

S.S. 346

A	Hold Cargos.	120	lights of 25 cp	requiring current	84 amps.
	$\frac{1}{2}$ Watts.	4	" " 1000 cp	" "	18.1 "
B	Engine Room.	41	" " 25 cp	" "	28.7 "
C	Poap.	24	" " " "	" "	18.9 "
D	Saloon	44	" " " "	}	37.8 "
	Bridge	3	" " 32 "		
			" " 8 "		
E	Marconi		" "	" "	15 "
F	Deck Cargos	30	" " 25 cp	" "	21 "

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Lloyd's Register  
FoundationW1175-0163 $\frac{1}{2}$



## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 40660

Port of Glasgow Date of First Survey 6 Sept 1920 Date of Last Survey 24 Nov 1920 No. of Visits 6  
 No. in Reg. Book 41102 on the Iron or Steel S.S. Calabanga Port belonging to Amsterdam  
 Built at Port Glasgow By whom Wm Hamell & Co When built 1920  
 Owners Stoom Maatschappij Nederland Owners' Address \_\_\_\_\_  
 Yard No. 376 Electric Light Installation fitted by M. A. T. Robertson When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo Compound Wound 131 amperes @ 110V direct coupled to steam turbine  
another 58 amperes at 110V both @ 3000 revs per minute

Capacity of Dynamos 131 + 58 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Eng. Room Starting Platform Whether single or double wire system is used double

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

Positions of auxiliary switch boards and numbers of switches on each No Auxiliary Switchboards Fitted

If fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary <sup>Fuse</sup> 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 80 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 276 arranged in the following groups:—

A \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes

B \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes

C \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ 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

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. No Arc Lamps Fitted

Where are the switches controlling the masthead and side lights placed In Chart Room, Lower Bridge

## DESCRIPTION OF CABLES.

Main cable carrying 131 + 58 Amperes, comprised of 19 wires, each 13 S.W.G. diameter, .125 square inches total sectional area

Branch cables carrying 30 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .0459 square inches total sectional area

Branch cables carrying 28 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, " square inches total sectional area

Leads to lamps carrying 7 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .0024 square inches total sectional area

Cargo light cables carrying 42 Amperes, comprised of 119 wires, each 38 S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber, Vulcanised Rubber Taped &  
Lead covered in accommodation, elsewhere armoured &  
braided

Joints in cables, how made, insulated, and protected No Joints

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No 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 the Tween Decks in Enamelled Steel Conduit



**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 or galvanised iron pipes*

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

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

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

How are cables carried through beams *Fibre or Lead Bushes* through bulkheads, &c. *w/ t. Glands*

How are cables carried through decks *In galv'd 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*

If so, how are they protected *Armoured & Braided or Enamelled Steel Conduit*

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 *No*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *Brass Terminals*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double Wired*

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 2*, and with *2* amperemeters, 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.

*H. T. Robertson & Co.* Electrical Engineers Date *26<sup>th</sup> Nov. 20*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *105 ft.*

Distance between dynamo or electric motors and steering compass *105 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>10</i>	<i>10</i>	<i>8</i>	<i>6</i>
<i>5</i>	<i>10</i>	<i>8</i>	<i>6</i>
<i>2</i>	<i>into</i>	<i>8</i>	<i>2 into</i>

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 *7 1/2* degrees on *every* course in the case of the standard compass and *7 1/2* degrees on *every* course in the case of the steering compass.

*WILLIAM HAMILTON & CO., LIMITED* Builder's Signature. Date *21<sup>st</sup> January 1921*

**GENERAL REMARKS.**

*This installation has been fitted on board under special survey. Tested under full working conditions and found satisfactory.*

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

*27/1/21*

*J. B. Hampson*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW. 25 JAN 1921*

*Elec. Light.*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.