

REPORT ON ELECTRIC ~~INSTALLATION~~ INSTALLATION. No. 4527.

Port of Newcastle on Tyne Date of First Survey 24/5/21 Date of Last Survey 11/7/21 No. of Visits 10
 No. in on the Iron or Steel British Colon. Port belonging to London
 Reg. Book Supp. Built at Sunderland By whom Sir J. Laing & Sons Ltd When built 1920
 Owners British Tankers Ltd Owners' Address _____
 Yard No. 626 Electric Light Installation fitted by Sunderland Forge & Eng Co Ltd When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo makes Metropolitan Vickers 2 h.p. generator 3 phase 50 periods. 220 volts.
20 KVA 1000 R.P.M. coupled through gearing to Lea imphase type turbines running @ 7500 R.P.M.
 Capacity of Dynamo 315 Amperes at 220 Volts, whether continuous or alternating current 3 phase alternating
 There is Dynamo fixed Engine Room port or starboard side Whether single or double wire system is used 3 wire
 Position of Main Switch Board after end on dynamo flat having switches to groups 16 of 100 amps, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each _____

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 _____

Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 200 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 _____ arranged in the following groups:—

	lights each of	candle power requiring a total current of	Amperes
A			
B			
C			
D			
E			
Mast head light with	lamps each of	candle power requiring a total current of	Amperes
Side light with	lamps each of	candle power requiring a total current of	Amperes
Cargo lights of		candle power, whether incandescent or arc lights	

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

Where are the switches controlling the masthead and side lights placed _____

DESCRIPTION OF CABLES.

Main cable carrying 315 Amperes, comprised of 37 wires, each .093 S.W.G. diameter, .25 square inches total sectional area
 Branch cables carrying 190 Amperes, comprised of 37 wires, each .064 S.W.G. diameter, .13 square inches total sectional area
 Branch cables carrying 125 Amperes, comprised of 19 wires, each .064 S.W.G. diameter, .06 square inches total sectional area
 Leads to lamps carrying _____ Amperes, comprised of _____ wires, each _____ S.W.G. diameter, _____ square inches total sectional area
 Cargo light cables carrying _____ Amperes, comprised of _____ wires, each _____ S.W.G. diameter, _____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Ropes insulated, lead-joints, armoured sheathed cables run in steel channel fitted with bitumen.

Points in cables, how made, insulated, and protected _____

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 _____

How are the cables led through the ship, and how protected _____



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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 cables are laid in steel troughing (channel bars) filled with bitumen

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

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 deck tubes watertight

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected

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

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 no 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 switch board

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 yes

Are any switches, fuses, 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 special gaslight fittings

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 2500 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. FOR THE SONDERLAND FORGE & ENGINEERING CO. LTD.

Electrical Engineers

Date 18 July 1921

COMPASSES.

SECRETARY.

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 Societys Rules

The vessel is eligible in my opinion for notation elec light & wireless

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute