

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29516

Port of Hull Date of First Survey 29th July 16 Date of Last Survey Aug 15th 16 No. of Visits 5
 No. in Reg. Book 1039 on the Iron or Steel Trawler "Transvaal" Port belonging to Grimaby
 Built at Selby By whom Cochrane & Sons L^{td} When built 1916
 Owners Messrs Taylor & Staff Owners' Address Fish Dock Grimsby
 Yard No. 658 Electric Light Installation fitted by The Humber Electric Com. When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Sisson Vertical Enclosed Engine 600 R.P.M. 100 lbs. \square W.P.
Coupled to Compound Wound Dynamo all on one bedplate
 Capacity of Dynamo 50 Amperes at 65 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Starboard bug Room Whether single or double wire system is used Double
 Position of Main Switch Board Engine Room having switches to groups Three of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One three way Forecastle one 4 way
Wheel house one three way Cabin entrance aft.

If fuses are fitted on main switch board to the cables of main circuit No 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

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 = 40 - 16 C.P. arranged in the following groups:—

A	7	lights each of	16	candle power requiring a total current of	6	Amperes
B	4	lights each of	16	candle power requiring a total current of	3.2	Amperes
C	5	lights each of	16	candle power requiring a total current of	4.1	Amperes
D	5	lights each of	16	candle power requiring a total current of	4.1	Amperes
E	19	lights each of	16	candle power requiring a total current of	17.5	Amperes
3	Mast head light with	1	lamps each of	32	candle power requiring a total current of	Included above Amperes
2	Side light with	1	lamps each of	32	candle power requiring a total current of	Amperes
1	Cargo lights of	6 - 16 C.P.		candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. No Arcs

Where are the switches controlling the masthead and side lights placed In Engine Room on Main Board

DESCRIPTION OF CABLES.

Main cable carrying	50	Amperes, comprised of	19	wires, each	18	S.W.G. diameter,	.034	square inches total sectional area
Branch cables carrying	7	Amperes, comprised of	3	wires, each	20	S.W.G. diameter,	.003	square inches total sectional area
Branch cables carrying	5	Amperes, comprised of	1	wires, each	18	S.W.G. diameter,	.0018	square inches total sectional area
Leads to lamps carrying	1	Amperes, comprised of	1	wires, each	18	S.W.G. diameter,	.0018	square inches total sectional area
Cargo light cables carrying	5.3	Amperes, comprised of	130	wires, each	40	S.W.G. diameter,	.002	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

V.I.R. Taped & Lead covered & Lead & Armoured Henlys make

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 — 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 No

How are the cables led through the ship, and how protected Through beams clipped up direct to steel
Wood, Deck pipes through deck.



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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 cable*

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

What special protection has been provided for the cables near boiler casings *Lead & Armoured*

What special protection has been provided for the cables in engine room *Lead & Armoured*

How are cables carried through beams *Clear holes & bushed for I.C. through bulkheads, &c. Brass H.I. glands*

How are cables carried through decks *Deck Pipes*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Lead & Armoured*

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

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 *✓*

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

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.

THE NUMBER ELECTRICAL ENGINEERING CO.

W.C. Shuttleworth Electrical Engineers Date *14/9/1916*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 50 ft.*

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

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	lead to	feet from standard compass	lead to	feet from steering compass
<i>2</i>					

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 *nil* degrees on *any* course in the case of the standard compass and *nil* degrees on *any* course in the case of the steering compass.

FOR COCHRANE & SONS LTD.

J.M. Cochrane

Builder's Signature. Date *14/9/1916*

GENERAL REMARKS.

This vessel has been fitted with an electric light installation as above and the workmanship is good. On completion it was tried under full working condition and found satisfactory.

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

Elec light J.M. 14/9/16

Geo. Allan

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.