

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 49459

Port of Newcastle on Tyne Date of First Survey Sept 5 05 Date of Last Survey Oct 2 05 No. of Visits 6
 No. in Reg. Book 117 Sup. on the Iron or Steel 15' Lestrus Port belonging to Cork
 Built at Low Walker By whom Swan Hunter & Wigham Richardson Ltd. When built 1905
 Owners The Cork S.S. Co. Ltd. Owners' Address Cork
 Yard No. 1170 Electric Light Installation fitted by Messrs. J. H. Holmes & Co. When fitted 1905

DESCRIPTION OF DYNAMO, ENGINE, ETC.

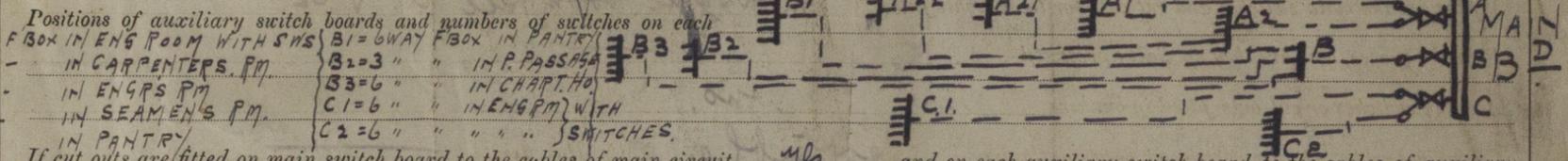
One $6\frac{1}{2} \times 6$ " open type engine with auto shaft for 50 to 60 lbs per sq. in. by "Foster" coupled to a "Holmes" No. 12/A compound wound dynamo.

Capacity of Dynamo 60 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starboard side of eng room

Position of Main Switch Board near dynamo having switches to groups A, B, C of lights, &c., as below

A1 = 6 WAY
A2 = - D0
A21 = 2 - D0
A22 = - D0
B = 3 - D0



Positions of auxiliary switch boards and numbers of switches on each

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 no

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 50 per cent over the normal current

Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used

yes 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 96 arranged in the following groups :-

Group	Description	Number of Lights	Wattage per Light	Total Wattage	Total Current (Amperes)
A	Engines & Eng. Rm	28	16	448	17.0
B	Midships	29	16	464	17.6
C	Cargo & Deck	39	16	624	23.5
D					
E					
	Two Mast head lights with 1 lamp each	2	32	64	2.4
	Two Side lights with 1 lamp each	2	"	"	2.4
	Four Cargo lights of 2 of 6x16 c.p. & 2 of 5x16 c.p.	4	"	"	"

If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed Chart House

DESCRIPTION OF CABLES.

Main cable carrying	60 Amperes, comprised of	19 wires, each	16 L.S.G. diameter,	.0604 square inches total sectional area
Branch cables carrying	7.8 Amperes, comprised of	19 wires, each	17 L.S.G. diameter,	.0460 square inches total sectional area
Branch cables carrying	17.6 Amperes, comprised of	19 wires, each	17 L.S.G. diameter,	.0460 square inches total sectional area
Leads to lamps carrying	6 Amperes, comprised of	1 wire, each	No. 18 L.S.G. diameter,	.0018 square inches total sectional area
Cargo light cables carrying	3.6 Amperes, comprised of	108 wires, each	38 L.S.G. diameter,	.005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are insulated with pure rubber taped & further protected either by lead sheathing or with galvanized iron wire sheathing & taped over all.

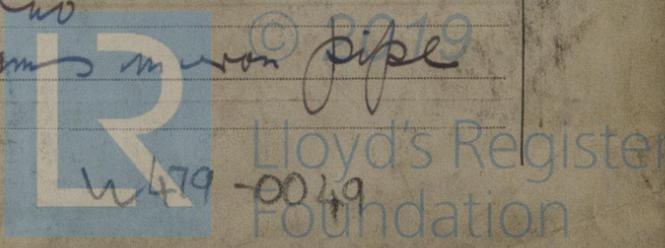
Joints in cables, how made, insulated, and protected spliced soldered and insulated with approved rubber protective tapes etc.

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

no made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage no

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 along of under beams on iron pipe



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible ye

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture as mounted on
described

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat no

What special protection has been provided for the cables near boiler casings no

What special protection has been provided for the cables in engine room no

How are cables carried through beams insulating bushes through bulkheads, &c. stuffing boxes

How are cables carried through decks tubes of lead or iron with flanges &c

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

If so, how are they protected in iron pipe

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage C.I. fittings with lamp C.I. covers

If so, how are the lamp fittings and cable terminals specially protected over glass

Where are the main switches and cut outs for these lights fitted in engine room see C.I. & C.E.

If in the spaces, how are they specially protected no

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed no

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel no

How are the returns from the lamps connected to the hull no

Are all the joints with the hull in accessible positions no

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 no

Are any switches, cut outs, 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 no

The installation is no supplied with a voltmeter and not an amperemeter, fixed on main board

The copper used is guaranteed to have a conductivity of 98 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.

J.H. Holmes & Co Electrical Engineers Date 24/10/05

COMPASSES.

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

Distance between dynamo or electric motors and steering compass " 94 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>17.6</u> Amperes	<u>24</u>	feet from standard compass	<u>16</u>	feet from steering compass
A cable carrying	<u>4.2</u> Amperes	<u>12</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>3.2</u> Amperes	<u>24</u>	feet from standard compass	<u>18</u>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power no

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

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

Builder's Signature. Date 23 Oct 1905

GENERAL REMARKS.

The installation has been examined & found to be efficient

John H Heck

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

Committee's Minute

This installation appears to be fitted in accordance with the Rules.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 12.