

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41573

Port of Glasgow. Date of First Survey 16.11.21 Date of Last Survey 25.11.21 No. of Visits 4
 No. in on the Iron or Steel S.S. FAUSANG Port belonging to London
 Reg. Book 15614 Built at Port Glasgow By whom Messrs. Barclay & Crichton When built 1921
 Owners Indo. China S. Nav. Co. Owners' Address
 Yard No. 345 Electric Light Installation fitted by Messrs. Claude Hamilton & Co. When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

— TOTAL KW = 25 —

1- $4\frac{1}{2} \times 5$ " enclosed steam engine direct coupled to compound wound ship lighting dynamo running at 550 R.P.M.
 1- ~~2~~ 2- Cyl. 14 H.P. vertical oil engine direct coupled to compound dynamo running at 1000 R.P.M.
 Capacity of Dynamo 150 100 steam oil Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Both in engine room Whether single or double wire system is used double
 Position of Main Switch Board engine room having switches to groups 8 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary ~~switch~~ ^{FUSE} 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

Total number of lights provided for 232 arranged in the following groups:—

A	After 14	lights each of	16	candle power requiring a total current of	4	Amperes
B	holds 29	lights each of	16	candle power requiring a total current of	14.5	Amperes
C	navigation 5.32	lights each of	32	candle power requiring a total current of	23	Amperes
D	Saloon 40	lights each of	16	candle power requiring a total current of	5	Amperes
E	Saloon 43	lights each of	16	candle power requiring a total current of	6.6	Amperes
	Engine Rm 28	lights each of	16	candle power requiring a total current of	20	Amperes
	Tw. Accom. 15	lights each of	16	candle power requiring a total current of	22	Amperes
2	Mast head light with 1 lamps each of	32	candle power requiring a total current of	14	Amperes	
2	Side light with 1 lamps each of	"	candle power requiring a total current of	7.5	Amperes	
6	Cargo lights of 4 and 4-16	2 .. 300 WATT. H.W.	candle power, whether incandescent or arc lights	2	Amperes	

If arc lights, what protection is provided against fire, sparks, &c. no arcs

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 37 wires, each .042 S.W.G. diameter, .150 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 22 Amperes, comprised of 7 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 3 wires, each .036 S.W.G. diameter, .0030 square inches total sectional area
 Cargo light cables carrying 2 Amperes, comprised of 3 wires, each .036 S.W.G. diameter, .0030 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

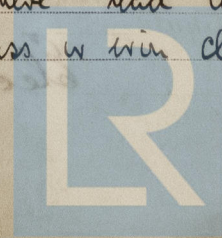
Cables of copper and insulated with fine and vulcanizing india rubber taped and lead covered then sheathed and armoured

Joints in cables, how made, insulated, and protected no joints

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 covered in cabins elsewhere lead covered and armoured from bulkheads and under decks by means of brass wire clip.



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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 *Lead cover*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead cover.*

What special protection has been provided for the cables near boiler casings *Lead cover & armoured with galv. steel wire*

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

How are cables carried through beams *Lead bushes.* through bulkheads, &c. *h.t. glands*

How are cables carried through decks *Deck 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 *Lead covered and armoured with galv. steel wires*

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 *double wire*

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 *Engine Room*

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 *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.

For *CLAUDE HARRISON & CO., LIMITED*

Electrical Engineers Date *29th Nov. 21.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *80*

Distance between dynamo or electric motors and steering compass *83*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>23</i>	<i>56</i>	<i>58</i>	
<i>11</i>	<i>10</i>	<i>12</i>	
<i>2</i>	<i>5</i>	<i>5</i>	

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

Geo. G. Parker.

Builder's Signature. Date *5th December 1921.*

GENERAL REMARKS.

Director

This installation has been fitted on board under special survey. Tested under full working conditions & found satisfactory

FEE: £20-0-0 a/c 6/12/21. RECORD. Elec. Light. J.B. Rankin.

Committee's Minute

-6 DEC 1921

Elec. Light.



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