Rpt. 13. REC'D NEW YORK Supt. Inspn.

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1189

Received at London Office 19

Port of Boston Date of First Survey 23 June Date of Last Survey 27 Aug 1919 No. of Visits 3.

No. in Reg. Book ✓ on the ~~Iron or Steel~~ wood tw. sc. s/s RIPOGENUS Port belonging to Searsport, Me.

Built at Rockland, Me. By whom Francis Cobb S. B. Co. When built 1919.

Owners Great Northern Paper Co. Owners' Address 60 Congress St, Boston, Mass

Yard No. 71 Electric Light Installation fitted by The Portland Co. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-10 KW General Electric generator, 6 pole compound wound, direct driven by vertical steam engine 6½"×5".

Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine room Whether single or double wire system is used double

Position of Main Switch Board Engine room having switches to groups A, B, C, D, E, F of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in Midship House with 4 switches

One tell tale in Pilot House with 8 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 none and to each lamp circuit no.

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 all but lamp circuits

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of less than 100 per cent over the normal current

Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions enclosed type 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 On fuse cases

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 132 arranged in the following groups:—

A	Aft Lights	A 14, B 11	lights each of	32	candle power requiring a total current of	5	Amperes
B	Port E.R.	A 14, B 11	lights each of	32	candle power requiring a total current of	4	Amperes
C	Starbd E.R.	A 11, B 9	lights each of	32	candle power requiring a total current of	5, 4	Amperes
D	Midship House	37	lights each of	32	candle power requiring a total current of	4, 3	Amperes
E	Searchlight		lights each of	✓	candle power requiring a total current of	14	Amperes
F	A 4 Mast head light with	1	lamps each of	32	candle power requiring a total current of	35	Amperes
	A 2 Side light with	1	lamps each of	32	candle power requiring a total current of		Amperes
	B 2 Forecastle	1	lamps each of	32	candle power requiring a total current of	2	Amperes
	3 Cargo lights of 4 light cluster + 1-6 light cluster			32	candle power, whether incandescent or arc lights	3	Amperes

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

✓

Where are the switches controlling the masthead and side lights placed Engine room + pilot house.

DESCRIPTION OF CABLES.

Main cable carrying 91 Amperes, comprised of 19 wires, each .0746" ~~S.W.G.~~ diameter, .083 square inches total sectional area

Branch cables carrying 35 to 14 Amperes, comprised of 7 wires, each .061" ~~S.W.G.~~ diameter, .022 square inches total sectional area

Branch cables carrying 5 to 2 Amperes, comprised of 1 wires, each .064" ~~S.W.G.~~ diameter, .003 square inches total sectional area

Leads to lamps carrying 4 Amperes, comprised of 1 wires, each .064" ~~S.W.G.~~ diameter, .003 square inches total sectional area

Cargo light cables carrying 3 Amperes, comprised of 13 wires, each .01 ~~S.W.G.~~ diameter, .002 .0102 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation, covered with braided waterproof fibre + carried in metal conduit throughout.

Joints in cables, how made, insulated, and protected Soldered well taped + made in metal junction boxes

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 no.

How are the cables led through the ship, and how protected Metallic conduits.

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 Metallic conduits

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

What special protection has been provided for the cables near boiler casings Metal conduits

What special protection has been provided for the cables in engine room Metal conduits Metal conduits

How are cables carried through beams Metal conduits *through bulkheads, &c.* Metal conduits made tight

How are cables carried through decks Metal conduits made watertight

Are any cables run through coal bunkers No *or cargo spaces* Yes *or spaces which may be used for carrying cargo, stores, or baggage* Yes

If so, how are they protected Metal conduits run high up under deck in boson of shelf

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* Attachment plugs provided

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° Farhenheit 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.

Electrical Engineers *Date*

COMPASSES.

Distance between dynamo or electric motors and standard compass about 140 feet

Distance between dynamo or electric motors and steering compass about 140 "

The nearest cables to the compasses are as follows:—

A cable carrying Binnacle	½	*Amperes*	close to	*feet from standard compass*	close to	*feet from steering compass*
A cable carrying Navigation	2	*Amperes*	about 8	*feet from standard compass*	about 8	*feet from steering compass*
A cable carrying Searchlight	35	*Amperes*	" 8	*feet from standard compass*	" 8	*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 degrees on course in the case of the standard compass and degrees on course in the case of the steering compass.

The Portland Co
By Geo. F. Reynolds Gen. Mgr. *Builder's Signature.* *Date* Sept. 17, 1917.

GENERAL REMARKS. This Electric Light Installation has been fitted in accordance with the Rules & the workmanship & materials are good. It has been satisfactorily tried under full load, & it is now in good & safe working condition & eligible, in my opinion to receive the notation ELEC. LIGHT in the Register Book

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

John S. Heck

RCH 18/10/19 *Surveyor to Lloyd's Register of Shipping.*

Committee's Minute Elect

New York SEP 23 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im.6,18.—Transfer.