

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 73614

Port of NEWCASTLE-ON-TYNE Date of First Survey 21/9/20 Date of Last Survey 29/9/20 No. of Visits 3

No. in Reg. Book 62938 on the ~~Iron~~ Steel Kinnwood Port belonging to Middlesboro'
Built at Middlesboro' By whom R. Craggo & Sons Ltd When built 1905
Owners Joseph Constantine Owners' Address _____
Yard No. _____ Electric Light Installation fitted by J. Bonham & Co When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo four pole compound wound multipolar coupled direct to a single cylinder open type engine. makers of engine & dynamo Sunderland Forge.

Capacity of Dynamo 35 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed engine room starboard side Whether single or double wire system is used double.

Position of Main Switch Board 5° on the workshop bulkhead having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 5 way + 2 way dist box in painting, 5 way dist box @ top of engine room, 5 way + 2 way dist box for engine room by switchboards, 5 way dist box in chart room 2 way dist box forward.

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 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 75 arranged in the following groups:—

A	Engine room	41 lights each of 17-20 watt + 24-16 candle power requiring a total current of	16.86	Amperes
B	Accommodation	34 lights each of 20 watt candle power requiring a total current of	6.8	Amperes
C	Wireless	lights each of _____ candle power requiring a total current of	5.0	Amperes
D		lights each of _____ candle power requiring a total current of		Amperes
E		lights each of _____ candle power requiring a total current of		Amperes
1	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
4-6 light	Cargo lights <u>cluster lights</u> of	16 candle power, whether incandescent or arc lights <u>incandescent.</u>		

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed in chart house.

DESCRIPTION OF CABLES.

Main cable carrying 35 Amperes, comprised of 19 wires, each 18 S.W.G. diameter, .0338 square inches total sectional area

Branch cables carrying 16.86 Amperes, comprised of 7 wires, each .036 S.W.G. diameter, .007 square inches total sectional area

Branch cables carrying 6.8 Amperes, comprised of 7 wires, each .029 S.W.G. diameter, .004 square inches total sectional area

Leads to lamps carrying .2 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 3.36 Amperes, comprised of 3 wires, each 22 S.W.G. diameter, .0018 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

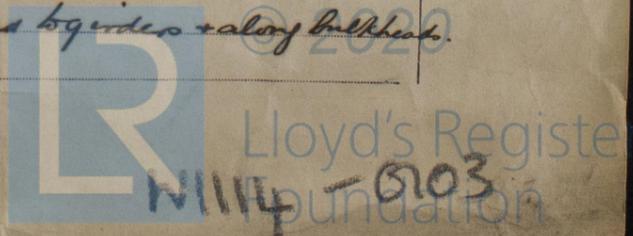
Cables in engine room, stokehold & tunnel are lead covered armoured & braided. Mains are V.I.R. in galvanised iron piping. Cabins, saloon & forward lead covered.

Joints in cables, how made, insulated, and protected none 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 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 in galvanised iron pipe clipped by guides & along bulkheads.



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 cable in galvanised iron pipe.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat lead covered & smould

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 flushed holes through bulkheads, &c. watertight glands

How are cables carried through decks iron deck pipes

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 V.I.R cable in galvanised iron pipe

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 —

Cargo light cables, whether portable or permanently fixed permanently to watertight deck low fixed clipped to bulkhead.

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 —

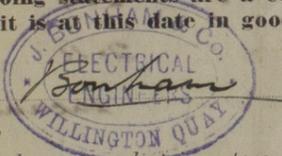
How are the lamps specially protected in places liable to the accumulation of vapour or gas —

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 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.

F. E.



Electrical Engineers

Date

2 OCT 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass —

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 —

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.

Builder's Signature. Date

GENERAL REMARKS.

The above installation is in accordance with the Society's Rules. It has been tested & found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. E Lee Lt.

Roll
13/10/20

W.T. Badger.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

