

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 11106

Port of *Southampton* Date of First Survey *16.11.21.* Date of Last Survey *8.12.21.* No. of Visits
 No. in Reg. Book on the Iron or Steel *S.S. LEASOWE* Port belonging to
 Built at *Woolston Southampton* By whom *Messrs. J. Thornycroft & Co. Ltd* When built *1921*
 Owners *The Wallasey Corporation* Owners' Address *Wallasey.*
 Yard No. *1005* Electric Light Installation fitted by *Messrs. J. Thornycroft & Co. Ltd* When fitted *1921*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Generating machinery consists of 2 sets each comprising a compound wound continuous current dynamo direct coupled to a vertical open type engine. The Engine & Dynamo being mounted on a combined bedplate.

Capacity of Dynamo { No 1 *174.5* No 2 *120* 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 *Double wire*

Position of Main Switch Board *In Engine Room* having switches to groups *A, B, C & D* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each and *Switches to control "Sirocco" Fan circuits*

A change over switch is fitted on Main Switchboard to prevent both dynamos supplying current to the board at the same time.

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 *50* 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 *No*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for *75* arranged in the following groups:—

A Machinery	46 lights each of	16	candle power requiring a total current of	27.6	Amperes
B Cabin	{ 4 Small Fans 9 lights each of	16	candle power requiring a total current of	7.8	Amperes
C Navigation	12 lights each of	1 = 32 11 = 16	candle power requiring a total current of	7.8	Amperes
D Gangway	8 lights each of	200 *	candle power requiring a total current of	8.0	Amperes
E) Fans	2	12 1/2" dia Sirocco	candle power requiring a total current of	24.0	Amperes
F)	1 lights each of	1 1/2" dia do	candle power requiring a total current of	28.0	Amperes
	1 Must head light with 1 lamps each of	16	candle power requiring a total current of	6	Amperes
	2 Side light with 1 lamps each of	32 16	candle power requiring a total current of	1.8	Amperes
	✓ Cargo lights of	✓	candle power, whether incandescent or arc lights	✓	

If arc lights, what protection is provided against fire, sparks, &c. *No Arc Lights fitted.*

Where are the switches controlling the masthead and side lights placed *In Wheel house or Bridge*

DESCRIPTION OF CABLES.

Main cable carrying	<i>103</i> 85 Amperes, comprised of	19 wires, each	.083 S.W.G. diameter,	.1 square inches total sectional area
Branch cables carrying	27.6 Amperes, comprised of	7 wires, each	.044 S.W.G. diameter,	.01 square inches total sectional area
Branch cables carrying	8 Amperes, comprised of	3 wires, each	.036 S.W.G. diameter,	.003 square inches total sectional area
Leads to lamps carrying	.6 Amperes, comprised of	3 wires, each	.029 S.W.G. diameter,	.002 square inches total sectional area
Cargo light cables carrying	✓ Amperes, comprised of	✓ wires, each	✓ S.W.G. diameter,	✓ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables to be insulated with 1 layer of pure & 2 layers of vulcanised India Rubber, taped and lead covered on circuits B, C & D. Cables to circuits A, E & F, also feeds to Box B, to be as above, armoured with a single layer of galvanised iron wire and braided overall.

Joints in cables, how made, insulated, and protected *No joints allowed or made.*

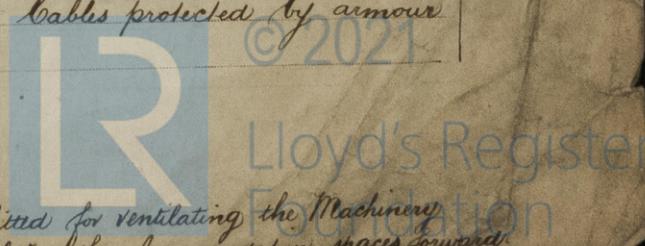
Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *Yes* Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage *Yes*

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 *Clipped to Ships structure cables protected by armour and lead casing and as required by lead piping (See overleaf)*

* Output of Dynamos. No 1: *7 1/4 KW* }
 No 2: *12 KW* }

* 200 cp 1/2 Watt lamps fitted in these positions
 Fans. 1 - 1 1/2" dia Exhaust & 2 - 12 1/2" dia Supply type "Sirocco" centrifugal fans fitted for ventilating the Machinery spaces. 2 - 12" dia supply & 2 - 12" dia exhaust type Propeller fans fitted to ventilate the Accommodation spaces forward.



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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 covered cables used

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat None. Cables kept clear

What special protection has been provided for the cables near boiler casings Cables run in iron piping where necessary

What special protection has been provided for the cables in engine room Cables armoured. Slating fitted over lead cased wires where required

How are cables carried through beams Through lead bushes ✓ through bulkheads, &c. Through W.I. glands or lead bushes ✓

How are cables carried through decks Through watertight deck tubes ✓

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 No

Cargo light cables, whether portable or permanently fixed ✓ 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 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 ✓

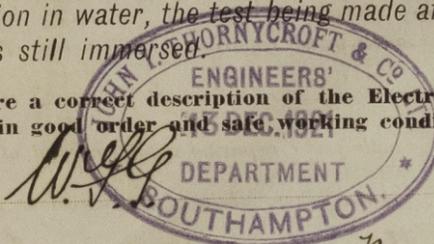
Are any switches, fuses, or joints of cables fitted in the pump room or companion ✓

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 2500 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.



W. J. Thornycroft Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass No Standard compass fitted

Distance between dynamo or electric motors and steering compass Minimum 40'-0" Maximum 60'-0"

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	✓	feet from standard compass	feet from steering compass
8	Amperes	✓	6 1/2	feet from steering compass
6	Amperes	✓	On each	feet from steering compass
1.2	Amperes	✓	4	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 _____ degrees on _____ course in the case of the steering compass.

William Frederick Gibson Builder's Signature. Date



GENERAL REMARKS.

This installation of electric light has been well fitted. The materials and workmanship are good. It has been tried under full working conditions found efficient.

19 3/4 K.W. this vessel is eligible for FEE. £20. ✓ THE RECORD. Elec. Light. 24 J. G. Mackillop Surveyor to Lloyd's Register of Shipping. 28/12/21

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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