

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 83641

Port of Ipwich Date of First Survey 5th March Date of Last Survey 5th October No. of Visits 45
 No. in Reg. Book on the Steel Leg "St. Austell" Port belonging to London
 Built at Ct Yarmouth By whom Crabtree & Co N° 175 When built 1920.
 Owners Admiralty Owners' Address Admiralty
 Yard No. 175 Electric Light Installation fitted by C. W. Hyde When fitted 1920.

DESCRIPTION OF DYNAMO, ENGINE, ETC. De Laval Steam Turbine, 20 B.H.P. geared 10:1 coupled to a 13 K.W. compound wound, direct current electric generator.

Capacity of Dynamo 125 Amperes at 105 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side in engine room Whether single or double wire system is used Double

Position of Main Switch Board Starboard side in engine room Having switches to groups A, B, C of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each lights & groups of lights provided with switches as required

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 in 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 86 arranged in the following groups :-

A	Navigation	lights each of	32 + 16	candle power requiring a total current of	7.5	Amperes
B	Engine Room	lights each of	16	candle power requiring a total current of	20	Amperes
C	Aft lighting	lights each of	16	candle power requiring a total current of	8	Amperes
D		lights each of		candle power requiring a total current of		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	Amperes
2	Side light with 1 lamps each of		32	candle power requiring a total current of	2	Amperes
2	6th Cargo lights of		32	candle power, whether incandescent or arc lights <u>incandescent</u>		Amperes

If arc lights, what protection is provided against fire, sparks, &c. No arc lights

Where are the switches controlling the masthead and side lights placed Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying	150 Amperes, comprised of	37 wires, each	15 S.W.G. diameter,	.15 square inches total sectional area
Branch cables carrying	34 Amperes, comprised of	7 wires, each	18 S.W.G. diameter,	.0125 square inches total sectional area
Branch cables carrying	20 Amperes, comprised of	3 wires, each	18 S.W.G. diameter,	.00532 square inches total sectional area
Leads to lamps carrying	9.8 Amperes, comprised of	1 wires, each	17 S.W.G. diameter,	.00246 square inches total sectional area
Cargo light cables carrying	7.2 Amperes, comprised of	3 wires, each	22 S.W.G. diameter,	.0018 square inches total sectional area
	20 Amperes, comprised of	3 wires, each	18 S.W.G. diameter,	.00532 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

lead covered cable, in dielectric, braided and

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 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

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 in Steel Tubes & perforated sheet plate



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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 sheathed ✓

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead sheathed ✓

What special protection has been provided for the cables near boiler casings Lead sheathed ✓

What special protection has been provided for the cables in engine room Lead sheathed ✓

How are cables carried through beams Lead bushes ✓ through bulkheads, &c. Water-tight glands ✓

How are cables carried through decks Steel 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 No ✓

If so, how are they protected in steel Tubes ✓

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 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 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.

C. W. Hyde Electrical Engineers Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass 75 ft.

Distance between dynamo or electric motors and steering compass 75 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>20</u>	Amperes	<u>10'</u>	feet from standard compass	<u>3'</u>	feet from steering compass
A cable carrying	—	Amperes	—	feet from standard compass	—	feet from steering compass
A cable carrying	—	Amperes	—	feet from standard compass	—	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 any course in the case of the standard compass and Nil degrees on any course in the case of the steering compass.

Builder's Signature. Date _____

GENERAL REMARKS.

The Electric Installation has been fitted in accordance with the Specification and Society's Rules, workmanship and materials are good. Apparatus tried and tested under working conditions and found Satisfactory

It is submitted that this vessel is eligible for THE RECORD. Flie light 1.16/1/20 Robert Rae Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.