

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17651

Port of Grenock Date of First Survey 26th June/20 Date of Last Survey 19th May 1920 No. of Visits 12
 No. in Reg. Book on the Iron Steel S/S "TELESFORA DE LARRINAGA" Port belonging to Liverpool
 Built at Port Glasgow By whom R. Duncan & Co. When built 1920
 Owners Larrinaga & Co. Owners' Address 30 James Street, Liverpool
 Yard No. 344 Electric Light Installation fitted by H. J. Boothroy & (Port-Glasgow) Ltd. When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

By "Allen" of Bedford. Single cylinder, open type, 7" x 6" engine direct coupled to comp'd. Wound, multipolar dynamo. Steam pressure 100 lbs. per sq. inch
 Capacity of Dynamo 80 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 near Dynamo having switches to groups Five of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none 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 — 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
 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
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases

Total number of lights provided for 18 + arranged in the following groups:—

A	#7	lights each of	16	candle power requiring a total current of	25	Amperes
B	#5	lights each of	16	candle power requiring a total current of	23	Amperes
C	38	lights each of	16	candle power requiring a total current of	19	Amperes
D	20	lights each of	16	candle power requiring a total current of	10	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	2.25	Amperes
2	Side light with	1 lamps each of	32	candle power requiring a total current of	2.25	Amperes
30	Cargo lights of	6 - 5 light of 16	candle power, whether incandescent or arc lights	Incandescent		

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

Where are the switches controlling the masthead and side lights placed In Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 80 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .09 square inches total sectional area
 Branch cables carrying 25 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area
 Leads to lamps carrying 1/2 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 5 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

I.R. taped, lead covered cables, and where exposed in machinery spaces and etc. armoured over the lead with galv. steel wire armour and where necessary further protected in steel tubing
 Joints in cables, how made, insulated, and protected no joints except mechanical ones

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 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 Lead covered + armoured + efficiently clipped



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 and armoured and where necessary in wrot iron tubing.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat - ditto -

What special protection has been provided for the cables near boiler casings - ditto -

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

How are cables carried through beams Lead & Fibre bushes through bulkheads, &c. Watertight glands.

How are cables carried through decks Watertight 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 As described above.

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

If so, how are the lamp fittings and cable terminals specially protected Specially guarded fittings.

Where are the main switches and fuses for these lights fitted In Engine Room

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 To Watertight Connector

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 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. T. BOOTHROYD (PORT GLASGOW) LTD.

Electrical Engineers

Date 24th May, 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass About 175 feet

Distance between dynamo or electric motors and steering compass About 210 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	In Instrument	feet from standard compass	In Instrument	feet from steering compass
$\frac{1}{2}$					
$\frac{1}{2}$	10			6	feet from steering compass
2	10		10		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 ✓ course in the case of the standard compass and ✓ degrees on ✓ course in the case of the steering compass.

Robert Duncan & Co. Ltd. J.R.M.

Builder's Signature.

Date 26/5/20.

GENERAL REMARKS.

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

It is submitted that this vessel is eligible for THE RECORD. ELEC: LIGHT 4/6/20.

J. Robinson.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1-JUN 1920

Elec. Light



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