Rpt. 13.

YACHT.

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. ~~11816~~ 14376

Port of Southampton Date of First Survey 3rd March Date of Last Survey 22nd July No. of Visits 7

No. in Reg. Book 5476 on the ~~Iron or~~ Steel M.Y. "SONA" Port belonging to Southampton

Built at Southampton By whom Camper & Nicholsons Ltd When built 1922

Owners The Earl of Dunraven Owners' Address

Yard No. 307. Electric Light Installation fitted by A. Smethurst & Sons Ltd When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC. One auxy. dynamo driven off main shaft.
One main compound wound dynamo coupled to a Parsons paraffin engine.
One auxy. " " " " " " " "

Capacity of Dynamo MAIN = 240, AUXY = 75, AUXY = 70 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Engine Room having switches to groups A to F. of lights, &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 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 20 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 —

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights (FAN PLUGS & RADIATOR) provided for 180 arranged in the following groups :—

A	35	lights each of	32	candle power requiring a total current of	12	Amperes
B	24	lights each of	32	candle power requiring a total current of	9	Amperes
C	22	lights each of	32	candle power requiring a total current of	8	Amperes
D	32	lights each of	32	candle power requiring a total current of	12	Amperes
E	36	lights each of	32	candle power requiring a total current of	14	Amperes
F	31	INCLUDING RADIATOR			21	
2	Mast head light with one lamps each of		32	candle power requiring a total current of	INCLUDED ABOVE.	Amperes
2	Side light with one lamps each of		32	candle power requiring a total current of	" "	Amperes
1	Stern ~~Cargo~~ lights of		32	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 Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 9-12, 12-14, 14-21 Amperes, comprised of 7 wires, each .036, .044, .064 S.W.G. diameter, .007, .010, .022 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 — 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.
In Engine Room, lead covered cable run on channel plate.
V.I.R. cable in wood casing and where exposed in galvanised iron tubes.

Joints in cables, how made, insulated, and protected —

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 As above.

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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 cable and W.T. galvanised iron tubes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Galvanised iron tubes

What special protection has been provided for the cables near boiler casings —

What special protection has been provided for the cables in engine room Lead covered cable on channel plate.

How are cables carried through beams 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 — *or cargo spaces* — *or spaces which may be used for carrying cargo, stores, or baggage* Yes

If so, how are they protected Wood casings

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 yes, *and with an amperemeter* Yes, *fixed* 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 2500 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.

FOR A. SMETHURST & SONS, LTD
ELECTRICAL ENGINEERS

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.

A. Smethurst *Directors.* Electrical Engineers *Date* 31 JUL 1922

COMPASSES.

Distance between dynamo or ~~electric motors and standard compass~~ Secret 42 ft.

Distance between dynamo or electric motors and steering compass 17 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	60	*Amperes*	19	*feet from standard compass*	15	*feet from steering compass*
A cable carrying	2	*Amperes*	7	*feet from standard compass*	—	*feet from steering compass*
A cable carrying	½	*Amperes*	—	*feet from standard compass*	4'-6"	*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* all *courses in the case of the standard compass and* Nil *degrees on* all *courses in the case of the steering compass.*

Builder's Signature. *Date*

GENERAL REMARKS.

The Electrical Installation has been fitted in accordance with the rule requirements. The materials and workmanship are good. The same has been examined under working conditions and found satisfactory.

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

A. W. Boyle
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 AUG. 1922

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2m,11,19.—Transfer.

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