

warded?

bottom end bolts

and bridge

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 27209

Lesto
SUNDERLAND. Date of First Survey *28 Mar* Date of Last Survey *4 Apr 18* No. of Visits *2*
the Iron or Steel *Lesto* Port belonging to *Newcastle*
built at *Cumans, SUNDERLAND.* By whom *J. Brown & Sons Ltd* When built *1918*
Pelton S.S. Co. Ltd Owners' Address *Newcastle*
62 Electric Light Installation fitted by *Campbell & Islerwood Ltd.* When fitted *April 1918.*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Well - Islerwood. 4 pole round Dynamo driven coupled to a
4 Engine
Dynamo *91.* Amperes at *110.* Volts, whether continuous or alternating current *Continuous*
Dynamo fixed *Starboard side Engineer room* Whether single or double wire system is used *Double*
Main Switch Board *Stores Bulk Head* having switches to groups *4* of lights, &c., as below
auxiliary switch boards and numbers of switches on each *Engine room 6. Chart House 8 and a*
let in a convenient position for each light

forwarded herewith *are* fitted on main switch board to the cables of main circuit *Yes* and on each auxiliary switch board to the cables of auxiliary
is *Yes* and at each position where a cable is branched or reduced in size *Yes* and to each lamp circuit *Yes*
5-2-18 Rods *are* wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits *Yes*
2-18 Propeller *uses* of non-oxidizable metal *Yes* and constructed to fuse at an excess of *75%* per cent over the normal current
down bolts *27* *uses* fitted in easily accessible positions *Yes.* Are the fuses of standard dimensions *Yes* If wire fuses are used
28-3-18 Permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit *Yes*
Starboard Fuses and fuses constructed of incombustible materials and fitted on incombustible bases *Yes.*

on Mark on Do. *3* number of lights provided for *92 of 16. 4 of 32* arranged in the following groups :-
Marks on Do. *30* lights each of *32 of 16. 4 of 32* candle power requiring a total current of *22* Amperes
Engine room lights each of *39 of 16* candle power requiring a total current of *21.45* Amperes
Engine room lights each of *21 of 16* candle power requiring a total current of *11.25* Amperes
Engine room lights each of *16 of 16* candle power requiring a total current of *16.0* Amperes
Engine room lights each of *16 of 16* candle power requiring a total current of *16.0* Amperes
1 Mast head light with *1* lamps each of *32* candle power requiring a total current of *included in 2* Amperes
2 Side light with *1* lamps each of *32* candle power requiring a total current of *" "* Amperes
4 Cargo lights of *6 of 16* candle power, whether incandescent or arc lights *Incandescent*
lights, what protection is provided against fire, sparks, &c. *-*

are the switches controlling the masthead and side lights placed *in Chart House*

DESCRIPTION OF CABLES.

cable carrying *40.3* Amperes, comprised of *37* wires, each *16* S.W.G. diameter, *.117* square inches total sectional area
each cables carrying *22* Amperes, comprised of *7* wires, each *18* S.W.G. diameter, *.012* square inches total sectional area
each cables carrying *15* Amperes, comprised of *7* wires, each *20* S.W.G. diameter, *.007* square inches total sectional area
lights to lamps carrying *1.65* Amperes, comprised of *1* wires, each *18* S.W.G. diameter, *.0018* square inches total sectional area
go light cables carrying *3.3* Amperes, comprised of *70* wires, each *36* S.W.G. diameter, *.0031* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Accommodation U.D.R. Lead covered Engineer room Armoured & Braided
holds and exposed positions U.D.R. in Screwed Steel Tubing

oints in cables, how made, insulated, and protected *Not 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 all joints in accessible*

Are there any joints in or branches from the cable leading from dynamo to main switch board *Are all joints in accessible*

Shipping

How are the cables led through the ship, and how protected *Accommodation U.D.R. Lead covered*
Engine room Armoured & Braided holds & exposed positions U.D.R. in
Screwed Steel Tubing

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. Screwed Steel Tubing

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered, Armoured, Braided

What special protection has been provided for the cables near boiler casings Lead covered, Armoured, Braided

What special protection has been provided for the cables in engine room Armoured & Braided

How are cables carried through beams Fibre & Irons except when armoured through bulkheads, & W.P. lands

How are cables carried through decks Deck Pipes & Langed to Deck

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

If so, how are they protected Screwed Steel Tubing

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 Special W. T. Bat.

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 Main 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 1000 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.

CAMPBELL & ISHERWOOD Ltd.
Per Thos. Macdonald

Electrical Engineers

Date 14th June 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass about 100 ft.

Distance between dynamo or electric motors and steering compass " 100 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
0.55	1	1	
1.65	3	3	
10	9	9	

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.

At Crown

Builder's Signature.

Date July 5th 1918

GENERAL REMARKS.

The installation has been satisfactorily fitted in the vessel, tested at full load and found good.

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

AWD
9/7/18

Sh. Davis

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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