

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 73772

Port of Newcastle on Tyne Date of First Survey 8/6/20 Date of Last Survey 14/9/20 No. of Visits 6
Built at Newcastle on Tyne By whom Messrs Palmer & Co Ltd When built 1920
Owners' Address 34 Leadenhall St London E.C.3
Electric Light Installation fitted by Messrs Palmer & Co Ltd When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Vertical double acting enclosed type engines coupled direct to two multipoles
Compound wound dynamos
Dynamo 200 Amperes at 100 Volts, whether continuous or alternating current continuous
Whether single or double wire system is used single
Main Switch Board to having switches to groups 22 of lights, &c., as attached
of auxiliary fuse boards See attached sheet.

yes fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary
yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes
wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits
fuses of non-oxidizable metal yes and constructed to fuse at an excess of 300 fuses each of 10 amp.
fuses fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used
permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit yes
switches and fuses constructed of incombustible materials and fitted on incombustible bases yes
number of lights provided for 383 arranged in the following groups: — as per attached sheet.

lights each of	candle power requiring a total current of	Amperes
lights each of	candle power requiring a total current of	Amperes
lights each of	candle power requiring a total current of	Amperes
lights each of	candle power requiring a total current of	Amperes
lights each of	candle power requiring a total current of	Amperes
Mast head light with <u>1</u> lamp each of <u>32</u>	candle power requiring a total current of <u>2.4</u>	Amperes
Side light with <u>1</u> lamp each of <u>32</u>	candle power requiring a total current of <u>2.4</u>	Amperes
Cargo lights of <u>6-16</u>	candle power, whether incandescent or arc lights <u>incandescent</u>	
<u>Back . . . 1-1000</u>	<u>incandescent</u>	

the switches controlling the masthead and side lights placed In wheel house

SECTION OF CABLES.

carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
ables carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
ables carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
lamps carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
ht cables carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area

SECTION OF INSULATION, PROTECTION, ETC.

cable in midship accommodation VLR in wood casing. All other cables V.L.R. lead
and armoured + leaded

cables, how made, insulated, and protected to joints made
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 any joints in or branches from the cable leading from dynamo to main switch board No
the cables led through the ship, and how protected main cable clipped to wood backing in turn deck spaces
led to bulkheads. Lighting leads clipped to 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 *Lead cover around & braided. Cables to open deck lights run in piping*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead cover around & braided*

What special protection has been provided for the cables near boiler casings *Lead cover around & braided*

What special protection has been provided for the cables in engine room *Lead cover around & braided*

How are cables carried through beams *through fibre bushed holes* through bulkheads, &c. *U.S. glands & fibre bushed holes*

How are cables carried through decks *through packed deck tubes*

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

If so, how are they protected *Lead cover around & braided*

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

If so, how are the lamp fittings and cable terminals specially protected *enclosed cad iron bunker fittings with cad iron covers*

Where are the main switches and fuses for these lights fitted *in Accommodation*

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 from connection boxes* How fixed *Cables clipped to bulkhead*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Cable sockets secured by 1/2" studs & nuts*

How are the returns from the lamps connected to the hull *each wire sweated & clamped to earthing terminal, measured by current*

Are all the joints with the hull in accessible positions *yes*

Is the installation supplied with a voltmeter *yes*, and with an amperemeter *yes*, fixed *main 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 *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.

Palmer Shipbuilding & Iron Co Ltd Electrical Engineers

Date *15 Oct 1920*

COMPASSES.

Distance between dynamo or electric motors and standard compass *80 feet*

Distance between dynamo or electric motors and steering compass *70 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>2</i>	Amperes	<i>on</i>	feet from standard compass	<i>10</i>	feet from steering compass
A cable carrying	<i>2</i>	Amperes	<i>10</i>	feet from standard compass	<i>on</i>	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.

Wm. S. Simpson Builder's Signature.

Date *28 Oct 1920*

GENERAL REMARKS.

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

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

Wm S Simpson
11/10/20

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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