

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6010

Port of PLYMOUTH Date of First Survey 14/6/20 Date of Last Survey 28/10/20 No. of Visits 14
 No. in 2169 on the Iron Steel Se Granter Joseph Connell Port belonging to
 Built at Greenock By whom G. Brown & Co Ltd When built 1919
 Owners' Address
 Card No. Electric Light Installation fitted by Deonport Dockyard When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

K.W. Robey direct coupled steam generating set. Dynamo
by Elctromotors Limited.

Capacity of Dynamo 10 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used
 Position of Main Switch Board Engine Room having switches to groups Two in No 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 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-oxidisable metal Yes and constructed to fuse at an excess of 25 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 36 arranged in the following groups :-

A	20	lights each of (Metallic)	16	candle power requiring a total current of	4	Amperes
B	2	lights each of (Carbon)	16	candle power requiring a total current of	1.2	Amperes
C		lights each of		candle power requiring a total current of		Amperes
D	6	lights each of (Metallic)	32	candle power requiring a total current of	2.4	Amperes
E	2	lights each of (Carbon)	32	candle power requiring a total current of	2.4	Amperes
B	3	Mast head light with one lamp each of (Carbon)	16	candle power requiring a total current of	1.8	Amperes
	2	Side light with one lamp each of (Carbon)	16, 32	candle power requiring a total current of	1.8	Amperes
	1	Stern Cargo lights of (Metallic)	16	candle power, whether incandescent or arc lights	2	

If arc lights, what protection is provided against fire, sparks, &c. None

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

DESCRIPTION OF CABLES.

Main cable carrying	10	Amperes, comprised of	3	wires, each	18	S.W.G. diameter, .00532	square inches total sectional area
Branch cables carrying	5	Amperes, comprised of	3	wires, each	18	S.W.G. diameter, .00532	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		Amperes, comprised of	1	wires, each	14	S.W.G. diameter, .00246	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.

All cables are rubber insulated and lead Cased.

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 none 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 none

How are the cables led through the ship, and how protected Clipped on to bulkheads with lead sheathing and run in conduit through bunkers.

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes except in bunkers & full of coal.*
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead sheathing.*
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Such places avoided.*
 What special protection has been provided for the cables near boiler casings *Not near boilers.*
 What special protection has been provided for the cables in engine room *Lead sheathing*
 How are cables carried through beams *Lead bushes* through bulkheads, &c. *Watertight stands*
 How are cables carried through decks *Watertight deck tubes.*
 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 *Cables through bunkers in conduit, elsewhere lead covered.*
 Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes Air Hold.*
 If so, how are the lamp fittings and cable terminals specially protected *Glass shade or metal guard, unsipped terminals*
 Where are the main switches and fuses for these lights fitted *Air Hold, fuses in Galley.*
 If in the spaces, how are they specially protected *Fitted near hatchways close under deck.*
 Are any switches or fuses fitted in bunkers *No*
 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 *Yes*, and with an amperemeter *Yes*, fixed *Switchboard Engine Room.*

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 *2000* 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.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *45 feet*
 Distance between dynamo or electric motors and steering compass *40 "*
 The nearest cables to the compasses are as follows:—
 A cable carrying *5* Amperes *10* feet from standard compass *5* feet from steering compass
 A cable carrying *2* Amperes *6* feet from standard compass *2* 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 *No*
 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.

All wiring, switches, sockets, fuses, guards and fittings are of Admiralty Standard pattern.
The installation remains to be tested when trials of machinery are made under steam.
It is submitted that this vessel is eligible for THE RECORD. See Lt. Bell 29/11/20
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. NOV. 30 1920

TUE. 14 JUN. 1921

FRI. 12 AUG. 1921



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THE SURVEYOR IS REQUESTED NOT TO WRITE ACROSS THIS MARGIN.