Rpt. 13.

Received at London Office TUE. 19 APR. 1921

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 20125

Port of New York Date of First Survey 8 July Date of Last Survey 15 Mar/21 No. of Visits 5

No. in Reg. Book — on the ~~Iron~~ Steel S/S "SUNUGENTCO" Port belonging to Newark N.J.

Built at Newark N.J. U.S.A. By whom Submarine Boat Corp. When built 1921

Owners Submarine Boat Corp. Owners' Address Newark N.J.

Yard No. 145 Electric Light Installation fitted by Submarine Boat Corp. When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC. Two generators each direct driven by a vertical reciprocating engine (450 R.P.M.) Each unit capable of handling the load. Generators built by General Electric Co. Engines by Troy Engine & Machine Co.

Capacity of Dynamos each 90 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Stard side of engine room Whether single or double wire system is used double

Position of Main Switch Board adjacent to dynamos having switches to groups A. B. C. D. E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Galley 8 switches, Officers kitchen 6 switches

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 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 150 arranged in the following groups :—

A	37	lights each of	25	candle power requiring a total current of	8½	Amperes
B	29	lights each of	40	candle power requiring a total current of	10½	Amperes
C	40	lights each of	40	candle power requiring a total current of	14½	Amperes
D	39	lights each of	25	candle power requiring a total current of	9	Amperes
E	1 search	lights each of	4000	candle power requiring a total current of	35	Amperes
	2 Mast head light with	1	lamps each of	40	candle power requiring a total current of	1/3	Amperes
	2 Side light with	1	lamps each of	40	candle power requiring a total current of	2/3	Amperes

12 Cargo lights of 4 lamps each 25 watts candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. no arc lights used

Where are the switches controlling the masthead and side lights placed in wheel house

DESCRIPTION OF CABLES.

Main cable carrying	75	Amperes, comprised of	1	wires, each #	2 B.&S. ~~S.W.G.~~	diameter,	.052	square inches total sectional area
Branch cables carrying	30	Amperes, comprised of	1	wires, each #	6 ~~S.W.G.~~	diameter,	.020	square inches total sectional area
Branch cables carrying	20	Amperes, comprised of	1	wires, each #	8 ~~S.W.G.~~	diameter,	.013	square inches total sectional area
Leads to lamps carrying	½	Amperes, comprised of	1	wires, each #	10 ~~S.W.G.~~	diameter,	.008	square inches total sectional area
Cargo light cables carrying	10	Amperes, comprised of	1	wires, each #	14 ~~S.W.G.~~	diameter,	.003	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

B. & L. Flexible steel cables throughout, metal mouldings in offices quarters & wheel house.

Joints in cables, how made, insulated, and protected no joints except at terminal boxes.

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 none

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 along underside of deck & securely clamped to same. These cables being armoured need no additional protection.

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 Terminal boxes only.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat none

What special protection has been provided for the cables near boiler casings cables carried against grating supports clear of boiler casings.

What special protection has been provided for the cables in engine room none

How are cables carried through beams { Through clearance holes & securely fastened to prevent chafing. } *through bulkheads, &c.* none except shaft alley.

How are cables carried through decks Through threaded bushings with lock nuts on each side, stuffing box & gland on top side.

Are any cables run through coal bunkers no *or cargo spaces* no *or spaces which may be used for carrying cargo, stores, or baggage* Bridge enclosure

If so, how are they protected Clamped against deck above between beams.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage none except bridge enclosure

If so, how are the lamp fittings and cable terminals specially protected watertight attachments, plug receptacles.

Where are the main switches and fuses for these lights fitted main switchboard.

If in the spaces, how are they specially protected watertight boxes

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* 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~~ A.I.E.E. 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 _____ 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.

Insulation in accordance with the National Board of Underwriters.

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.

Geo. A. Authony *Electrical Engineers* *Date* March 23, 1921.

COMPASSES.

Distance between dynamo or electric motors and standard compass about 140 ft.

Distance between dynamo or electric motors and steering compass about 135 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	35	*Amperes*	10	*feet from standard compass*	*feet from steering compass*
A cable carrying	1/16	*Amperes*	in binnicle	*feet from standard compass*	*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 Not yet adjusted.

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.*

SUBMARINE BOAT CORPORATION
BY Geo. A. Authony
SUPERINTENDING ENGINEER

Builder's Signature. *Date* March 23, 1921.

GENERAL REMARKS. This installation has been fitted in the S/S Sunnygentleo. under special survey. The generators are erected on rigid seatings. The wires are stranded. The fittings of the wires throughout are as stated on the above report & appear to be in accordance with the Committees requirements.

It is submitted that this vessel is eligible for THE RECORD
Elec Light Rell 20/4/21

John Carnegie.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec Lt New York APR - 5 1921

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2m.11.19.—Transfer.