

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Belfast

THURS. 3 AUG 1907
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No. 4220 *

No. in Reg. Book. Name of Ship Mobile Built at Harland & Wolff, Belfast When built 1892
Electric Light Installation fitted by W. H. Allen & Co. when fitted February 1893-completed.

DESCRIPTION OF DYNAMO AND ENGINE.—

Dynamo drum armature, inserted field, compound wound, direct driven by
Engine of Allen's patent single cylinder vertical type, with special cut-off
governor
Capacity of Dynamo 130 Amperes at 62 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed On starting platform aft in thrust block recess

LAMPS.—

Is vessel wired on single or double wire system single Total number of lights 301 arranged in the following groups:—
1 58 lights each of 16 candle power requiring a total current of 58 Amperes
A 43 lights each of 16 candle power requiring a total current of 43 Amperes
B 43 lights each of 16 candle power requiring a total current of 43 Amperes
C 31 lights each of 16 candle power requiring a total current of 31 Amperes
D 23 lights each of 16 candle power requiring a total current of 23 Amperes
E 48 lights each of 16 candle power requiring a total current of 48 Amperes
1 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2 Amperes
2 Side light with 2 lamps each of 32 candle power requiring a total current of 4 Amperes
6 Cargo lights of 128 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. —

SWITCHES AND CUT-OUTS.—

Position of Main Switch Board Aft bulkhead facing dynamo having switches to groups 1 to 8 of lights as above

Positions of other switch boards and numbers of switches on each —

If cut outs are fitted to main circuit yes and to each auxiliary circuit yes

and at each position where cable is branched or reduced in size where sufficiently so as to need it

If vessel is wired on the double wire system are cut outs fitted on each wire —

Are the cut outs of non-oxidizable metal pure tin and constructed to fuse at an excess of about 50 per cent over the normal current

Are all cut outs fitted in easily accessible positions yes

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas —

How are the lamps specially protected in places liable to the accumulation of vapour or gas —

Are all switches and cut-outs constructed of unflammable materials and fitted on unflammable bases yes

DESCRIPTION OF CABLES.—

Main cable carrying 130 Amperes, comprised of 37 wires, each 16 legal standard wire gauge diameter
Branch cables carrying 23 Amperes, comprised of 4 wires, each 16 legal standard wire gauge diameter
Branch cables carrying 58 Amperes, comprised of 19 wires, each 16 legal standard wire gauge diameter
Leads to lamps 1 Amperes, comprised of 1 wires, each 16 legal standard wire gauge diameter
Cargo light cables carrying 8 Amperes, comprised of 145 wires, each 38 legal standard wire gauge diameter

The copper used has a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2000 megohms per statute mile after 24 hours' immersion in seawater



DESCRIPTION OF INSULATION, PROTECTION, &c.—

pure rubber, vulcanizing white & black vulcanized together, internally braided & compounded.

Joints in cables, how made, insulated, and protected soldered & covered with pure rubber rubber solution & external tape & waterproof varnish.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes

How are cables led throughout the ship in casing, except in machinery spaces where they are clipped to bulkheads.

What special protection has been provided for the cables in open alleyways strong covers

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

What special protection has been provided for the cables near boiler casings } galvanized armoring.

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

How are cables carried through decks galvanized iron deck tubes and through bulkheads fibre bushes

Are any cables run through coal bunkers no or cargo spaces yes If so, how are they protected strong covers & casing carried in most cases along channel iron

Are any lamps fitted in coal bunkers or spaces which may be used for cargo in cargo spaces

If so, how are they specially protected best iron fittings & cast iron covers

Cargo light cables, whether portable or permanently fixed portable How fixed to special couplers.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel earth screw or fibre magnet

How are the returns from the lamps connected to the hull 3/8" brass which screws have the reticulus soldered to the

Are all the joints with the hull in accessible positions yes.

TESTING, &c.—

Has the installation been thoroughly tested to its full capacity during a trial of 6 hours' duration yes

The insulation resistance of the whole installation was not less than — ohms

The installation is supplied with 1 voltmeter and 2 amperemeter, fixed on near switchboard.

General Remarks.—

A cable carrying 24 amps for 3 cargo lanterns hangs about 24' from standard compass & about 18.6' from steering compass, but this cable is only used for cargo purposes in port, not at sea, & does not therefore concern compass.

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.

N. Hauer & Co



Date 29th July 1893

COMPASSES.—

Distance between dynamo and standard compass } about 100 feet

Distance between dynamo and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 32	} = a total of 65	Amperes	} about 24	feet from standard compass	} about 18' 6"	feet from steering compass
A cable carrying 16						
A cable carrying 12						
A cable carrying 4		Amperes		feet from standard compass		feet from steering compass
A cable carrying 1		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

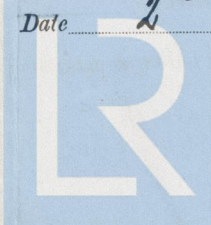
The maximum deviation due to electric currents, etc., was found to be 0 degrees on any course in the case of the standard compass and 0 degrees on any course in the case of the steering compass.

Builder's Signature Date

Surveyor's Signature Date

A. H. Jones

Date 2nd Aug 1893



Lloyd's Register Foundation