

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 11364

Port of *Middlesbrough* Date of First Survey *14.6.22* Date of Last Survey *2.8.22* No. of Visits *7*  
 No. in Reg. Book *77929* on the ~~Iron or Steel~~ *S/S "Allegany"* Port belonging to *Liverpool*  
 Built at *Seaverton Hill-on-Tees* By whom *Furness S/B Co Ltd* When built *1922*  
 Owners *Furness Tishy & Co Ltd* Owners' Address *✓*  
 Yard No. *28* Electric Light Installation fitted by *Furness Shipbuilding Co Ltd* When fitted *1922*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo: - *Open Type Compound Sunderland Forge No 32207 + 30998 - 15 Kw. + 7 1/2 Kw. Respectively*  
 Engine: - *End Type Forced Lubrication do do No 30727 + 30718 do do*  
 Capacity of Dynamo *150 + 75* Amperes at *100* Volts, whether continuous or ~~alternating~~ *continuous*  
 Where is Dynamo fixed *Tank Room Tween Decks Port Side* Whether single or double wire system is used *Double*  
 Position of Main Switch Board *Aft B'head Tank Room* having switches to groups *A. B. C. D + E.* of lights, &c., as below  
 Positions of auxiliary ~~switch~~ <sup>FUSE</sup> boards and numbers of switches on each *"A" Chart Room "B" Engineers Mess "C" Switchboard Room. "D" Engineers Mess. "E" Lower Crew Space Aft*

If fuses are fitted on main switch board to the cables of main circuit *yes* and on each auxiliary ~~switch~~ <sup>FUSE</sup> 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 *50* 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 <sup>POINTS</sup> provided for *238* arranged in the following groups: -  
 A Navigation *2 POINTS for Morse Keys 13 lights each of 8CP/16CP/32CP* candle power requiring a total current of *9.7* Amperes  
 B Midship *6 POINTS for 5 Fans 96 lights each of 16CP/30 Watts* candle power requiring a total current of *41.3* Amperes  
 C Engine Room *2 POINTS for 1-600 C.P. 73 lights each of 16 C.P./400 C.P.* candle power requiring a total current of *58.4* Amperes  
 D Cargo Lights *12 POINTS for 8-600 C.P. lights each of* candle power requiring a total current of *24.0* Amperes  
 E Aft *34 lights each of 8CP/16CP/32CP/30 watts* candle power requiring a total current of *12.6* Amperes  
 1 Mast head light with *1* lamps each of *32* candle power requiring a total current of *1.3* Amperes  
 2 Side light with *1* lamps each of *32* candle power requiring a total current of *2.6* Amperes } *Included in "A"*  
 9 Cargo lights of *600* 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 *Chart House*

## DESCRIPTION OF CABLES.

Main cable carrying *150/75* Amperes, comprised of *37/19* wires, each *1#* S.W.G. diameter, *.188* square inches total sectional area  
 Branch cables carrying *53.4* Amperes, comprised of *19* wires, each *.06#* S.W.G. diameter, *.06* square inches total sectional area  
 Branch cables carrying *12.6* Amperes, comprised of *7* wires, each *.06#* S.W.G. diameter, *.0225* square inches total sectional area  
 Leads to lamps carrying *3* Amperes, comprised of *3* wires, each *.029* S.W.G. diameter, *.002* square inches total sectional area  
 Cargo light cables carrying *3* Amperes, comprised of *110* wires, each *.0076* S.W.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*Lead covered single cables used in all cabins, Saloon etc including navigation circuits. Lead covered, Armoured & braided twin cables used in all exposed positions, including Engine + Boiler Room, Tween Decks, Crew Space Aft + Fore.*  
 Joints in cables, how made, insulated, and protected  
*Porcelain binding roses with cast iron covers where exposed to damage*

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 *yes*

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 *Through galvanized piping along Shelter Deck Piping being protected by Hatch Beaming Bars.*

*1.5 HP. Ash Hoist Motor fitted in Ash Hoist Space Aft Side Shelter Dk. Fed from D.P. Switch + Fuses on Main Switch*

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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 Lead covered Armoured & braided cables used in Alleyways Iron pipes to exposed deck lights

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered Armoured & braided cables used

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 Lead bushes for lead covered cables through bulkheads, &c. with glands below Shelter Deck

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. Tween Decks

If so, how are they protected Lead covered Armoured & braided cables used

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

If so, how are the lamp fittings and cable terminals specially protected Fittings have iron guards & hinged iron covers

Where are the main switches and fuses for these lights fitted Switchboard Room & Saloon Pantry

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 both How fixed Iron pipes on Masts

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 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.

FURNESS SHIPBUILDING CO. LIMITED

*P. S. Glover*

Electrical Engineer

Date 18<sup>th</sup> September 1922

**COMPASSES.**

Distance between dynamo or electric motors and standard compass Approx 100 ft

Distance between dynamo or electric motors and steering compass " 100 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>9</u>	Amperes	<u>10</u>	feet from standard compass	<u>10</u>	feet from steering compass
A cable carrying	<u>3</u>	Amperes	<u>inside</u>	<del>feet from standard compass</del>	<u>6</u>	feet from steering compass
A cable carrying	<u>-</u>	Amperes	<u>-</u>	feet from standard compass	<u>-</u>	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 course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

FURNESS SHIPBUILDING CO. LIMITED  
*Wm Quattrone*

Builder's Signature.

Date 18<sup>th</sup> Sept 1922

**GENERAL REMARKS.**

*Secretary*  
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. It is submitted that this vessel is eligible for THE RECORD Elec. light.

Fee £ 18-15/- applied for 23/8/22  
Received

*Wm Morrison & Wm Cowie*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*Electric Light*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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