

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28223

Port of NEWCASTLE-ON-TYNE Date of First Survey Nov. 7 Date of Last Survey Dec 1 '21 No. of Visits 6  
 No. in 36445 on the Steel "BRITISH CHANCELLOR" Port belonging to London.  
 Reg. Book Suppl. Built at Sunderland. By whom Truss' Sir J. Lang & Sons Ltd When built 1921.  
 Owners British Tanker Co. Ltd. Owners' Address London.  
 Yard No. 681 Electric Light Installation fitted by Sunderland Forge & Eng Co. Ltd When fitted 1921.

## DESCRIPTION OF DYNAMO, ENGINE, ETC. POWER CIRCUITS.

2 - Open Type Turbo generator 120 K.V.A. at 0.8 power factor, 220 volts  
3 Phase, 50 periods gear driven 4500/1000 R.P.M.  
 Capacity of Dynamo \_\_\_\_\_ Amperes at \_\_\_\_\_ Volts, whether continuous or alternating current Alternating  
 Where is Dynamo fixed 1 Port & 1 Star. Whether single or double wire system is used Double  
 Position of Main Switch Board Engine room Aft Subst. having switches to groups Eight of motors s, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each \_\_\_\_\_

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 \_\_\_\_\_ and to each lamp circuit \_\_\_\_\_  
 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 200 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~~ motors provided for See Separate Sheet, 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. \_\_\_\_\_  
 Where are the switches controlling the masthead and side lights placed \_\_\_\_\_

## DESCRIPTION OF CABLES.

Main cable carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Branch cables carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Branch cables carrying	Amperes, comprised of	<u>See Separate Sheet</u> wires, each	S.W.G. diameter,	square inches total sectional area
Leads to lamps carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Cargo light cables carrying	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

3. core Paper Insulated Lead covered Armoured & Braided.  
 Joints in cables, how made, insulated, and protected None Made.  
 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 \_\_\_\_\_  
 How are the cables led through the ship, and how protected \_\_\_\_\_

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

Are they in places always accessible \_\_\_\_\_

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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat \_\_\_\_\_

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 \_\_\_\_\_ through bulkheads, &c.

How are cables carried through decks \_\_\_\_\_

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

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 \_\_\_\_\_ 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 \_\_\_\_\_, and with an amperemeter \_\_\_\_\_, fixed \_\_\_\_\_

**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 \_\_\_\_\_ } See lighting report.

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 \_\_\_\_\_ 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.

p. pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

Electrical Engineers

Date 30th Dec. 1921.

**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 _____	Amperes _____	feet from standard compass _____	feet from steering compass _____
A cable carrying _____	Amperes _____	feet from standard compass _____	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 \_\_\_\_\_

The maximum deviation due to electric currents, etc., was found to be \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

Builder's Signature. Date \_\_\_\_\_

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

W.T. Badger. *[Signature]*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

20.11.21.—Transfer.



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S.S. "BRITISH CHANCELLOR".

LIST OF POWER CIRCUITS.

2-37/.093	-	3	core paper insulated cables L.C A&B, from 2 main alternators to main switchboard.		
1-37/.093	"	"	"	"	from main switchboard to main distribution panels.
2-7/.064	"	"	"	"	from Dis. Panel to Starting Gear & motors for 2 Forced Draught Fans.
2-19/.064	"	"	"	"	from Main Dis. Panels to Starting Gear & Motors for 2 main Circulating Pumps.
1-7/.064	"	"	"	"	from Main Dis. Panels to Starting Gear & motor for Main Feed Pump.
1-7/.036	"	"	"	"	from Dis. Panel to Starting Gear & Motor for Refrigerator.
1-7/.064	"	"	"	"	from Dis. Panel to Starting Gear & Motor for Steering Gear.
1-7/.064	"	"	"	"	from Dis. Panel to Starting Gear & Motor for Motor-generator.
2-7/.036	"	"	"	"	L.C. from Lighting Switchboard to De Laval Oil. Purifier Motor.
2-7/.036	"	"	"	"	L.C. A.&B. from Lighting Switchboard to Cumberland System Switchboard.
2-7/.064	"	"	"	"	L.C. from Lighting Switchboard to Generator of Motor Generator.

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