

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7869

Port of NEWCASTLE-ON-TYNE Date of First Survey 12/12/21 Date of Last Survey 12/1/22 No. of Visits 5
 No. in on the Steel 83. "22 Galle" Port belonging to London
 Reg. Book 37199 Built at Newcastle on Tyne By whom Armstrong Whitehead & Co Ltd When built 1922
 Owners Lobster Offshore Ltd Owners' Address _____
 Yard No. 97a Electric Light Installation fitted by Armstrong Whitehead & Co Ltd When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 in the open type compound wound multipolar 12 kW Dynamos each coupled to a single cylinder vertical steam engine
 Capacity of Dynamo 120 each Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where Dynamo fixed on dynamo flat aft side of Engine Room Whether single or double wire system is used double
 Position of Main Switch Board 150 having switches to-groups all & 5-way one set of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 10 way 50 in dynamo flat, 10 way 100 outside engine room, 5 way 200 switchboard on aft pump bridge deck, 4 way 8 & 8 way 50 in 50 ft pump bridge deck, 6 way 50 in fore passage bridge deck, 8 way 50 in Pump Room forward, 10 way 50 in wheel house, 6 way 50 in aft pump transverse & 5 way 500 forward pump room entrance
 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 Castings furnished
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 801 + 24 fuses arranged in the following groups:—

A Eng & boiler rooms	45 lights	37-200, 2-2000, 8-16	candle power requiring a total current of	16.2	Amperes
B Aft acc. 11 fuses	35 lights	34-200, 3-16cp, 1-32	candle power requiring a total current of	16.4	Amperes
C Fore acc. 14 fuses	77 lights	57-200, 8-16cp, 9-32	candle power requiring a total current of	37.2	Amperes
D Wheelhouse			" " " "	25.0	"
E Navigation 2 fuses	22 lights	2-200, 6-16cp, 8-16cp, 5-32	candle power requiring a total current of	14.8	Amperes
F Workshop fuses			" " " "	10.0	"
G Pump Rooms	19 lights	9-200, 2-16cp, 8-32	candle power requiring a total current of	12.6	Amperes
2 Mast head light, with	1 lamp each of	32	candle power requiring a total current of	2.4	Amperes
2 Side light, with	1 lamp each of	32	candle power requiring a total current of	2.4	Amperes
2 Cargo lights of	8 in to	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 wheel house.

DESCRIPTION OF CABLES.

For remaining branch cables see attached list

Main cable carrying	120 Amperes, comprised of	37 wires, each	.064 mm diameter,	.12	square inches total sectional area
Branch cables carrying	509 Amperes, comprised of	37 wires, each	.083 mm diameter,	.2	square inches total sectional area
Branch cables carrying	404 Amperes, comprised of	7 wires, each	.083 mm diameter,	.0145	square inches total sectional area
Leads to lamps carrying	2.6 Amperes, comprised of	3 wires, each	.029 mm diameter,	.002	square inches total sectional area
Cargo light cables carrying	96 Amperes, comprised of	3 wires, each	.036 mm diameter,	.003	square inches total sectional area

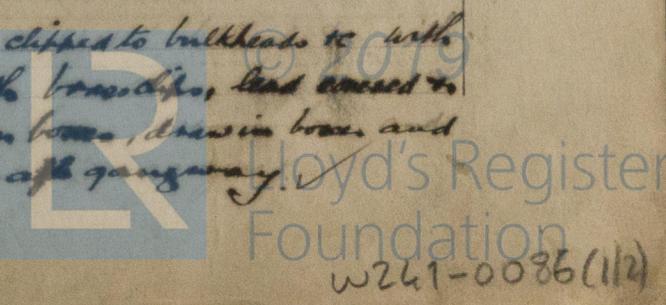
DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables in engine rooms were lead covered & removed. Cables running along fore & aft gangway lead covered & taped & run in galvanised iron piping. Cables in accommodation spaces lead covered. Cables exposed in any way to damage were in galvanised iron piping.
 Joints in cables, how made, insulated, and protected above made.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances _____ 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, and how protected Lead covered & removed cables clipped to bulkheads & with galvanised iron clips, lead covered cable clipped to bulkheads & with brass clips, lead covered & taped cable run in galvanised iron piping with expansion boxes, drawn in boxes and one expansion gland. The piping being clipped to the fore & aft gangway.



S.S. "EL GRILLO".

DESCRIPTION OF CABLES (CONTINUED FROM REPORT SHEET)

				branch cable carrying 16.2 amps. comprised of 7 wires each ".052 dia. total sec. area .0145". ✓
"	"	"	10.0	" comprised of 3 wires each ".036 dia. total sec. area .003 ". ✓
"	"	"	14.1	" comprised of 7 wires each ".036 dia. total sec. area .007 ". ✓
"	"	"	25.0	" comprised of 7 wires each ".064 dia. total sec. area .0225". ✓
"	"	"	37.2	" comprised of 19 wires each ".052 dia. total sec. area .04 ". ✓
"	"	"	11.8	" comprised of 7 wires each ".064 dia. total sec. area .0225 ". ✓
"	"	"	.8	" comprised of 7 wires each ".029 dia. total sec. area .0045". ✓
"	"	"	12.2	" comprised of 7 wires each ".036 dia. total sec. area .007". ✓
"	"	"	7.8	" comprised of 7 wires each ".036 dia. total sec. area .007 ". ✓
"	"	"	7.6	" comprised of 7 wires each ".052 dia. total sec. area .0145". ✓



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W 240-0086 (2/2)

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 run in galvanised iron piping or lead covered or armoured cable ✓

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat lead covered cable ✓

What special protection has been provided for the cables near boiler casings lead-covered or armoured cable ✓

What special protection has been provided for the cables in engine room bits ✓

How are cables carried through beams by lead lashed holes ✓ through bulkheads, &c. by watertight glands ✓

How are cables carried through decks by water tight 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 lead covered run in galv. w.t. pipes in bunkers; lead covered or armoured in cargo spaces ✓

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 from Connection box How fixed Cables to Connⁿ box secured to bulkhead

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 near starboard

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 fittings

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. (C.M. of Grade of Cable used)

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.

A. W. Co. Electrical Engineers Date 28/1/22

COMPASSES.

Distance between dynamo or electric motors and standard compass 255 feet

Distance between dynamo or electric motors and steering compass 250 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6</u>	Amperes	<u>8</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>6</u>	Amperes	<u>1</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>6</u>	Amperes	<u>8</u>	feet from standard compass	<u>2</u>	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 all course in the case of the standard compass and nil degrees on all course in the case of the steering compass

Builder's Signature. Date Jany. 30th 1922

GENERAL REMARKS. The above installation is in accordance with the Society Rules.

The vessel is eligible in my opinion for notation des light, which

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

The light
Feb 19-10.0 applied for 30/1/22.

H. 3/2/22

W. T. Badger.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

