

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 73614

Port of NEWCASTLE-ON-TYNEDate of First Survey 28/9/20Date of Last Survey 29/9/20 No. of Visits 3No. in on the Iron Steel KinnwoodPort belonging to Middlesboro'Reg. Book 62938Built at Middlesboro'By whom R. Craggo & Sons LtdWhen built 1905Owners Joseph Constantine

Owners' Address

Yard No.

Electric Light Installation fitted by J. Bonham & CoWhen 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 continuousWhere is Dynamo fixed engine room starboard side Whether single or double wire system is used doublePosition of Main Switch Board 50 on the workshop bulkhead having switches to groups 3 of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each 5 way + 2 way motor in painting, 5 way disbr in top of engine room, 5 way + 2 way disbr for engine room by switchboard, 5 way disbr in chart room 2 way disbr 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 yesIf 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 yesAre the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 100 per cent over the normal currentAre 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 yesAre all switches and fuses constructed of incombustible materials and fitted on incombustible bases yesTotal 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 AmperesB Accommodation 34 lights each of 20 watt candle power requiring a total current of 6.8 AmperesC Wireless lights each of candle power requiring a total current of 5.0 AmperesD lights each of candle power requiring a total current of AmperesE lights each of candle power requiring a total current of Amperes1 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.4 Amperes2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.4 Amperes4-6 light Cargo cluster lights of 16 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 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 areaBranch cables carrying 16.86 Amperes, comprised of 7 wires, each .036 S.W.G. diameter, .007 square inches total sectional areaBranch cables carrying 6.8 Amperes, comprised of 7 wires, each .029 S.W.G. diameter, .004 square inches total sectional areaLeads to lamps carrying .2 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional areaCargo 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 hams are V.I.R. in galvanised iron piping. Cabins, saloon & forward lead covered

Joints in cables, how made, insulated, and protected none madeAre 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 noHow 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 & armoured

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 bushed 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 bulkheads 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 —

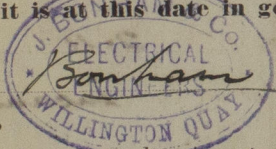
How are the lamps specially protected in places liable to the accumulation of vapour or gas —

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	Ampere	feet from standard compass	feet from steering compass
A cable carrying	Ampere	feet from standard compass	feet from steering compass
A cable carrying	Ampere	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 Societys Rules. It has been tested & found satisfactory.

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

Elec Lt.

Rel
13/10/20

W.T. Badger.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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