

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 30357

Port of Glasgow Date of First Survey 1-3-11 Date of Last Survey 30-6-11 No. of Visits 33
 No. in Reg. Book on the Iron or Steel T/s Argyllshire Port belonging to _____
 Built at Clydebank By whom J. Brown & Co Ltd When built 1911
 Owners Turnbull Martin & Co Owners' Address 112 Finchurch Street London
 Yard No. 399 Electric Light Installation fitted by J. Brown & Co Ltd When fitted 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 generating sets each comprising vertical open type engine having single cylinder 10" dia by 9" stroke coupled directly to a compound wound dynamo 250 R.P.M. 100 lbs steam
 Capacity of Dynamo 300 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In thrust recess in engine room Whether single or double wire system is used Double

Position of Main Switch Board On Bk head in thrust recess having switches for groups A.B.C.D.E.F.G.H.I. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each _____

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 100 per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 493 + 2.12 fans arranged in the following groups:—

A. navigation	32 lights each of 6.8	16	32	candle power requiring a total current of	43.2	Amperes
B. 1st class Public rooms	80 each	16		candle power requiring a total current of	34.4	Amperes
BC 2nd class	2075 lights each of	16		candle power requiring a total current of	42.8	Amperes
D. Crew + Red room	74 lights each of	8	16	candle power requiring a total current of	39.3	Amperes
E. Way circuit	71 lights each of	8	16	candle power requiring a total current of	34.0	Amperes
F. Engine + Boiler rooms	65 lights each of	16		candle power requiring a total current of	30.4	Amperes
G. Cargo Forward	54 lights each of	16		candle power requiring a total current of	27.6	Amperes
H. Cargo aft + mid	42 lights each of	16		candle power requiring a total current of	22.8	Amperes
I. Storage	lights each of <u>Floods only</u>			candle power requiring a total current of		
2 Mast head light with	1 lamp each of 32			candle power requiring a total current of	2.2	Amperes
2 Side light with	1 lamp each of 32			candle power requiring a total current of	2.2	Amperes
12 Cargo lights of	5.16 c.p. each			candle power, whether incandescent or arc lights	Incandescent	

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

Where are the switches controlling the masthead and side lights placed In wheel House

DESCRIPTION OF CABLES.

Main cable carrying	274.5 Amperes, comprised of	37 wires, each	12 L.S.G. diameter, .3105	square inches total sectional area
Branch cables carrying	39 Amperes, comprised of	14 wires, each	17 L.S.G. diameter, .04627	square inches total sectional area
Branch cables carrying	17 Amperes, comprised of	7 wires, each	16 L.S.G. diameter, .02727	square inches total sectional area
Leads to lamps carrying	56 Amperes, comprised of	3 wires, each	22 L.S.G. diameter, .001825	square inches total sectional area
Cargo light cables carrying	3 Amperes, comprised of	7 wires, each	20 L.S.G. diameter, .00705	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The conductors are insulated with pure rubber vulcanising rubber and taped, the whole then vulcanised together and enclosed in a tube of lead. In machinery spaces, cargo spaces and other positions where exposed to injury the cable is armoured + braided

Joints in cables, how made, insulated, and protected no joints

Are all the joints of cables thoroughly soldered, resin only having been used as a flux _____ 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 none

How are the cables led through the ship, and how protected Up aft end of engine room casing + along port alleyway on sheller deck. Through gally coal + baggage spaces Refrigerating room and no. 2 Hold Fore. Through nos 5 + 6 Hold 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 Lead covering

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covering, armoured + braided

What special protection has been provided for the cables near boiler casings Lead covering armoured and braided

What special protection has been provided for the cables in engine room 190

How are cables carried through beams Through holes bushed with lead through bulkheads, &c. Watertight glands

How are cables carried through decks Through deck tubes

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 Lead covered + armoured + braided, in cargo spaces lead covered enclosed in iron casing for Bunkers

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes Haw Lamp

If so, how are the lamp fittings and cable terminals specially protected The terminals are enclosed in cast iron boxes

Where are the main switches and cut outs for these lights fitted Switches are inside terminal boxes, fuses in long + Bales Room for Bunker lights

If in the spaces, how are they specially protected Switches are enclosed in the cast iron terminal boxes

Are any switches or cut outs fitted in bunkers Switches as mentioned above, no fuses are in bunkers

Cargo light cables, whether portable or permanently fixed Portable How fixed _____

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 _____
The installation is _____ supplied with a voltmeter and Two an amperemeters fixed on Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas _____

Are any switches, cut outs, 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 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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. Henderson Assistant Secretary Electrical Engineers Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass 142 ft.

Distance between dynamo or electric motors and steering compass 140

The nearest cables to the compasses are as follows:—

A cable carrying	25	Amperes	14 ft.	feet from standard compass	19-6	feet from steering compass
A cable carrying	18	Amperes	5 ft.	feet from standard compass	5-6	feet from steering compass
A cable carrying	1.5	Amperes	4-6	feet from standard compass	6 ft.	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power _____

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.

J. Henderson Assistant Secretary Builder's Signature. Date _____

GENERAL REMARKS.

This installation has been fitted in an efficient manner and in accordance with the rules and has been seen working satisfactorily.

It is submitted that the vessel is eligible for THE RECORD Elec. Light. JWD APR 50/7/11 Harry Clarke Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute Glasgow 12 JUL 1911

Elec. Light.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

24M
10-7-11