

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29078

Port of Hull Date of First Survey Dec 3/15 Date of Last Survey 7.1.16 No. of Visits 6  
 No. in on the Iron or Steel Sea Monarch Port belonging to Hull  
 Reg. Book 818 Built at Beverley By whom Cook, Welton & Gemmell When built 1916  
 Owners Humber Stevedoring Co. Ltd. Owners' Address  
 Yard No. 322 Electric Light Installation fitted by The Humber Electrical Eng. Co. When fitted 1916

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Sinon Engine enclosed direct coupled to Tals Dynamo all mounted on one bed plate, Engine W.P. 110 H.P.

Capacity of Dynamo 53 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room (Starboard) Whether single or double wire system is used Double

Position of Main Switch Board Store end Engine Room having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One 5 way Aft, One 3 way Engine Room

1. 12 way Wheelhouse, 1. 3 way Forecastle.

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 Yes

Are the fuses of non-oxidisable 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 57. 16 ep. arranged in the following groups:—

A	9	lights each of	16	candle power requiring a total current of	8.2	Amperes
B	21	lights each of	16	candle power requiring a total current of	14.0	Amperes
C	9	lights each of	16	candle power requiring a total current of	8.2	Amperes
D	12	lights each of	16	candle power requiring a total current of	11.0	Amperes
E		lights each of		candle power requiring a total current of		Amperes
3	Mast head light with	1 lamp each of	32	candle power requiring a total current of	5.3	Amperes
2	Side light with	1 lamp each of	32	candle power requiring a total current of	3.8	Amperes

Two Cargo lights of 5. 16 ep 2. 16 ep 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 Wheelhouse.

## DESCRIPTION OF CABLES.

Main cable carrying	53	Amperes, comprised of	19	wires, each	18	S.W.G. diameter, .034	square inches total sectional area
Branch cables carrying	20	Amperes, comprised of	3	wires, each	18	S.W.G. diameter, .053	square inches total sectional area
Branch cables carrying	12	Amperes, comprised of	3	wires, each	20	S.W.G. diameter, .003	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	Amperes, comprised of	130	wires, each	40	S.W.G. diameter, .0024	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead Covered Babins Lead Armoured elsewhere  
Steel Cables

Points 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 Lead Covered Armoured Cables  
Clipped up direct to Decks Steel work



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible

No.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture

Lead Armoured

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

Lead Armoured

through bulkheads, &c.

Boas W.T. 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

No

If so, how are the lamp fittings and cable terminals specially protected

Heavy Iron Boxes to fittings

Where are the main switches and fuses for these lights fitted

Storehold

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. B. Shuttleworth

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 2 Amperes 6 feet from standard compass 8 feet from steering compass

A cable carrying 2 Amperes 6 feet from standard compass 8 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

course in the case of the

standard compass and

nil

degrees on

all

course in the case of the steering compass.

COOK, WELTON & GEMMELL, LTD.

Builder's Signature.

Date

March 1<sup>st</sup> 1916

GENERAL REMARKS.

DIRECTOR.

This installation of electric light has been well fitted. The materials & workmanship are good. It has been tried under full working conditions & found satisfactory.

It is submitted that

this vessel is eligible for

THE RECORD Elec. light.

P. Fitzgerald.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.