

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29716

Port of Hull Date of First Survey Nov 29/16 Date of Last Survey Dec 22/16 No. of Visits 13  
 No. in 1510 on the Iron or Steel S.S. Condessa Port belonging to Liverpool  
 Reg. Book 1510 Built at Hull By whom Messrs Charles Bly & Son Ltd When built 1916  
 Owners Furness & Holden Argentine Line Ltd Owners' Address \_\_\_\_\_  
 Yard No. 611 Electric Light Installation fitted by Sunderland Forge & Engineering Co Ltd When fitted 1916

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 - Howdens tandem compound enclosed double acting engines 7" x 12" by 7" stroke  
coupled to S.Y. & C. compound wound multipolar dynamos.  
 Capacity of Dynamo 160 Amperes at 100 Volts, whether continuous or alternating current continuous ✓  
 Where are Dynamos fixed Aftend of Engine Room Whether single or double wire system is used double ✓  
 Position of Main Switch Board Close to dynamos having switches to groups ten of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Chart Room eleven switches for signal lts  
compasses etc. Forward deck house with eleven switches for lights in Nos 1, 2, & 3 holds  
P.O.'s Mess with five switches for lights in Nos 4, 5, & 6 holds  
 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 No 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 399 arranged in the following groups:—

1 AFT ACC.	40	16	27.4	11.2	Amperes
A 2 AFT HOLDS	20 lights each of	16	8.4	15/20	Amperes
3 AFT CLUSTERS	15	16	36.9	40.0	Amperes
B 4 WIRELESS	- lights each of	-	10.0	11.2	Amperes
5 ENGRS & P.O.s	66	16	24.6	52.5	Amperes
C 6 SALOON ETC	73 lights each of	16	2.24		Amperes
7 NAVIGATION	18	4 @ 32 10 @ 16	2.24		Amperes
D 8 FORD CLUSTERS	20 lights each of	16			
9 FORD HOLDS	44	16			
E 10 E & B. ROOMS	94 lights each of	16			
2 Mast head light with	1 lamps each of	32			
2 Side light with	1 lamps each of	32			
6 Cargo lights of	five 16 c				

If arc lights, what protection is provided against fire, sparks, &c. —

Where are the switches controlling the masthead and side lights placed Chartroom

## DESCRIPTION OF CABLES.

Main cable carrying 160 Amperes, comprised of 37 wires, each 14 S.W.G. diameter, "182" square inches total sectional area  
 Branch cables carrying 52.5 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, "035" square inches total sectional area  
 Branch cables carrying 36.9 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, "022" square inches total sectional area  
 Leads to lamps carrying 3 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 1 wires, each 14 S.W.G. diameter, "005" square inches total sectional area

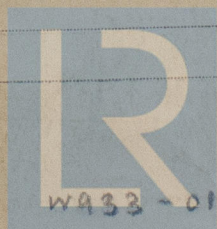
## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Mains - Pure Rubber Vulcanised S. R. Taped, braided & compounded  
 Acc. Spaces do do do do do & Lead Covered  
 Mach Spaces & Mast Chambers do do do do do & Lead Covered & armoured  
 Joints in cables, how made, insulated, and protected None

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 run in Iron pipe



© 2020

Lloyd's Register  
Foundation



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 Iron pipe

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 ditto

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

How are cables carried through beams holes bushed with fibre through bulkheads, &c. iron pipe or W.Y. glands

How are cables carried through decks W.Y. Deck Tubes

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 Lead covered & armoured

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

If so, how are the lamp fittings and cable terminals specially protected In cast-iron fittings with strong bellows & guards

Where are the main switches and fuses for these lights fitted Forward, in Forward house aft in alleyway

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 on Main S'board

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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.,

Electrical Engineers

Date 27-1-17

COMPASSES.

Distance between dynamo or electric motors and standard compass Director about 100 feet

Distance between dynamo or electric motors and steering compass about 98 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Distance from standard compass	Distance from steering compass
10.0	about 16	abt 16	feet from steering compass
56	led into	abt 8	feet from steering compass
56	abt 8	led into	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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

ENGINEERING COMPANY, LIMITED.

Builder's Signature. Date

GENERAL REMARKS.

This vessel has been fitted with an electric light installation as above & the workmanship is good on completion it was tested under full working conditions & found satisfactory.

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

JWD 27/2/17

Frank L. Sturges

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

Committee's Minute



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.