

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41577.

Port of Glasgow. Date of First Survey 7.12.21 Date of Last Survey 9.12.21 No. of Visits 2  
 No. in on the Iron or Steel S.S. KYLEBEG Port belonging to  
 Reg. Book 38042 S Built at Dublin By whom Messrs The Dublin Shipbuilders When built 1921  
 Owners Abram I. S. Collo Owners' Address  
 Yard No. 17 Electric Light Installation fitted by Messrs The Sunderland Forge When fitted 1921

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

TOTAL K.W. = 467

Compound wound 4 pole dynamo, direct coupled to single stroke open type steam engine fitted with governor on crank shaft.

Capacity of Dynamo 45 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 In Engine Room having switches to groups Four of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each In Engine Room - 6 switches  
In Bridge Deck House - 6 switches

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 35 arranged in the following groups:—

A Accommodation	20 lights each of	16	candle power requiring a total current of	12.0	Amperes
B Navigation	9 lights each of 4 at 32 & 5 at 16		candle power requiring a total current of	7.8	Amperes
C Engine & Boiler Rooms	6 lights each of	16	candle power requiring a total current of	3.6	Amperes
D Cargo	2 lights each of	1000	candle power requiring a total current of	10.0	Amperes
E	lights each of		candle power requiring a total current of		Amperes
2 Mast head light	1 lamp each of	32	candle power requiring a total current of each	1.2	Amperes
2 Side light	1 lamp each of	32	candle power requiring a total current of each	1.2	Amperes
2-2 Cargo lights	of	1,000	candle power, whether incandescent or arc lights	Incandescent.	

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

None fitted

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

## DESCRIPTION OF CABLES.

Main cable carrying 33.4 Amperes, comprised of 19 wires, each .052" S.W.G. diameter, .04 square inches total sectional area  
 Branch cables carrying 12.0 Amperes, comprised of 7 wires, each .036" S.W.G. diameter, .007 square inches total sectional area  
 Branch cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area  
 Leads to lamps carrying 1.8 Amperes, comprised of 3 wires, each .029" S.W.G. diameter, .002 square inches total sectional area  
 Cargo light cables carrying 5 Amperes, comprised of 100 wires, each .006 S.W.G. diameter, .0028 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper conductors insulated with pure and vulcanising india rubber, taped and the whole vulcanised together and finished:— In accommodation — Lead covered and braided overall In machinery spaces etc. Lead covered, armoured and braided.

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 — 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 No

How are the cables led through the ship, and how protected Mains are drawn into galvanised iron pipe, made water-tight, from engine room to forecastle



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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 covered armoured and braided

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

What special protection has been provided for the cables near boiler casings None near boiler casing

What special protection has been provided for the cables in engine room Lead covered armoured and braided

How are cables carried through beams through holes bushed with fibre through bulkheads, &c. W.T. packing glands

How are cables carried through decks in deck tubes made W.T.

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 In watertight boxes

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 in Main 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 2,500 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.

R. H. Gough

Electrical Engineers

Date 6th January, 1922

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

90 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
7.8	12	-	-
.6	3	-	-

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 any course in the case of the standard compass and degrees on course in the case of the steering compass.

DUBLIN SHIPBUILDERS', LIMITED

W. M. Millan

Builder's Signature.

Date 10<sup>th</sup> Jan 1922

GENERAL REMARKS.

Managing Director

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

FRS. £5.0.0.

19.12.21  
26.12.21

RECORD.

Elec. Light. J. S. Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

17 JAN 1922.

Elec. Light.



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