

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8767

Port of Belfast. Date of First Survey 6th Mar 1922 Date of Last Survey 20th June 1922 No. of Visits Fifteen
 No. in Reg. Book on the Iron or Steel Thin Sk "DIOGENES" Port belonging to Admiralty
 Built at Belfast By whom Harland & Wolff Ltd. When built 1922
 Owners Geo. Thompson & Co. Ltd. Owners' Address _____
 Yard No. 576 Electric Light Installation fitted by Harland and Wolff Ltd. When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

For use in port: 1. 50 kW Turbo Generator, set (ex Admiralty) fitted 10.48
 See Log report 117339.

Two Main Dynamos, each 150 kW, driven by a steam turbine, giving an output of 601 Amps at 220 volts when running at 750 R.P.M. One Emergency Diesel driven dynamo 75 kW, giving an output of 340 Amps at 220 volts running at 1000 R.P.M.

Capacity of 2 Dynamos (Main) 1362 Amperes at 220 Volts, whether continuous or alternating current continuous
 (Emergency) 341

Where is Dynamo fixed Dynamo Platform Port side of Engine Casing Whether single or double wire system is used double

Position of Main Switch Board Dynamo Platform having switches to groups A B C D E F G H I of lights, &c., as below
J K L M N O

Positions of auxiliary switch boards and numbers of switches on each One Board containing 14 switches in Chart House

One Board containing 22 switches in Port Passage Forward Bridge Deck

One Board containing 8 switches in Star Passage Aft Bridge Deck

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 1215 arranged in the following groups:—

A Passenger Port 248 lights each of 30 watts candle power requiring a total current of 32 Amperes

B Passenger Starboard 182 lights each of 30 watts candle power requiring a total current of 25 Amperes

C Service 504 lights each of 30 watts candle power requiring a total current of 70 Amperes
84 16 C.P.

D Emergency 95 lights each of 30 watts candle power requiring a total current of 12.5 Amperes

E Cargo 100 lights each of 16 candle power requiring a total current of 50 Amperes
2000

2 Mast head lights with 1 lamp each of 32 candle power requiring a total current of 1.2 Amperes

2 Side lights with 1 lamp each of 32 candle power requiring a total current of 1.2 Amperes

12 Cargo lights of 120 candle power, whether incandescent or arc lights incandescent
4 2000

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

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

DESCRIPTION OF CABLES.

Main cable carrying 400 Amperes, comprised of 37 wires, each 0.103 S.W.G. diameter, 0.6 square inches total sectional area

Branch cables carrying 60 Amperes, comprised of 19 wires, each 0.052 S.W.G. diameter, 0.240 square inches total sectional area

Branch cables carrying 30 Amperes, comprised of 7 wires, each 0.044 S.W.G. diameter, 0.110 square inches total sectional area

Leads to lamps carrying 1.5 Amperes, comprised of 3 wires, each 0.036 S.W.G. diameter, 0.002 square inches total sectional area

Cargo light cables carrying _____ Amperes, comprised of _____ wires, each _____ S.W.G. diameter, _____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables throughout ship are of 2500 megohm class and C.M.A. quality. Insulated with pure rubber and vulcanised rubber and protected by lead covering. Cables exposed to heat or moisture and in Engine and Boiler Rooms are further protected by steel armouring and braiding. Cables from Switchboard to Decks up Engine Casing and Branch wires for Deck lights are protected by lead covering. No joints in main cables. Joints in Branch wiring are made in properly constructed joint boxes.

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 Clipped direct to bulkhead or beams or run on perforated steel plating and protected by lead covering or lead covering, steel armouring & braiding. In Cargo Hold cables are lead covered and enclosed in galvanised iron troughing.

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 covered, served, steel armoured & braided.

What special protection has been provided for the cables near boiler casings Lead covered, served, steel armoured & braided.

What special protection has been provided for the cables in engine room Lead covered, served, steel armoured & braided. Cables from switch-board to Decks up Engine casing, protected by lead covering.

How are cables carried through beams Bushed with lead through bulkheads, &c. In glands where watertight, otherwise lead bushed.

How are cables carried through decks In deck tubes bushed with fibre and cable ducts.

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 covered, served, steel armoured and braided overall.

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 In coal bunkers by strong C.I. covers. In baggage and Special Cargo Rooms by steel guards.

Where are the main switches and fuses for these lights fitted for bunker lights in Boiler Room. for Baggage Room, fuses in Passage Pt. Shelter Deck Amidsides. switch in Baggage Rm. for Special Cargo, fuses in Passage under Forecastle. Switch in Room.

If in the spaces, how are they specially protected by cast iron covers.

Are any switches or fuses fitted in bunkers No.

Cargo light cables, whether portable or permanently fixed permanently How fixed clipped to beams or bulkheads or to perforated steel plate.

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 Main Switchboards.

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.

COMPASSES.

Distance between dynamo or electric motors and standard compass 176 ft to nearest dynamo 26 ft to nearest motor.

Distance between dynamo or electric motors and steering compass 182 ft to nearest dynamo 36 ft to nearest motor.

The nearest cables to the compasses are as follows:—

A cable carrying	/0	Amperes	6	feet from standard compass	14	feet from steering compass
A cable carrying	12	Amperes	16	feet from standard compass	36	feet from steering compass
A cable carrying	140	Amperes	26	feet from standard compass	14	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 all course in the case of the steering compass and nil degrees on all course in the case of the standard compass.

Builder's Signature. Date 6/7/22

GENERAL REMARKS.

This installation is of good description, and has been fitted in accordance with the Rules.

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

See: 440-17-6. Applied for 7/7/22.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI JUL 14 1922 Elec Lt FRI JUL 21 1922

One Board containing 8 switches in Entrance to 3rd fl. Smoke Room and General Room. Shelter Deck Aft.

One Board containing 16 switches in 1st fl. Pantry on Upper Deck.

One Board containing 8 switches in 3rd fl. Dining Saloon. Upper Deck.

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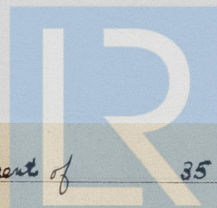
F Machinery ⁴⁶ 32 lights. each of ^{16 c.p.} 30 watts.
1000 watts.

requiring a total current of 35 Amperes.

G. Signals 5 lights each of 32 c.p. 8-60 c.p. 4-2 1/2 c.p.
6-8 c.p. and 30-30 watts.

requiring a total current of 10.5 Amperes.

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