

SEP. 16 1921

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10786

Port of Bristol Date of First Survey June 3rd Date of Last Survey Aug 24 No. of Visits 4
 No. in Reg. Book STEVENSTONE Port belonging to LONDON
 Built at BIDEFORD, N. DEVON By whom HANSEN SHIPB^g & SHIP REP^g CO LTD When built 1921
 Owners HANSEN SHIPPING CO. LTD. Owners' Address 11, 12, MOUNT STUART SQUARE, CARDIFF.
 Yard No. 3 Electric Light Installation fitted by HANSEN SHIPB^g & SHIP REP^g CO LTD. When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Shunt wound, four pole dynamo coupled direct to a single cylinder, enclosed type, high speed steam engine.

Capacity of Dynamo 3 K.W. Amperes 30, at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed on steering gear flat, top of Engine Room Whether single or double wire system is used double

Position of Main Switch Board on bulkhead close to dynamo having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one in Engine room with six switches, one in chart room with six switches, one in amidship accommodation with four switches and one in fore-castle with one switch.

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 74 arranged in the following groups:—

A Fore-castle	{ 4 lights each of (Metal Fil)	30	candle power requiring a total current of	1	Amperes
	{ 6 " " " (Carbon Fil)	16	" " " " " " " "	3	"
B Navigation	{ 5 lights each of (Carbon Fil)	32	candle power requiring a total current of	5	Amperes
	{ 1 " " " (Metal Fil)	30	" " " " " " " "	1/3	"
C Saloon	{ 14 lights each of (Metal Fil)	30	candle power requiring a total current of	4	Amperes
	{ 12 " " " (Carbon Fil)	16	" " " " " " " "	6	"
D Engine Room	{ 20 lights each of (Metal Fil)	30	candle power requiring a total current of	6	Amperes
	{ 12 " " " (Carbon Fil)	16	" " " " " " " "	6	"
E	lights each of		candle power requiring a total current of		Amperes
NOTE. The above includes Navigation and Cargo lights.					
Two Mast head lights with one lamp each of	32	candle power requiring a total current of	2	Amperes	
Two Side lights with one lamp each of	32	candle power requiring a total current of	2	Amperes	
Four Cargo lights of	96	candle power, whether incandescent or arc lights	incandescent.		

If arc lights, what protection is provided against fire, sparks, &c. No arc lights fitted.

Where are the switches controlling the masthead and side lights placed in the Chart Room.

DESCRIPTION OF CABLES.

Main cable carrying 30 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .014 square inches total sectional area
 Branch cables carrying 5 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area
 Branch cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area
 Leads to lamps carrying 2 1/2 Amperes, comprised of 3 wires, each 22 S.W.G. diameter, .002 square inches total sectional area
 Cargo light cables carrying 5 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables used comply with British Standard Specification N° 7. Main cables are V.I.R. cable protected by iron tubing (dynamo to Switchboard). Branch cables are V.I.R. cable protected by lead covering + steel armoring.

Joints in cables, how made, insulated, and protected porcelain extension pots are used for this purpose protected by cast iron covers in exposed positions.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances yes 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 yes

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 Cables led through holes pierced in beams. The holes in beams being brushed with lead



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5210-117M
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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 Vulcanised cable protected by lead covering & steel armouring is used in such positions.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat vulcanised, lead covered, & armoured cable is used but care taken to avoid placing cable in way of excessive heat.

What special protection has been provided for the cables near boiler casings Vulcanised, lead covered and armoured cable as above.

What special protection has been provided for the cables in engine room Vulcanised, lead covered and armoured cable as above.

How are cables carried through beams through lead bushes through bulkheads, &c. Brass watertight glands.

How are cables carried through decks Through galvanised wrought iron deck pipes fitted with brass glands.

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 covered and 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 ✓

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

Cargo light cables, whether portable or permanently fixed Portable How fixed from a plug connection

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 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.

COMPASSES.

Distance between dynamo or electric motors and standard compass about 80 feet

Distance between dynamo or electric motors and steering compass about 75 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>one</u>	<u>10</u>	<u>6</u>	<u>6</u>
<u>one</u>	<u>10</u>	<u>6</u>	<u>6</u>
<u>half</u>	<u>10</u>	<u>6</u>	<u>6</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 _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

GENERAL REMARKS.

This installation of electric light has been well fitted. The materials & workmanship are good, it has been tried under full working conditions with satisfactory results & in my opinion is now eligible for the record of Electric Light.

It is submitted that this vessel is eligible for the RECORD Elec Light Bell 21/9/21

John W. Gwynne
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

See P 5. D. 0

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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