

New York Shipbuilding Corp - Cont. 172.  
S.S. Gulfmaid.

Rpt. 13.

REC'D NEW YORK

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# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2555

Port of Philadelphia - Pa. Date of First Survey 7<sup>th</sup> Feb 1917 Date of Last Survey 27<sup>th</sup> March 1917 No. of Visits 10  
No. in on the ~~Iron~~ Steel S.S. Gulfmaid Port belonging to Port Arthur  
Reg. Book Built at Camden - New Jersey - U.S.A. By whom New York Shipbuilding Corp When built 1917  
Owners Gulf Refining Company. Owners' Address Frick Building - Pittsburg - Pa.  
Yard No. 172 Electric Light Installation fitted by New York Shipbuilding Corp When fitted 1917.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two (2) - 10 K.W. 110 Volt Generators direct connected to Vertical Marine Engines built by the General Electric Company - Schenectady - New York - U.S.A.

Capacity of Dynamo 30.9 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Lower Engine Room - Stbd. Whether single or double wire system is used Double

Position of Main Switch Board Lower Eng. Rm. Stbd. having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each "A" Spar Deck - Aft. Fr. 46 (6)

"B" Officers Mess (4) - "E" Captain's Office (4).

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 10% 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

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

Total number of lights provided for 200 arranged in the following groups :-

|   |    |                |    |   |    |         |
|---|----|----------------|----|---|----|---------|
| A | 24 | lights each of | 16 | candle power requiring a total current of | 12 | Amperes |
| A | 42 | lights each of | 16 | candle power requiring a total current of | 21 | Amperes |
| B | 12 | lights each of | 16 | candle power requiring a total current of | 6  | Amperes |
| B | 42 | lights each of | 16 | candle power requiring a total current of | 21 | Amperes |
| C | 12 | lights each of | 16 | candle power requiring a total current of | 6  | Amperes |
| C | 36 | lights each of | 16 | candle power requiring a total current of | 18 | Amperes |
| D | 12 | lights each of | 16 | candle power requiring a total current of | 6  | Amperes |
| E | 20 | lights each of | 16 | candle power requiring a total current of | 10 | Amperes |

3 Mast head light with 2 lamps each of 16 candle power requiring a total current of 3 Amperes

2 Side light with 2 lamps each of 16 candle power requiring a total current of 2 Amperes

6 Cargo lights of 36 candle power, whether incandescent or arc lights Incandescent.

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

Where are the switches controlling the masthead and side lights placed Switchboard in Pilot House.

## DESCRIPTION OF CABLES.

Main cable carrying 30.9 Amperes, comprised of 6/18 wires, each #0 S.W.G. diameter, .0824 square inches total sectional area

Branch cables carrying 50 Amperes, comprised of 19/15 wires, each #2 S.W.G. diameter, .0521 square inches total sectional area

Branch cables carrying 50 Amperes, comprised of 19/15 wires, each #2 S.W.G. diameter, .0521 square inches total sectional area

Leads to lamps carrying 5 Amperes, comprised of 1 wires, each #14 S.W.G. diameter, .0032 square inches total sectional area

Cargo light cables carrying 3 Amperes, comprised of 7/22 wires, each #14 S.W.G. diameter, .0032 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conduit installation throughout, except in Quarter's where wire is run in moulding.

Joints in cables, how made, insulated, and protected Good mechanical joint, soldered, taped and painted with insulating compound.

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 Completely encased in conduits.



ss. "Mullmaid"

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 Conduits

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

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

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

How are cables carried through beams in conduit through bulkheads, &c. in conduit

How are cables carried through decks in conduit

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 ✓

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 sw'd.

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 none

How are the lamps specially protected in places liable to the accumulation of vapour or gas Vapor Proof Lamps (special design)

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.

S. A. Hornor

Electrical Engineer

Date 5<sup>th</sup> April 1917

COMPASSES.

Distance between dynamo or electric motors and standard compass Approx - 200'

Distance between dynamo or electric motors and steering compass Approx - 175'

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes  | feet from standard compass | feet from steering compass |
|------------------|----------|----------------------------|----------------------------|
| <u>5</u>         | <u>3</u> | <u>✓</u>                   | <u>✓</u>                   |
| <u>✓</u>         | <u>✓</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.

H. A. Magnum

Builder's Signature.

Date 5<sup>th</sup> April 1917

GENERAL REMARKS.

This installation has been well fitted, and proved satisfactory on trial

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

J. W. D. 16.5.17  
Elec. light

A. T. Thomas.

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

New York APR 26 1917

Committee's Minute



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