

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25997

Port of SUNDERLAND. Date of First Survey 27 Jan Date of Last Survey 2 Feb 14 No. of Visits 2
 No. in Reg. Book on the Iron or Steel S.S. Constantinian XII Port belonging to
 Built at Sunderland By whom Messrs J. Priestman & Co When built 1914
 Owners Hellenic Transport S.S. Co. Owners' Address
 Yard No. 246 Electric Light Installation fitted by Fulham, Lewis & Co. When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

6 1/2" x 5" Open type engine Throttle Govt to work with 100 sq Steam Press.
Compound wound dynamo 385 Revs
 Capacity of Dynamo 65 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Shutling Platform Whether single or double wire system is used double
 Position of Main Switch Board Near dynamo having switches to groups A.B.C.D. of lights, &c., as below
 Positions of auxiliary ~~switch~~ ^{fuses} boards and numbers of ~~switches~~ ^{fuses} on each 5 way in Forward Passage
10 Way in Pantry, 7 Way in Wheelhouse, 8 Way in Eng's Steward's Passage
3 Way Engin's Port Passage, 3 Way in Main Mast House, 3 Way Up stn, 7 Way Engin Room
 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 25 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 150 arranged in the following groups:—
 A Forward 25 lights each of 16 candle power requiring a total current of 12.7 Amperes
 B Mastheads 49 lights each of 4 candle power requiring a total current of 24.9 Amperes
 C Engin's R. 47 lights each of 4 candle power requiring a total current of 23.9 Amperes
 D Engin Room 24 lights each of 4 candle power requiring a total current of 14.7 Amperes
 E lights each of candle power requiring a total current of Amperes
2 Mast head lights with 1 lamp each, of 32 candle power requiring a total current of 1 Amperes
2 Side lights with 1 lamp each, of 4 candle power requiring a total current of 1 Amperes
8 Cargo lights of 6 x 16 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 Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 65 Amperes, comprised of 19 wires, each 15 S.W.G. diameter, .075 square inches total sectional area
 Branch cables carrying 24.9 Amperes, comprised of 7 wires, each 15 S.W.G. diameter, .018 square inches total sectional area
 Branch cables carrying 23.9 Amperes, comprised of 7 wires, each 15 S.W.G. diameter, .018 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper, fine Para rubber, Vulc. rubber taped braided & lead covered
in cabins &c. Armoured & Braided in Machinery spaces

Joints in cables, how made, insulated, and protected

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 yes

How are the cables led through the ship, and how protected Iron Pipe



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1020160600-003083

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Generally (Through hatches and cargo spaces)

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Unwound. Braided

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 Fibre bushes through bulkheads, &c. W. J. glands

How are cables carried through decks 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 Iron Pipe

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 W. J. sockets

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 Main Board

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.

COMPASSES.

Distance between dynamo or electric motors and standard compass 90 ft

Distance between dynamo or electric motors and steering compass 80 "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>7</u>	<u>12</u>	<u>15</u>	<u>—</u>
<u>.5</u>	<u>1</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

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

GENERAL REMARKS.

The installation has been satisfactorily fitted in the vessel tested at full load and found good.

It is submitted that this vessel is eligible for

THE RECORD. Elec. light. JWD. 2/2/14

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.