

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17822

Port of Greenock. Date of First Survey 17th Aug. 1920 Date of Last Survey 10th May 21. No. of Visits 40.
 No. in Reg. Book 78094 on the Iron or Steel 3/8 "CORINALDO." Port belonging to Glasgow.
 Built at Greenock. By whom Scotts S. B & Eng Co Ltd When built 1921.
 Owners Donaldson Bros Ltd. Owners' Address Glasgow.
 Yard No. 482. Electric Light Installation fitted by Scotts S. B & Eng Co Ltd. When fitted 1921.

DESCRIPTION OF DYNAMO, ENGINE, ETC. 1 Main Dynamo, (Laurence Scott make) direct coupled to a compound Engine (by Paul, Dumbarton) 6 1/2" Cyl, 11" Cyl, 6" Stroke - 20 Kilowatts
 110 Volts. 300 Revs. @ 150 lbs. Steam pressure. per sq. in. 1 Auxiliary Dynamo (Laurence Scott make)
 direct coupled to single engine 6 1/2" Cyl. x 6" Stroke - 12 1/2 Kilowatts - 110 Volts. @ 150 lbs. Steam pressure per sq. in.
 Capacity of Dynamo (main) 182 Amperes at 110 Volts, whether continuous or alternating current continuous
 (aux.) 114
 Where is Dynamo fixed in Dyn. Flat in Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board " " " " " having switches to groups 1 of lower 1 Spare & 7 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 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 200 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 314 arranged in the following groups:—

A	3	32	1	lights each of	50	25	2 1/2	candle power requiring a total current of	6.88	Amperes		
B	4	32		lights each of	50	25		candle power requiring a total current of	24.5	Amperes		
C	20	67	2	lights each of	50	25	600	candle power requiring a total current of	25.5	Amperes		
D	6	5	2	lights each of	6	2 1/2	16	32	3.64	Amperes		
E				lights each of	✓			candle power requiring a total current of	✓	Amperes		
	2			Mast head light with	1			lamps each of	32	candle power requiring a total current of	2.16	Amperes
	2			Side light with	1			lamps each of	"	candle power requiring a total current of	"	Amperes
	(10 - 6 lt clusters)	60			50							
	(Potables)	21		Cargo lights of	16			1000		candle power, whether incandescent or arc lights	incandescent	
	(6 - 500 watt)	6										

If arc lights, what protection is provided against fire, sparks, &c.
No Arc lights fitted

Where are the switches controlling the masthead and side lights placed on Navigation Lt. Indicator fitted on Bridge

DESCRIPTION OF CABLES.

Main cable carrying	182	Amperes, comprised of	37	wires, each	14	S.W.G. diameter,	37/.083	.2	square inches total sectional area
Branch cables carrying	30.8	Amperes, comprised of	19	wires, each	18	S.W.G. diameter,	19/.052	.04	square inches total sectional area
Branch cables carrying	9.6	Amperes, comprised of	7	wires, each	18	S.W.G. diameter,	7/.052	.0145	square inches total sectional area
Leads to lamps carrying	1.5	Amperes, comprised of	3	wires, each	20	S.W.G. diameter,	3/.036	.003	square inches total sectional area
Cargo light cables carrying	3.2	Amperes, comprised of	70	wires, each	36	S.W.G. diameter,	70/.0076	.0030	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC. In machinery spaces in open Tubing has been used where found necessary, for general practice the cable in these places is lead covered, armoured & Braided — In places where the cables are subject to exceptional heat they have been clipped up to Metal Trays which hold them clear of the Bulkheads — In accommodation the cables are all lead covered. all cables for Elec. light & power circs. are of 2,500 Megohm Grade
 Joints in cables, how made, insulated, and protected
No joints unless where a distribution or Extension box has been fitted.

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 No.
 How are the cables led through the ship, and how protected Main cables lead covered clipped to iron or wood bulkheads & run in Galvan. Iron Tubing on open deck fore and aft.



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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 where found necessary cables run in open have been fitted in Tubing

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat see description of Insulation Protection

What special protection has been provided for the cables near boiler casings cables in Machinery Spaces protected by lead covering Armour & Braided.

What special protection has been provided for the cables in engine room " " " " " " " " " " " "

How are cables carried through beams Lead Bushes used through bulkheads, &c. Glands used where necessary

How are cables carried through decks by the use of Deck Tube & Watertight glands.

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 NO.

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 NO.

Are any switches or fuses fitted in bunkers —

Cargo light cables, whether portable or permanently fixed Portable How fixed To Watertight connectors

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 Yes 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 2500 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.

W. J. W. Electrical Engineers Date 12/5/21

COMPASSES.

Distance between dynamo or electric motors and standard compass 12 ft.

Distance between dynamo or electric motors and steering compass 8 "

The nearest cables to the compasses are as follows:—

A cable carrying	15	Amperes	5	feet from standard compass	5.	feet from steering compass
A cable carrying	8.7	Amperes	6	feet from standard compass	6	feet from steering compass
A cable carrying	23.7	Amperes	15	feet from standard compass	12	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 Any course in the case of the standard compass and nil degrees on Any course in the case of the steering compass.

W. J. W. Builder's Signature. Date 12/5/21

GENERAL REMARKS.

The above Installation has been fitted in a satisfactory manner. The materials & Workmanship employed so far as could be seen are sound & good. It has been examined under full load & found to be satisfactory.

Total Kilowatts:— 32½. Fee:— £ 23:2:6. Elec Light 18/5/21 J. Robinson Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW, 17 MAY 1921 Elec. Light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

