

REPORT ON ELECTRIC LIGHTING INSTALLATION

No. 10765
F. E. Mab. 10763.

Port of MIDDLESBRO' Date of First Survey Whole Date of Last Survey Building No. of Visits 1
 No. in on the Iron or Steel S.S. ROBILANTE War Project Port belonging to Latina
 Reg. Book Built at Haverton Hill-on - Tees By whom Messrs The Furners S. B. Co Ltd When built 1920
 Owners Societa di Navigazione Owners' Address _____
 Card No. 14 Electric Light Installation fitted by Messrs Furners S. B. Co Ltd When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four pole compound wound dynamo by Messrs The Electric Construction Co; coupled direct to single cylinder, enclosed forced lubrication engine.

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

Where is Dynamo fixed Starting platform, Engine Room Whether single or double wire system is used double

Position of Main Switch Board Engine Room near dynamo having switches to groups A, B, C, D, E, F of lights, &c., as below

Positions of auxiliary fuses boards and numbers of fuses on each A. Chart House 16 fuses, B Saloon Pastry, 20 fuses, C. Crew Alleyway, 12 fuses, D. Engine Room 16 fuses, E. Engine Room entrance 12 fuses.

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 25 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 145 arranged in the following groups:—

A	Navigation	9 lights each of $5 \frac{1}{2}$ 32 C.P. 4 1/2 16	candle power requiring a total current of	8.4	Amperes
B	Midship	71 lights each of $40 \frac{1}{2}$ 16 C.P. 31 1/2 30 watt.	candle power requiring a total current of	32	Amperes
C	Aft	18 lights each of 16	candle power requiring a total current of	10	Amperes
D	Engine room	39 lights each of 16	candle power requiring a total current of	23.4	Amperes
E	Cargo clusters	lights each of 38	candle power requiring a total current of	22.2	Amperes
F	Wireless			15	"
	2 Mast head light with 1 lamps each of	32	candle power requiring a total current of	Included in A	Amperes
	2 Side light with 1 lamps each of	32	candle power requiring a total current of	80	Amperes
	6 Cargo lights of	96	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	100 Amperes, comprised of	19 wires, each	14 S.W.G. diameter,	.093 square inches total sectional area
Branch cables carrying	32 Amperes, comprised of	7 wires, each	14 S.W.G. diameter,	.034 square inches total sectional area
Branch cables carrying	10 Amperes, comprised of	7 wires, each	16 S.W.G. diameter,	.022 square inches total sectional area
Leads to lamps carrying	2.4 Amperes, comprised of	1 wires, each	18 S.W.G. diameter,	.0018 square inches total sectional area
Cargo light cables carrying	3.6 Amperes, comprised of	7 wires, each	20 S.W.G. diameter,	.007 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure rubber, Vulcanized rubber, taped and lead sheathed in cabins: Braided and armoured at other parts.

Joints in cables, how made, insulated, and protected None, except mechanical in extension boxes.

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 none

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 Armoured cables clipped to under side of deck, deck beams or bulkheads: Lead sheathed cables in cabins

DESCRIPTION OF INSULATION, PROTECTION. *Continued.*

Are they in places always accessible *yes, except holds when full of cargo*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead sheathed and armoured if necessary*

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

What special protection has been provided for the cables near boiler casings *armoured*

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

How are cables carried through beams *holes; bushed where lead sheathed through bulkheads, &c. W.T. glands*

How are cables carried through decks *In iron deck pipes*

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 *armoured and clipped to under side of deck*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coats, 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 *no*

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 *double wire*

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 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

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 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.

P. S. Glover Electrical Engineer Date *9th Aug 1920*
 FURNESS SHIPBUILDING COMPANY, LTD.

COMPASSES.

Distance between dynamo or electric motors and standard compass *150 ft approx.*

Distance between dynamo or electric motors and steering compass *do do*

The nearest cables to the compasses are as follows:—

A cable carrying	0.3	Amperes	inside	feet from standard compass	3	feet from steering compass
A cable carrying	8.4	Amperes	15	feet from standard compass	9	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 *Yes.*

The maximum deviation due to electric currents, etc., was found to be *nil* degrees on *all* courses in the case of the standard compass and *all* degrees on *all* courses in the case of the steering compass.

J. M. Brown Builder's Signature Date *9/8/20*
 FURNESS SHIPBUILDING COMPANY, LTD.

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules; is of good materials and workmanship and on completion was examined under full working conditions and found satisfactory

Wm Morrison
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute *FRI. AUG. 13 1920*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

