

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 15707.

Port of NEWCASTLE-ON-TYNE Date of First Survey 22/12/21 Date of Last Survey 10/7/22 No. of Visits 20  
 No. in on the Iron or Steel "Badarpur" Port belonging to Rangoon  
 Reg. Book 53986 Built at Newcastle By whom Hawthorn Leslie & Co. Ltd. When built 1922  
 Owners Burmah Oil Co. Ltd. Owners' Address 23 Gt. Winchester Street, London E.C.2.  
 Yard No. 528 Electric Light Installation fitted by Hawthorn Leslie & Co. Ltd. When fitted 1922

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

2 No. Dynamo, multipolar, compound wound coupled direct to a single cylinder enclosed type steam engine.  
 Capacity of <sup>each</sup> Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Engine Room starboard side Whether single or double wire system is used double  
 Position of Main Switch Board Do. having switches to groups 6 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 4-way D.B. crew space stbd side, 10 way D.B. crew space port side, 1-6 way + 1-3 way E.B., 2-10 way D.B., 1-8 way D.B. in pantry, 1-12 way D.B. in chartroom, 2-4 way E.B. + 1-8 way D.B. in eng. casing top, 1-10 way D.B. eng.'s quarters, 1-4 way E.B., 1-10 way D.B., 1-6 way D.B. in eng. room  
 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 100 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 267 arranged in the following groups :-

A Forecastle.	32	lights each of 30-20W. 1-10W. 1-32	candle power requiring a total current of	7.0	Amperes
B Midship & Nav.	77	lights each of 27-40W. 33-20W. 6-10W. 5-32	candle power requiring a total current of	25.5	Amperes
C Deck Blusters	43	lights each of 3-500W.H.W. 40-20W.	candle power requiring a total current of	23.0	Amperes
D Workshop Motor	65	lights each of 20W.	candle power requiring a total current of	31.4	"
E Wireless	—	lights each of	candle power requiring a total current of	13.0	"
F Eng.'s Acc.	50	" " " 16-40W. 32-20W. 2-10W.	" " " " " "	10	"
2 Mast head lights with	1	lamps each of 32	candle power requiring a total current of	25.0	"
2 Side lights with	1	lamps each of 32	candle power requiring a total current of	2.24	Amperes

3-500W.H.W. 40-20W. Cargo lights of 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 Navigating Bridge, Navigation light indicator fitted.

**DESCRIPTION OF CABLES.**

Main cable carrying 91 Amperes, comprised of 19 wires, each .083 S.W.G. diameter, .1 square inches total sectional area  
 Branch cables carrying 25.5 Amperes, comprised of 19 wires, each .052 S.W.G. diameter, .04 square inches total sectional area  
 Branch cables carrying 31.4 Amperes, comprised of 19 wires, each .052 S.W.G. diameter, .04 square inches total sectional area  
 Leads to lamps carrying .56 Amperes, comprised of 3 wires, each .029 S.W.G. diameter, .002 square inches total sectional area  
 Cargo light cables carrying 1.5 Amperes, comprised of 70 wires, each .0076 S.W.G. diameter, .003 square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

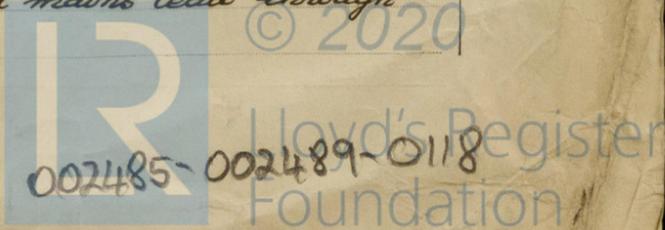
Dynamo mains, engine room lead covered & armoured cables.  
Main cables lead covered & armoured. Accommodation lead covered.

Joints in cables, how made, insulated, and protected

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 mains lead through galvanised iron pipe under fore & aft gangway.



**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 or lead covered in conduit

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

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 fibre bushed holes through bulkheads, &c. watertight glands.

How are cables carried through decks watertight deckpipes.

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected \_\_\_\_\_

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 \_\_\_\_\_

Cargo light cables, whether portable or permanently fixed flexible from watertight socket or fixed clipped to bulkhead

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 Yes.

Are any switches, fuses, or joints of cables fitted in the pump room or companion no

How are the lamps specially protected in places liable to the accumulation of vapour or gas gaslight fittings.

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 2500 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.

*R. & W. HAWTHORN, LESLIE & CO LIMITED*  
*John Batey* Electrical Engineers Date 1/8/22

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 200 feet.

Distance between dynamo or electric motors and steering compass 192 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.1</u>	Amperes	<u>on the</u>	<u>1</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	<u>.1</u>	Amperes	<u>8</u>	feet from standard compass	<u>on the</u>	<u>1</u>	feet from steering compass
A cable carrying	<u>5.6</u>	Amperes	<u>20</u>	feet from standard compass	<u>24</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.

*R. & W. HAWTHORN, LESLIE & CO LIMITED.*  
*John Batey* Builder's Signature. Date 1/8/22

**GENERAL REMARKS.** The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation electric light.  
Wireless

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

Fee £17. 10. 0. Applied for 14/7/22  
Paid 22/7/22. *W.T. Badger* Surveyor to Lloyd's Register of Shipping. 1/8/22.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2020

Lloyd's Register Foundation