

Jan 8 1917

TUE 23 JAN 1917

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 477

Port of SEATTLE, WASH. Date of First Survey OCT. 2nd 1916 Date of Last Survey DEC 21st 1916 No. of Visits
 No. in on the ~~Iron~~ Steel SS "HANNA NIELSEN" Port belonging to HAUGESUND
 Reg. Book Built at SEATTLE By whom SKINNER & EDDY CORPORATION When built 1916
 Owners DAMP SKIBSAKTIESELSKAPET HANNA NIELSEN Owners' Address
 Yard No. 2 Electric Light Installation fitted by BUILDERS When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 15 K.W. 125 volt General Electric Co's Compound Wound Generators
Direct Connected to Single Cylinder Reciprocating Engine.
 Capacity of Dynamo 125/120 Amperes at 125 Volts, whether continuous or alternating current D.C.
 Where is Dynamo fixed On Platform in Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board On Generator Platform having switches to groups Twelve of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one in front of Pilot House, 6 switches,
Two in Port Passage Of Ford Deck House, 6 switches each, one in Stbd & one in Port Passages Midship Deck
House, 4 & 6 switches respectively, one in Passage Crews Quarters, 6 switches, one in Engine Room, 8 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
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes.

Total number of lights provided for 297 arranged in the following groups:—

A	37	lights each of	40 watts	candle power requiring a total current of	11.84	Amperes
B	33	lights each of	40 "	candle power requiring a total current of	10.58	Amperes
C	65	lights each of	40 "	candle power requiring a total current of	22.40	Amperes
D	32	lights each of	40 "	candle power requiring a total current of	10.24	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	1	Mast head light with	1 lamps each of 40 watt	candle power requiring a total current of	0.32	Amperes
	2	Side light with	1 lamps each of 40 "	candle power requiring a total current of	0.64	Amperes
	28	Cargo lights of	4, 40 watt	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 In front of Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 176 ¹²⁰ Amperes, comprised of 27 wires, each # 11 B.S.G. diameter, 21,600 [✓] C.M. square inches total sectional area
 Branch cables carrying 50 Amperes, comprised of 7 wires, each # 14 B.S.G. diameter, 26,250 [✓] C.M. square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 7 wires, each # 16 B.S.G. diameter, 16,510 [✓] C.M. square inches total sectional area
 Leads to lamps carrying 2.56 Amperes, comprised of 1 wires, each # 14 B.S.G. diameter, 4,096 [✓] C.M. square inches total sectional area
 Cargo light cables carrying 4.11 Amperes, comprised of 1 wires, each S.W.G. diameter, 4,096 [✓] C.M. square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

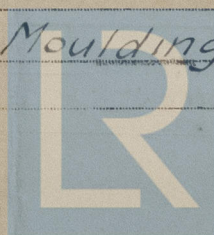
National Electric Code Standard. Double Braid.

Joints in cables, how made, insulated, and protected Soldered, Taped With Splicing Compound, Friction Tape,
& Painted with P&B Electrical Paint

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 No

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 In Conduit Pipes & Moulding.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible No

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Metal Conduit Casing

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

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

What special protection has been provided for the cables in engine room "

How are cables carried through beams Conduits through bulkheads, &c. Conduits.

How are cables carried through decks Conduits

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 Wooden Boxes & Metal Conduits

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage W.T. Switch & Receptacle

If so, how are the lamp fittings and cable terminals specially protected

Where are the main switches and fuses for these lights fitted In Houses on Upper Deck

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

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 ^{Two} ~~a~~ voltmeters Yes, and with ^{Two} ~~an~~ amperemeters Yes, fixed on 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 _____ 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.

B. N. McCallum

Electrical Engineers

Date Dec. 27-1916

COMPASSES.

Distance between dynamo or electric motors and standard compass 19 ft.

Distance between dynamo or electric motors and steering compass 1 1/2 ft.

The nearest cables to the compasses are as follows:—

A cable carrying <u>32</u> Amperes	<u>Two</u> feet from standard compass	<u>One</u> 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 Compasses adjusted with electric installation at work but deviation not given

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the steering compass.

_____ standard compass and _____ degrees on _____ course in the case of the steering compass.

Skinner & Eddy Corp. for M. H. Keil Builder's Signature. Date Dec. 27-1916.

GENERAL REMARKS.

The Electric lighting installation fitted and tested under special survey. The material and workmanship of the best quality, and in my opinion eligible to have the record of Electric Light in the Register Book in the case of this vessel.

this vessel is eligible for THE RECORD. Elec. light.

J. W. 31/1/17.

James Fowler

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec Light

New York JAN 11 1917

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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