

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5222

Port of PHILADELPHIA Date of First Survey 6<sup>th</sup> NOV. 25 Date of Last Survey 15<sup>th</sup> APR. 1926 No. of Visits 13.  
 No. in on the Steel TWIN SCREW "GULFCREST" Port belonging to PORT ARTHUR, TEXAS.  
 Reg. Book Built at CAMDEN, N. J. By whom AMER. BROWN BOVERI ELEC. CORP. When built 1926.  
 Owners GULF REFINING CO. Owners' Address  
 Yard No. 304 Electric Light Installation fitted by AMER. BROWN BOVERI ELEC. CORP. When fitted 1926.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

TWO 72 K.W.-230 VOLT DIESEL DRIVEN GENERATOR SETS (INGERSOLL RAND CO.) ONE AUX. 25 K.W.-230 VOLT GENERATOR DIRECT CONNECTED TO VERTICAL MARINE ENG. (G.E. CO.) TWO 10 K.W.-115 VOLTS MOTOR GENERATOR SETS. DIRECT CONNECTED (G.E. CO.)  
 Capacity of Dynamo 2-72 K.W. 313 A.M.P. 230 Volts, whether continuous or alternating current CONTINUOUS.  
 Where ARE 2-70 " 87 Amperes at 230  
 Dynamos fixed ENGINE ROOM Whether single or double wire system is used DOUBLE  
 Position of Main Switch Board ENGINE ROOM having switches to groups 40 SWITCHES of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each A. UPPER DEK. FR. B. OUTSIDE PUMP ROOM (8)  
B. UPPER DEK. FR. 21 OUTSIDE PUMP ROOM (16.) C. ENG. ROOM BHD. 39 STB. (12) D. RUNNING LIGHTS.  
E. SEARCHLIGHT.

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 NONE.

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

Total number of lights provided for 265 arranged in the following groups:-

A	7	lights each of 7-40 WATT	candle power requiring a total current of	1.2	Amperes
B	15	lights each of 15-40 "	candle power requiring a total current of	2.6	Amperes
C	61	lights each of 35-40 " 23/00 W	candle power requiring a total current of	16.6	Amperes
D	5	lights each of 32 C.P.	candle power requiring a total current of	5.4	Amperes
E	SEARCHLIGHT	lights each of	candle power requiring a total current of	35	Amperes
	1	Most head light with 2 lamps each of 32	candle power requiring a total current of	1.1	Amperes
	2	Side light with 2 lamps each of 32	candle power requiring a total current of	2.2	Amperes
	13	Cargo lights of 4-300 WATTS 49-16 C.P.	candle power, whether incandescent or arc lights	INCANDESCENT	

If arc lights, what protection is provided against fire, sparks, &c. NONE.

Where are the switches controlling the masthead and side lights placed TELLTALE PANEL IN PILOT HOUSE.

## DESCRIPTION OF CABLES.

Main cable carrying	313	Amperes, comprised of	37/10	wires, each	.102	B&S.	.300	square inches total sectional area
Branch cables carrying	35	Amperes, comprised of	7/17	wires, each	.072	B&S.	.0774	square inches total sectional area
Branch cables carrying	6.5	Amperes, comprised of	7/22	wires, each	.025	B&S.	.0035	square inches total sectional area
Leads to lamps carrying	.5	Amperes, comprised of	7/22	wires, each	.025	B&S.	.0035	square inches total sectional area
Cargo light cables carrying	1.3	Amperes, comprised of	7/22	wires, each	.025	B&S.	.0035	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

LEAD AND ARMoured CABLE THROUGHOUT ENGINE ROOM AND DECK SPACES. ARMoured CABLE IN LIVING QUARTERS.

Joints in cables, how made, insulated, and protected GOOD MECHANICAL JOINTS, SOLDERED, TAPER 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 LEAD & ARMoured CABLE & ARMoured CABLE.



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 ARMoured CABLE

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

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

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

How are cables carried through beams LEAD BUSHINGS through bulkheads, &c. STUFFING TUBES

How are cables carried through decks IN CONDUIT

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 IN CONDUITS

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 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 YES

Are any switches, fuses, or joints of cables fitted in the pump room or companion NO

How are the lamps specially protected in places liable to the accumulation of vapour or gas VAPOUR-PROOF LAMPS

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.

L. D. Naudain

Electrical Engineers

Date 20 April 1926

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 5 Amperes 3 feet from standard compass 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 degrees on course in the case of the

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

American Brown Boveri Electric Corp. M. E. Spaulding Builder's Signature. Date 20th April 1926

GENERAL REMARKS. THE INSTALLATION HAS BEEN FITTED ON BOARD IN A SATISFACTORY MANNER. IT WAS TRIED WITH ALL LIGHTS ON AND FOUND EFFICIENT.

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

FEE. \$ 175.00

pd 24/5/26 RRM

19/5/26

E. F. R.

M. Buchanan

Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK MAY 5 1926

Electric Light



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