

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 11075

Port of Southampton Date of First Survey 19th Oct. Date of Last Survey 3rd Nov. No. of Visits 3

No. in Reg. Book on the Steel M.V. PHILO Port belonging to London

Built at Goport By whom Camper & Nicholsons Ltd When built 1921

Owners British Oil Bunkering Co. Ltd Owners' Address James Scott Ltd. When fitted 1921

Yard No. Electric Light Installation fitted by 2 1/2 kW dynamo coupled to a 5 1/2 HP Paraffin Engine fitted 11.34.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Totally enclosed self lubricating 4" x 3" Steam Engine, direct coupled to one 4 pole open protected, Compound Wound Dynamo

Capacity of Dynamo 30 Amperes at 100 Volts, whether continuous or alternating current Direct

Where is Dynamo fixed Starboard side of Engine room Whether single or double wire system is used double

Position of Main Switch Board Engine room having switches to groups A.B.C. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine room 3. Navigation 4. Accommodation 3.

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 cessel 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 Tin & Lead and constructed to fuse at an excess of 75% 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 porcelain & Valconite

Total number of lights provided for 27. arranged in the following groups :-

A	<u>6</u>	lights each of	<u>32.</u>	candle power requiring a total current of	<u>6.6.</u>	Amperes
B	<u>Navigation 4</u>	lights each of	<u>32.</u>	candle power requiring a total current of	<u>4.4.</u>	Amperes
C	<u>17</u>	lights each of	<u>20.</u>	candle power requiring a total current of	<u>8.5</u>	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
	<u>1</u>	Mast head light with <u>1</u> lamps each of	<u>32.</u>	candle power requiring a total current of	<u>1.1</u>	Amperes
	<u>2</u>	Side light with <u>1</u> lamps each of	<u>32.</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
	<u>2</u>	Cluster Cargo lights of	<u>120</u>	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 Alley way under Bridge

DESCRIPTION OF CABLES.

Main cable carrying	<u>19.5</u> Amperes, comprised of	<u>7</u> wires, each	<u>18</u> S.W.G. diameter,	<u>.0100</u> square inches total sectional area
Branch cables carrying	<u>6.6</u> Amperes, comprised of	<u>3</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.0030</u> square inches total sectional area
Branch cables carrying	<u>4.4</u> Amperes, comprised of	<u>3</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.0030</u> square inches total sectional area
Leads to lamps carrying	<u>3.6</u> Amperes, comprised of	<u>3</u> wires, each	<u>22</u> S.W.G. diameter,	<u>.0020</u> square inches total sectional area
Cargo light cables carrying	<u>4</u> Amperes, comprised of	<u>70</u> wires, each	<u>36</u> S.W.G. diameter,	<u>.003</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Valconised India Rubber insulated Cable of 600 Muggon drawn in Solid heavy gauge screwed Conduit with suitable Water light drain in brass & securely clipped to bulkheads.

Joints in cables, how made, insulated, and protected None
all circuits looped

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances None 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 None

How are the cables led through the ship, and how protected Solid heavy gauge screwed 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 *In Conduit with Water tight joints*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *In Conduit*

What special protection has been provided for the cables near boiler casings *No Cable near boiler casing*

What special protection has been provided for the cables in engine room *Secured Conduit*

How are cables carried through beams *In Conduit* through bulkheads, &c. *In Conduit*

How are cables carried through decks *Secured Conduit*

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 *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 *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 *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 *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 *In Well Glass airtight 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 *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.

James Scott Ltd. Electrical Engineers Date *Nov 10th 1921*

COMPASSES.

Distance between dynamo or electric motors and standard compass *20 ft*

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying <i>4-4</i> Amperes <i>10</i> 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.

For CAMPER & NICHOLSONS, LIMITED.

C. G. Nicholson Builder's Signature. Date *Nov 15th 1921*

GENERAL REMARKS.

The Electrical Installation has been fitted in accordance with the rule requirements, it has been tried under working conditions and found satisfactory.

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

Elec. Light. *22/11/21* *A. A. Boyle* Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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£5 paid 12/11/21.