

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2363

Port of Shanghai Date of First Survey 3-10-1925 Date of Last Survey 8th May 1926 No. of Visits 6
 No. in on the Iron or Steel Twin Screw S.S. "HAI KWANG" Port belonging to Shanghai
 Reg. Book: Built at Shanghai By whom How Eng & S.B. Mts. When built 1926
 Owners Anglo-Siam Petroleum Co. Owners' Address
 Yard No. 568 Electric Light Installation fitted by How Eng & S.B. Mts. When fitted 1926

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Combined Kromhult Oil engine & Vertical Steam engine.

Capacity of Dynamo 55 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed On side Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board " " " " having switches to groups A B C D E of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each None. Two boards fitted. Saloon & Engine Room
Whellhouse, Alleyway aft & engine 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 No 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 3 Times 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 100 arranged in the following groups:—

A	12	lights each of	16	candle power requiring a total current of	2.2	Amperes
B	24	lights each of	16	candle power requiring a total current of	4.4	Amperes
C	18	lights each of	16	candle power requiring a total current of	3.3	Amperes
D	35	lights each of	16	candle power requiring a total current of	6.4	Amperes
E	20	lights each of	50	candle power requiring a total current of	10	Amperes
1	Mast head light with 1 lamps each of	16	candle power requiring a total current of	2	Amperes	
2	Side light with 1 lamps each of	16	candle power requiring a total current of	4	Amperes	
2	Cargo lights of	16	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 In wheel house

DESCRIPTION OF CABLES.

Main cable carrying 36 Amperes, comprised of 19 wires, each .052 S.W.G. diameter, .0400 square inches total sectional area
 Branch cables carrying 10-2 Amperes, comprised of 7 wires, each .036 S.W.G. diameter, .0070 square inches total sectional area
 Branch cables carrying - Amperes, comprised of - wires, each - S.W.G. diameter, - square inches total sectional area
 Leads to lamps carrying 1.6 Amperes, comprised of 1 wires, each .044 S.W.G. diameter, .0015 square inches total sectional area
 Cargo light cables carrying 1.2 Amperes, comprised of 28 wires, each .012 S.W.G. diameter, - square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Joints in cables, how made, insulated, and protected None. Looping out & junctions kept

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 Lead covered cables in conduits

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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 In pipes

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

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

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

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

How are cables carried through decks Deck Ladders

Are any cables run through coal bunkers — 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 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 Gas tight Bulbs

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.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass 10'-0"

Distance between dynamo or electric motors and steering compass 7'-0"

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
2-4	6	4	

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.

SHIPBUILDING WORKS, LTD.

Builder's Signature. Date 26 May 1926

GENERAL REMARKS.

This Electric installation has been fitted on board in accordance with the Rules, the material and workmanship are good and was found satisfactory under working conditions.

Fee £ 120.00

It is submitted that the vessel is eligible for

RECORD. Elec. Light

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

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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.