

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8055

Port of Dublin Date of First Survey 23rd May Date of Last Survey 28th May No. of Visits 2
 No. in Reg. Book on the Iron or Steel S. J. Hill & Co. Ltd belonging to London
 Built at Londonderry By whom North of Ireland S. Co. when built 1918
 Owners The Shipping Controller Owners' Address London
 Yard No. 69 Electric Light Installation fitted by Sunderland Forge Co. Ltd when fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One - Combined Generating Set consisting of open type single cylinder steam engine, direct coupled to compound wound multipolar dynamo on combined bedplate.

Capacity of Dynamo 150 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

Position of Main Switch Board In Engine room having switches to groups 10 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each
1 in Wheelhouse - 9 switches for Navigation and Signal Lights.
1 in Engine room 10 " " Engine and Boiler room "

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-oxidisable 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 280 @ 16 c/p arranged in the following groups :-

A.	37	lights each of	16	candle power requiring a total current of	7.4	Amperes
B.	12	"	32 c/p plus 1 @ 1000 Watts	"	23.2	"
B.C.	Wireless	lights each of		candle power requiring a total current of	10.0	Amperes
D.	36 @ 16 c/p & 10 @ 32 c/p	lights each of		"	19.2	"
E.	44	"	16	"	8.8	Amperes
F.	35	"	16	"	7.0	"
D.G.	11	lights each of	32 c/p plus 1 @ 1000 W.	"	23.2	Amperes
H.	14	"	16	"	2.8	"
J.	18	lights each of	16	"	3.6	Amperes
K.	30	"	16	"	6.0	"
	2 Mast head light with	1 lamps each of	32	candle power requiring a total current of	2.4	Amperes
	2 Side light with	1 lamps each of	32	candle power requiring a total current of	2.4	Amperes
	5 Cargo lights of	each 5 @ 32		candle power, whether incandescent or arc lights	Incandescent	

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

Where are the switches controlling the masthead and side lights placed In Wheelhouse on Bridge.

DESCRIPTION OF CABLES.

Main cable carrying	150	Amperes, comprised of	37	wires, each	15	S.W.G. diameter, 0.150	square inches total sectional area
Branch cables carrying	23.2	Amperes, comprised of	7	wires, each	18	S.W.G. diameter, 0.01246	square inches total sectional area
Branch cables carrying	10.0	Amperes, comprised of	7	wires, each	18	S.W.G. diameter, 0.01246	square inches total sectional area
Leads to lamps carrying	2.4	Amperes, comprised of	7	wires, each	25	S.W.G. diameter, 0.002162	square inches total sectional area
Cargo light cables carrying	10	Amperes, comprised of	114	wires, each	38	S.W.G. diameter, 0.00319	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

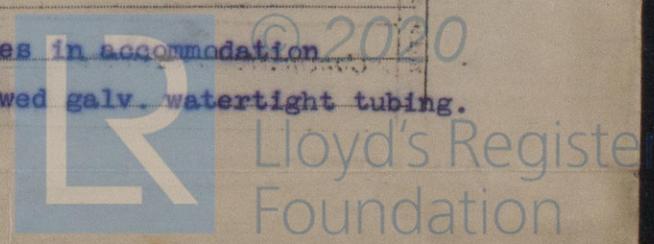
Tinned copper conductors insulated with pure and vulcanising indiarubber taped and the whole vulcanised together and finished as follows (Mains in pipe - braided & compounded overall.
 (In Accommodation - lead-covered & braided overall.
 (In Engine room - lead-covered armoured and braided overall.)

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 --- 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 and braided cables in accommodation secured with brass saddles. Mains through cargo space run in screwed galv. watertight tubing.



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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 & braided.

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 -ditto-

What special protection has been provided for the cables in engine room -ditto-

How are cables carried through beams Through holes bushed w/fibre through bulkheads, &c. through brass w.t.glands

How are cables carried through decks " deck tubes made watertight.

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 run in screwed galvd. iron pipe made watertight.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage yes

If so, how are the lamp fittings and cable terminals specially protected by glass well jar and strong brass guard.

Where are the main switches and fuses for these lights fitted in Engine room.

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 to heavy brass terminals in cast iron boxes on deck.

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 in 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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.

Electrical Engineers

Date 29th. Novr. 1918.

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 feet

Distance between dynamo or electric motors and steering compass 96 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>8.8.</u>	Amperes	<u>6</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>0.2</u>	Amperes	<u>3</u>	feet from standard compass	<u>3</u>	feet from steering compass
A cable carrying	<u>-</u>	Amperes	<u>-</u>	feet from standard compass	<u>-</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.

THE NORTH OF IRELAND SHIPBUILDING Co. Ltd

Builder's Signature.

Date 4th Dec. 1918

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules, and is of good description.

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

W.D. 16/11/18

R. L. Beven
Surveyor to Lloyd's Register of Shipping.

150,110—Transfer.

Committee's Minute



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