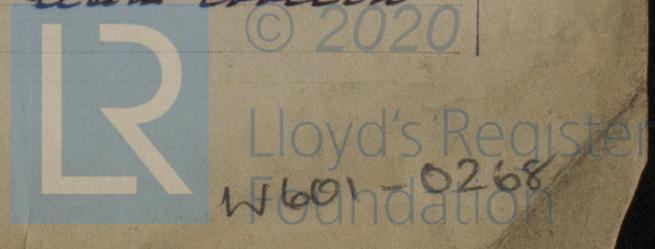
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Barren cables in pipes insulated and lead covered in machinery spaces lead covered and armoured in accommodation lead covered
 Joints in cables, how made, insulated, and protected waterlight boxes.

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 none made

How are the cables led through the ship, and how protected steel pipes and lead covered



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 tubes*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armoured Pb*

What special protection has been provided for the cables near boiler casings *armoured and lead covered*

What special protection has been provided for the cables in engine room *armoured and lead covered*

How are cables carried through beams *Fibre bushes* through bulkheads, &c. *W.T. gaskets*

How are cables carried through decks *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 cables, whether portable or permanently fixed *portable* How fixed *horse shoe connect*

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 with lead*

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 *yes*

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 *gas tight glass bowls*

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 _____ 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.

p.pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD

Electrical Engineers

Date 6th April 1922.

COMPASSES.

Distance between dynamo or electric motors and standard compass *172 ft*

Distance between dynamo or electric motors and steering compass *172 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>0.5</i>	Amperes	<i>0</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>0.56</i>	Amperes	<i>6</i>	feet from standard compass	<i>led into</i>	<i>feet from steering compass</i>
A cable carrying	<i>0.56</i>	Amperes	<i>led into</i>	feet from standard compass	<i>6</i>	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 *every* course in the case of the standard compass and *nil* degrees on *every* course in the case of the steering compass.

ROTTERDAMSCHER DROOGBOEK MAATSCHAPPIJ

DIRECTEUR

Builder's Signature. Date 13 April 1922

GENERAL REMARKS.

The installation has been fitted in accordance with the Rules by the Rules has worked very satisfactorily during a trial and given in my opinion the approval of the committee.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light. 24 19/4/22.

A. Pijl
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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