

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 40416

Port of Glasgow Date of First Survey 14th Sept Date of Last Survey 28th Sept No. of Visits 3
 No. in Reg. Book 7112 on the Iron or Steel S.S. Solawato Port belonging to Amsterdam
 Built at Port Glasgow By whom Mess^{rs} Lithgows & Co When built 1920
 Owners Stoomvaart Maatschappij Nederland Owners' Address Amsterdam
 Yard No. 738 Electric Light Installation fitted by Mess^{rs} H.T. Robertson & Co When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo compound wound 131 amperes at 110 volts direct coupled to steam turbine, & another 58 amperes at 110 volts both at 3000 Revs per minute
 Capacity of Dynamos 131 & 58 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Eng Room Starting Platform Whether single or double wire system is used double
 Position of Main Switch Board " " " " 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 No Auxiliary Switchboards Fitted

If fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary ^{fuse} 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 80 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 216 arranged in the following groups:—
 A lights each of candle power requiring a total current of Amperes
 B lights each of candle power requiring a total current of Amperes
 C lights each of candle power requiring a total current of Amperes
 D lights each of candle power requiring a total current of Amperes
 E lights each of 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 1.4 Amperes
2 Side lights with 1 lamps each of 32 candle power requiring a total current of 1.4 Amperes
24 Cargo lights of 6 of 25cp - 150 candle power, whether incandescent or arc lights Incandescent
4 Half watt lamps - 1000

If arc lights, what protection is provided against fire, sparks, &c. No Arc Lamps Fitted
 Where are the switches controlling the masthead and side lights placed In Chart Room, Lower Bridge

DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 19 wires, each 13 S.W.G. diameter, .125 square inches total sectional area
 Branch cables carrying 60 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .0459 square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0124 square inches total sectional area
 Leads to lamps carrying .7 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .0024 square inches total sectional area
 Cargo light cables carrying 4.2 Amperes, comprised of 119 wires, each 38 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber, Vulcanized Rubber Taped & Lead covered in accommodation, elsewhere armoured & braided, or V.I.P. in tubes
 Joints in cables, how made, insulated, and protected No Joints

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No Joints 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 No
 How are the cables led through the ship, and how protected Through the Tween Decks in Enamelled Steel Conduit Tubing



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 or galvanised iron pipes

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

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 Lead Bushes through bulkheads, &c. w/ft. Glands

How are cables carried through decks In Galv. Iron Deck Pipes

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 Armoured & Braided or Enamelled Steel Conduit Tubing

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 _____

Cargo light cables, whether portable or permanently fixed portable How fixed Brass Terminals

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double Wires

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 2, and with 2 amperemeters _____, fixed on 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.

H. J. Robertson & Co. Electrical Engineers Date 23rd Sept 20

COMPASSES.

Distance between dynamo or electric motors and standard compass 105 ft

Distance between dynamo or electric motors and steering compass 105 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>10</u>	Amperes	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>5</u>	Amperes	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>2</u>	Amperes	<u>into</u>	feet from standard compass	<u>2 into</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 7 1/2 degrees on every course in the case of the standard compass and 7 1/2 degrees on every course in the case of the steering compass.

LITHGOWS LIMITED.

Wm Allan Builder's Signature. Date 18th November 1920

GENERAL REMARKS.

This installation has been fitted on board under special survey. Tested under full working conditions found satisfactory in every way.

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

Elec Light Bell 13/12/20

J. Stanley Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Glasgow
Elec Light



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

HC
6.12.20

Im, 7, 10.—Transfer.