Rpt. 13.

Received at London Office TUE APR 6 1920 19

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2729

Port of Kobe Date of First Survey 10 Feb 1919 Date of Last Survey 19 Mar 1919 No. of Visits 7

No. in Reg. Book — on the Iron or Steel Scr. Stmr "Shinto Maru" Port belonging to Nishinomiya

Built at Osaka By whom Fujinagata Dkyd When built 1919

Owners Nishinomiya Kisen Kaisha Owners' Address Nishinomiya

Yard No. 31 Electric Light Installation fitted by Fujinagata Dockyard When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct current multipolar dynamo, direct coupled to Vertical Single Cylinder engine

Capacity of Dynamo 50 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. B. C. D. E F of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine Rm. 5. Amidships 3

Bridge. 4 Forward 3 Aft 3.

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 about 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

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

Total number of lights provided for 147 arranged in the following groups :—

A	29	lights each of	16	candle power requiring a total current of	5·8 Amperes
B	26	lights each of	16	candle power requiring a total current of	5·2 Amperes
C	42	lights each of	16	candle power requiring a total current of	8·9 Amperes
D	23	lights each of	16	candle power requiring a total current of	4·6 Amperes
E	23	lights each of	16	candle power requiring a total current of	4·6 Amperes
2	Mast head light with Carbon lamps each of	D. F	16	candle power requiring a total current of	2·24 Amperes
2	Side light with Carbon lamps each of	"	16	candle power requiring a total current of	2·24 Amperes
8	Cargo lights of	5 × 16		candle power, whether incandescent or arc lights	incandescent

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	33·08 Amperes, comprised of	19	wires, each	15	S.W.G. diameter,	0·079 (·075) square inches total sectional area
Branch cables carrying	8·4 Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	0·0201 (·022) square inches total sectional area
Branch cables carrying	4·6 Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	0·0201 (·022) square inches total sectional area
Leads to lamps carrying	0·2 Amperes, comprised of	1	wires, each	16	S.W.G. diameter,	·00322 square inches total sectional area
Cargo light cables carrying	1 Amperes, comprised of	19	wires, each	24	S.W.G. diameter,	·00738 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables are insulated by vulcanized rubber & lead covering

Joints in cables, how made, insulated, and protected Water tight junction boxes are used.

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 None

How are the cables led through the ship, and how protected Feeder lines are led within wood casing & lamp lines are lead protected & secured by screwed clips.

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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 ~~as~~ Spares planchered in iron tubes.

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

What special protection has been provided for the cables near boiler casings Lead covered in wood casing.

What special protection has been provided for the cables in engine room Lead covered in wood casing. or

How are cables carried through beams Vulcanized fibre protection *through bulkheads, &c.* Vulcanized fibre protection

How are cables carried through decks W.T. metal 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

Cargo light cables, whether portable or permanently fixed Portable *How fixed* Screwed in plugs inserted

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 Switch bd

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 ____ megohms per statute mile at 60° Farhenheit 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.

Mr. Inouye, Osaka *Electrical Engineers* *Date* 23 March 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 57'-0"

Distance between dynamo or electric motors and steering compass 57'-0"

The nearest cables to the compasses are as follows:—

A cable carrying 2 *Amperes* 5'-0" *feet from standard compass* ____ *feet from steering compass* ____

A cable carrying ____ *Amperes* ____ *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 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.* ✓

M

Y. Nagata
Fujinagata Zosensho *Builder's Signature.* *Date* 20 Feb. 1920

GENERAL REMARKS.

This installation has been fitted in accordance with the requirements of the Rules & worked satisfactorily on trial

It is admitted that this vessel is eligible for THE RECORD ELEC: LIGHT. NTG. 12/4/20

N. L. Jones
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI.OCT.29 1920 TUE.28JUN.1921 FRI.28JUL.1921

1m.8.18.—Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.