LLOYD'S NEW YORK July 26, 1920

TUE. AUG. 17 1920

Rpt. 13. Received at London Office ____ 19

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 64

Port of Duluth. Minn. Date of First Survey May. 26th Date of Last Survey July. 17 No. of Visits 14

No. in Reg. Book — on the ~~Iron~~ or Steel Screw Steamer "Julius Kessler" Port belonging to St John. N.B.

Built at Duluth. Minn. U.S.A. By whom W. Dougall Duluth. Shipbuilding Co When built 1920.

Owners Sugar Products. Co. Owners' Address

Yard No. 37. Electric Light Installation fitted by W. Dougall Duluth. Shipbuilding Co When fitted 1920.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Generating set. rated at. 10 K.W. directly connected to General Electric engine 6½" × 5" × 476 Revs.

Capacity of Dynamo 87 Amperes at 115 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starb'd side of engine room. Whether single or double wire system is used double

Position of Main Switch Board " " " " " having switches to groups ____ of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in Galley. 6 switches. + One in Crews quarters aft. 4 switches.

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 10 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 no.

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes.

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

A	Captains + Officers Qrs.	46	lights each of	25.	~~candle-power~~ Watts requiring a total current of	10.4	Amperes
B	Crews Qrs. Aft.	16	lights each of	40	~~candle-power~~ requiring a total current of	5.6	Amperes
C	Engine room	25	lights each of	60	~~candle-power~~ requiring a total current of	13.0	Amperes
D	" tunnel	12	lights each of	40	~~candle-power~~ requiring a total current of	4.1	Amperes
E	Boiler room	12	lights each of	60	~~candle-power~~ requiring a total current of	6.2	Amperes
	One. Mast head light with	2	lamps each of	60	~~candle-power~~ requiring a total current of	1.	Amperes
	2 Side light with	4	lamps each of	50	~~candle-power~~ requiring a total current of	2	Amperes
	16 Cargo lights of			50	~~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 Pilot House.

DESCRIPTION OF CABLES.

Main cable carrying	87	Amperes, comprised of	2	wires, each	2	B.W.G. ~~diameter~~, 66373	Circular mils square inches total sectional area
Branch cables carrying	10.4	Amperes, comprised of	2	wires, each	10	S.W.G. diameter, 10381	square inches total sectional area
Branch cables carrying	5.5	Amperes, comprised of	2	wires, each	12	S.W.G. diameter, 6530	square inches total sectional area
Leads to lamps carrying	5	Amperes, comprised of	2	wires, each	14	S.W.G. diameter, 4107	square inches total sectional area
Cargo light cables carrying	4	Amperes, comprised of	2	wires, each	14	S.W.G. diameter, 4107.	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber covered, double braided, led through galvanized iron conduit, In cabins, wood moulding. All cables & specifications and tests of the National Board of Fire underwriters.

Joints in cables, how made, insulated, and protected Soldered. rubbered and friction taped. In iron boxes where iron conduit is used.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances Yes. 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 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 Galvanized iron conduit

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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 Galvanized iron conduit

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

What special protection has been provided for the cables near boiler casings "

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

How are cables carried through beams Iron conduit *through bulkheads, &c.* Iron conduit. W.T. fittings

How are cables carried through decks Iron conduit. W.T. fittings

Are any cables run through coal bunkers None. *or cargo spaces* Yes. *or spaces which may be used for carrying cargo, stores, or baggage* Yes.

If so, how are they protected In water tight conduit screwed to deck beams.

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* ✓

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* On Switchboard.

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.

McDougall-Duluth Shipbuilding Co.

D Farwell
ASST. GEN. MGR.

Electrical Engineers *Date*

COMPASSES.

Distance between dynamo or electric motors and standard compass About 50 feet

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

The nearest cables to the compasses are as follows:—

A cable carrying *Amperes* *feet from standard compass* *feet from steering compass*

A cable carrying *Amperes* *feet from standard compass* *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 No.

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

McDougall-Duluth Shipbuilding Co.,

D Farwell
ASST. GEN. MGR.

Byilder's Signature. *Date*

GENERAL REMARKS. The above Installation has been fitted in a satisfactory manner and proved efficient under test. Side and mast head lights tested.

Elec Lt.
Hull
24/8/20

Geo. Tully.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec Lt

New York AUG - 5 1920

THE SURVEYOR IS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im.11,18—Dunsfer.