

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12599

Port of Rottterdam Date of First Survey 20 Oct Date of Last Survey 15 Nov No. of Visits 4
 No. in Reg. Book on the Iron or Steel s.s. Field Marshal Port belonging to Lima
 Built at Hamburg By whom Beckerting Schiffebau When built 1903
 Owners Chungwa Navigation Co Owners' Address 27 Marktplatz
 Yard No. Electric Light Installation fitted by When fitted 1903

DESCRIPTION OF DYNAMO, ENGINE, ETC.

3 Dynamo's compound wound, protected, direct coupled to cylinder steam engine, 100 lbs.

Capacity of Dynamo's 250 Amperes at 100 Volts, whether continuous or alternating current continuous

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

Position of Main Switch Board near dynamo's having switches to groups 14 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Forecastle 2, Passages 1st Class 4, Passages 2nd class 4, Pump 2, Provisions 1, Engineer room 1.

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 100 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, porcelain

Total number of lights provided for 733 arranged in the following groups:—

A	Forecastle	93	lights each of	32	candle power requiring a total current of	29	Amperes
B	1 st class	265	lights each of	32 e.p., 65 fans	candle power requiring a total current of	140	Amperes
C	2 nd class	101	lights each of	32 " 34 "	candle power requiring a total current of	85	Amperes
D	Pump	03	lights each of	32	candle power requiring a total current of	26	Amperes
E	Eng. room	96	lights each of	32	candle power requiring a total current of	30	Amperes
	2 nd Mast head light with	1	lamps each of	32	candle power requiring a total current of	2	Amperes
	2 nd Side light with	1	lamps each of	32	candle power requiring a total current of	2	Amperes
	22	Cargo lights of	6 x 32	candle power, whether incandescent or arc lights	incandescent		

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

Where are the switches controlling the masthead and side lights placed in Chartroom

DESCRIPTION OF CABLES.

Main cable carrying	250	Amperes, comprised of	37	wires, each	11	S.W.G. diameter, .34072	square inches total sectional area
Branch cables carrying	72	Amperes, comprised of	19	wires, each	16	S.W.G. diameter, .06112	square inches total sectional area
Branch cables carrying	42	Amperes, comprised of	7	wires, each	14	S.W.G. diameter, .03510	square inches total sectional area
Leads to lamps carrying	1	Amperes, comprised of	1	wires, each	7	S.W.G. diameter, .00240	square inches total sectional area
Cargo light cables carrying	2	Amperes, comprised of	33	wires, each	30	S.W.G. diameter, .00399	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised rubber insulated in wooden casing.

" " " " iron tubes.

Armoured lead covered cable.

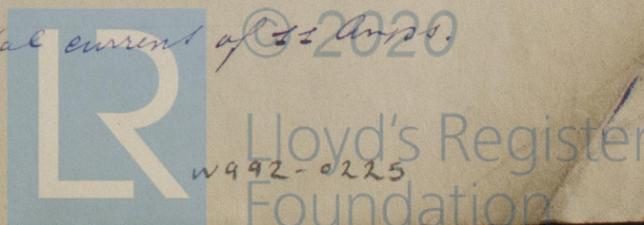
Joints in cables, how made, insulated, and protected

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 Main cables and wires in cabins vulc. rubber insulated in wooden casing. In Engineer room armoured lead covered cables.

Provisions 35 lights each of 32 e.p. requiring a total current of 22 Amperes.



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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 iron tubes. ✓
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat same ✓
 What special protection has been provided for the cables near boiler casings same ✓
 What special protection has been provided for the cables in engine room same ✓
 How are cables carried through beams with fibre protections through bulkheads, &c. same ✓
 How are cables carried through decks watertight fitted iron tubes ✓
 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 wooden casing ✓
 Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage yes ✓
 If so, how are the lamp fittings and cable terminals specially protected bull eyes with heavy guards
 Where are the main switches and fuses for these lights fitted on distribution boards
 If in the spaces, how are they specially protected No
 Are any switches or fuses fitted in bunkers No
 Cargo light cables, whether portable or permanently fixed portable How fixed watertight plugs
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel 1/4" bolt.
 How are the returns from the lamps connected to the hull by 1/2" copper r.h. screws.
 Are all the joints with the hull in accessible positions yes
 Is the installation supplied with a voltmeter yes, and with an amperemeter yes, 3 ✓, fixed Main Sv. board

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 ? 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.

[Signature] Electrical Engineers Date 31 October 22.

COMPASSES.

Distance between dynamo or electric motors and standard compass 82 ft
 Distance between dynamo or electric motors and steering compass 76 ft
 The nearest cables to the compasses are as follows:—
 A cable carrying 0.2 Amperes 7 feet from standard compass 5 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 every course in the case of the standard compass and nil degrees on every course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

This installation has been tested under full working conditions and found in order.

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

[Signature] Elec. Light. [Signature] 20/11/22
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. NOV. 21 1922

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2 in. 11. 20. - Transfer.



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