

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 27590

Port of Glasgow Date of First Survey 24th Feb Date of Last Survey 1st April No. of Visits 6
 No. in Reg. Book on the Iron or Steel S.S. "Pangan" Port belonging to Bangkok
 Built at Glasgow By whom Barclay Curle & Co Ltd When built 1909
 Owners East Asiatic S.S. Co Ltd Owners' Address _____
 Yard No. 476 Electric Light Installation fitted by J H Holmes & Co N/le When fitted 1909

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 7 1/2 x 7" Open type engine to work at 100 lbs pressure per sq" & with stand 200 lbs coupled to one 13 1/2" W. Type Dynamo, compound wound, 350 Revs.
 Capacity of Dynamo 110 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Starting Platform Whether single or double wire system is used Double. N.S.
 Position of Main Switch Board near Dynamo 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 2-way B.P. fusebox in steering gear recess: 1-9 way & 1-14 way
Switch & fuse boxes in engine room: 1-3 way, 2-way and 1-9 way, Amidships: 1-3 way fusebox
aft: 1-3 way fusebox forward
 If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes
 Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 25 per cent over the normal current
 Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used yes
yes 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 cut-outs constructed of incombustible materials and fitted on incombustible bases yes
 Total number of lights provided for 152 arranged in the following groups:—

A	engine room	40	lights each of	16	candle power requiring a total current of	22.4	Amperes
B	Cargos	32	lights each of	16	candle power requiring a total current of	17.9	Amperes
C	Ship	80	lights each of	16	candle power requiring a total current of	44.24	Amperes
D	Projector		lights each of		candle power requiring a total current of	60	Amperes
E	Arc lamps		lights each of		candle power requiring a total current of	30	Amperes
	2 Mast head lights with	1	lamps each of	32	candle power requiring a total current of	2.24	Amperes
	2 Side lights with	1	lamps each of	32	candle power requiring a total current of	2.24	Amperes
	4 Cargo lights of	8 x 16 cp	2 Arcs:		candle power, whether incandescent or arc lights	Both	

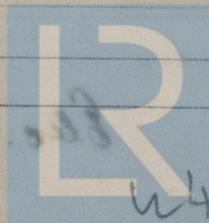
 If arc lights, what protection is provided against fire, sparks, &c. Special lanterns.
 Where are the switches controlling the masthead and side lights placed Chart room

DESCRIPTION OF CABLES.

Main cable carrying	110	Amperes, comprised of	37	wires, each	16	L.S.G. diameter,	.1176	square inches total sectional area
Branch cables carrying	17.9	Amperes, comprised of	7	wires, each	17	L.S.G. diameter,	.070	square inches total sectional area
Branch cables carrying	44.24	Amperes, comprised of	19	wires, each	17	L.S.G. diameter,	.0460	square inches total sectional area
Leads to lamps carrying	50	Amperes, comprised of	1	wires, each	18	L.S.G. diameter,	.0018	square inches total sectional area
Cargo light cables carrying	4.48	Amperes, comprised of	7	wires, each	2 1/2	L.S.G. diameter,	.0050	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper, Pure Para rubber, Vulcan rubber, taped & Braided
L.C. in cables & Armoured in machinery spaces
 Joints in cables, how made, insulated, and protected none
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux none 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 none
 How are the cables led through the ship, and how protected In Iron pipes



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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 Armoured

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

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 Fibre Bushes through bulkheads, &c. W. I. Glands

How are cables carried through decks Deck Tubes

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Iron Pipes

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 cut outs for these lights fitted —

If in the spaces, how are they specially protected —

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Portable How fixed W. I. Socket

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 —

The installation is — supplied with a voltmeter and also an amperemeter, fixed on Main Sw. Bd

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas —

Are any switches, cut outs, 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 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

J. W. Holmes & Co. Electrical Engineers Date Mar 18. 09

COMPASSES.

Distance between dynamo or electric motors and standard compass 72 ft

Distance between dynamo or electric motors and steering compass 64 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>7.8</u>	Amperes	<u>10 ft</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	<u>.56</u>	Amperes	<u>8 ft</u>	feet from standard compass	<u>14</u>	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 —

The maximum deviation due to electric currents, etc., was found to be — degrees on — course in the case of the standard compass and FOR BARCLAY, CURRIE & CO., LTD. degrees on — course in the case of the steering compass.

D. Morrison Builder's Signature. Date 19th March 1909

GENERAL REMARKS.

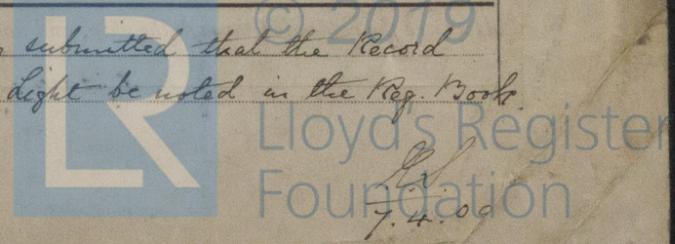
The installation has been well fitted and ran satisfactorily on trial

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

Committee's Minute GLASGOW 6 APR. 1909

Elec. light J. W. Holmes

It is submitted that the Record
Shc. light be noted in the Reg. Book.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13—2nd Ed.