

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25290

Port of SUNDERLAND. Date of First Survey 14 May Date of Last Survey 20 May No. of Visits 4
 No. in Reg. Book on the Iron or Steel S.S. "Rondo" Port belonging to Newcastle
 Built at Sunderland By whom S.P. Austin & Son Ltd When built 1912
 Owners Pelton & Co Ltd Owners' Address Newcastle
 Yard No. 263 Electric Light Installation fitted by The Sunderland Forge & Eng. Co. Ltd. When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Multipolar Compound wound Dynamo direct coupled to open type inverted engine both by Sunderland Forge Co.,
 Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Bottom of Engine room Whether single or double wire system is used Double
 Position of Main Switch Board Close to dynamo having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One in Chart room having switches for Foremast, Mainmast, Port and Starboard lights.

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 100% per cent over the normal current
 Are all cut outs fitted in easily accessible positions Yes Are the fuses of standard dimensions No 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 cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 92 arranged in the following groups:—

A	56	lights each of	16	candle power requiring a total current of	28	Amperes
B	24	lights each of	16	candle power requiring a total current of	12	Amperes
C	12	lights each of	16	candle power requiring a total current of	6	Amperes
D	Wireless	lights each of	none run	candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
	2	Mast head light with	1 lamps each of 32 c.p.D.F.	candle power requiring a total current of	2	Amperes
	2	Side light with	1 lamps each of 32 c.p.D.F.	candle power requiring a total current of	2	Amperes
	4	Cargo lights of	6 x 16	candle power, whether incandescent or arc lights	incandescent	

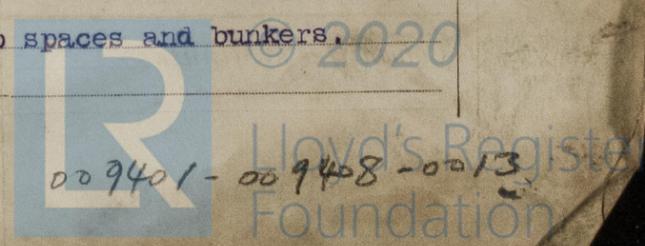
If arc lights, what protection is provided against fire, sparks, &c. None fitted
 Where are the switches controlling the masthead and side lights placed In Chart house.

DESCRIPTION OF CABLES.

Main cable carrying	46	Amperes, comprised of	19	wires, each	14	L.S.G. diameter, .0956	square inches total sectional area
Branch cables carrying	28	Amperes, comprised of	7	wires, each	15	L.S.G. diameter, .0285	square inches total sectional area
Branch cables carrying	12	Amperes, comprised of	7	wires, each	17	L.S.G. diameter, .0172	square inches total sectional area
Leads to lamps carrying	1.5	Amperes, comprised of	1	wires, each	18	L.S.G. diameter, .00181	square inches total sectional area
Cargo light cables carrying	3	Amperes, comprised of	1	wires, each	16	L.S.G. diameter, 3.22	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

In Berths etc., Pure rubber vulcanised rubber lead covered.
 Engine room etc., Armoured and braided.
 Main Cables, V.I.R. in iron pipes.
 Joints in cables, how made, insulated, and protected There are none.
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux Yes Are all joints in accessible positions, none being made in bunks, 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 V.I.R. in iron pipe in cargo spaces and bunks.



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 V.I.R. in iron pipe.

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

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 holes bushed with fibre through bulkheads, &c. Water tight glands

How are cables carried through decks 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 in 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

Cargo light cables, whether portable or permanently fixed Portables 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

The installation is Yes supplied with a voltmeter and Yes an amperemeter, fixed on Switchboard.

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 99% 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.

P. Pao THE SUNDERLAND FORGE & ENGINEERING CO., L^{td}.

[Signature] **Director,** Electrical Engineers Date 24/5/12.

COMPASSES.

Distance between dynamo or electric motors and standard compass 60 ft.

Distance between dynamo or electric motors and steering compass do.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.5</u>	Amperes	<u>about 4</u>	feet from standard compass	<u>about 8</u>	feet from steering compass
A cable carrying	<u>.5</u>	Amperes	<u>" 6</u>	feet from standard compass	<u>" 6</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 yes

The maximum deviation due to electric currents, etc., was found to be 0° degrees on each course in the case of the standard compass and 0° degrees on each course in the case of the steering compass.

FOR S. P. AUSTIN & SON LIMITED.

[Signature]

Builder's Signature. Date

[Signature]

GENERAL REMARKS.

The installation has been fitted under special survey, tested under full working conditions and found satisfactory

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

[Signature] Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.