

No. 40414

No. in Reg. Book 328289 on the ~~Iron~~ Steel S.S. Lady Denison Penarth Port belonging to London.
Built at Govan. By whom Messrs Fairfield S. B. & Co. Ltd. When built 1920.
Owners The Eastern Telegraph Co. Ltd Owners' Address
Yard No. 597 Electric Light Installation fitted by Messrs Fairfield S. B. & Co. When fitted 1920.

TWO SHANKS & SONS COMPOUND VERTICAL OPEN TYPE ENGINES ^{EACH} DIRECT COUPLED TO A HOLMES & CO OPEN TYPE DYNAMO.

Capacity of Dynamo 120 Amperes at 100/105 Volts, whether continuous or alternating current CONTINUOUS

Where is Dynamo fixed DYNAMO ROOM STARB^d SIDE UPPER DX Whether single or double wire system is used DOUBLE

Position of Main Switch Board DYNAMO ROOM UPPER DX having switches to groups 6 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each NONE

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 NONE 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 50 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

the permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit

11 switches and fuses constructed of incombustible materials and fitted on incombustible bases YES

number of lights provided for 384 arranged in the following groups :— *SEE ATTACHED SCHEDULE*

lights each of _____ candle power requiring a total current of _____ Amperes

lights each of _____ candle power requiring a total current of _____

lights each of _____ candle power requiring a total current of _____ Amperes

lights each of _____ candle power requiring a total current of _____ Amperes

lights each of _____ candle power requiring a total current of _____ Amperes

Mast head lights with 1 lamp each of 32 [Double C.F.] candle power requiring a total current of 2.24 [Amperes in the Box C.F.] Amperes

[illegible]

3 CABLE CLUSTERS EACH OF 5-20 WATT LAMPS
4 " " Large lights of " 3-20 " "
3 " " Have ~~candle power~~, whether incandescent or arc lights } INCANDESCENT

lights, what protection is provided against fire, sparks, &c. *No ARC LIGHTS FITTED*

are the switches controlling the masthead and side lights placed WHEEL HOUSE.

DESCRIPTION OF CABLES.

cable carrying 120 Amperes, comprised of 37 wires, each .064" ~~S.W.G.~~ diameter, .1200 square inches total sectional area

ch cables carrying 17-0 Amperes, comprised of 7 wires, each .052" S.W.G. diameter, .0145 square inches total sectional area

ch cables carrying 11-8 Amperes, comprised of 77 wires, each .052" S.W.G. diameter, .0145 square inches total sectional area

s to lamps carrying .2 Amperes, comprised of 1 wires, each .064" S.W.G. diameter, .0225" square inches total sectional area

Eight cables carrying 20 Max Amperes, comprised of 1 wires, each .064" S.W.G diameter, .0030 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

LEAD COVERED; : LEAD COVERED, ARMoured & BRAIDED; : AND LEAD COVERED RUN
IN TUBING.

in cables, how made, insulated, and protected

All the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances. — Are all joints accessible

positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage. —

here any joints in or branches from the cable leading from dynamo to main switch board NONE

are the cables led through the ship, and how protected MAIN CABLES FROM SWITCHBOARD IN DYNAMO ROOM LED

UPPER DECK STARB^o PASSAGE TO THEIR SEPARATE POSITIONS. LEAD COVERED ARMOURD & BRAIDED

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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 RUN IN TUBING.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat SPL. LEAD COVERED, ARMoured & BRAIDED.

What special protection has been provided for the cables near boiler casings LEAD COVERED, ARMoured & BRAIDED.

What special protection has been provided for the cables in engine room LEAD COVERED.

How are cables carried through beams IN LEAD BUSHES through bulkheads, &c. W.T. GLANDS

How are cables carried through decks W.T. DECK TUBES

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 No

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

CABLE CLUSTERS & HAND LANTERNS
Cargo light cables, whether portable or permanently fixed PORTABLE How fixed REYROLLE SOCKETS

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 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 FAIRFIELD SHIPBUILDING AND ENGINEERING CO., LIMITED.

Electrical Engineers Date _____

COMPASSES.

J. Hendrie **INSIDE MANAGER** 65 FEET

Distance between dynamo or electric motors and standard compass 60 "

Distance between dynamo or electric motors and steering compass _____

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	IN	feet from standard compass	feet from steering compass
<u>1</u>	<u>1</u>	<u>IN</u>	<u>feet from standard compass</u>	<u>feet from steering compass</u>
<u>1</u>	<u>1</u>	<u>IN</u>	<u>feet from standard compass</u>	<u>feet from steering compass</u>
<u>1</u>	<u>1</u>	<u>IN</u>	<u>feet from standard compass</u>	<u>feet from steering compass</u>

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.

THE FAIRFIELD SHIPBUILDING AND ENGINEERING CO., LIMITED.

Builder's Signature.

Date 11th Nov. 1920

GENERAL REMARKS.

J. Hendrie **INSIDE MANAGER**

This installation has been fitted on board under special survey. Tested under full working conditions and satisfactory in every way.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light. 26/11/20

J. Stanley Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 23 NOV 1920

Elec. Lights



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Are all fuses fitted in easily accessible positions

YES

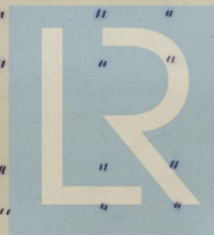
Are the fuses of standard dimensions

YES

GROUPING OF LIGHTS.

S.S. "LADY DENISON PENDER"

72 LIGHTS EACH OF 20 WATT, REQUIRING A TOTAL CURRENT OF									
FORWARD CIRCUIT.	3	"	"	5-20	"	"	"	"	21.06 AMPERES.
	3	"	"	32 C.P. DOUBLE C.F.	"	"	"	"	
	3	"	"	2½ C.P.	"	"	"	"	
AFT CIRCUIT.	67	"	"	20 WATT	"	"	"	"	17.0 "
	3	"	"	4-20	"	"	"	"	
	2	"	"	3-20	"	"	"	"	
MIDSHIPS PORT CIRCUIT.	72	"	"	20 WATT	"	"	"	"	22.16 "
	5	"	"	32 C.P. DOUBLE C.F.	"	"	"	"	
	1	"	"	6-6 C.P.	"	"	"	"	
MIDSHIPS Starboard CIRCUIT.	9	"	"	2½ C.P.	"	"	"	"	11.8 "
	53	"	"	20 WATT	"	"	"	"	
	2	"	"	3-20	"	"	"	"	
ENGINE AND BOILER ROOM CIRCUIT.	87	"	"	20 WATT	"	"	"	"	18.6 "
	2	"	"	3-20	"	"	"	"	



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MID. STARBOARD
CIRCUIT.

Branch cables carrying 11.8
18.6
11.0

Ampères, comprised of
wires, each

7
7
1

.052"
.052"
.064"
.064"

.0145
.0145
.0225
.0230

square
square
square