

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Calcutta

Received at London Office 18

No. 1048 *
 Name of Ship P. S. S. Princess Built at Kiel When built 1905
 Reg. Book. 1048
 Electric Light Installation fitted by The Russia Eng. Works Ltd. when fitted May 1919

DESCRIPTION OF DYNAMO AND ENGINE.—

Compound wound 12 Pole. Three dynamos each of capacity stated below.
Compound slow speed R. P. M. 250 Engines & Dynamos made in Berlin.
 Capacity of Dynamo K. W. 41 Amperes at 402, 102 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In the Engine Room

LAMPS.—

Is vessel wired on single or double wire system Single Total number of lights 576 arranged in the following groups:—

A	<u>nil</u>	lights each of	<u>nil</u>	candle power requiring a total current of	<u>nil</u>	Amperes
B	<u>nil</u>	lights each of	<u>nil</u>	candle power requiring a total current of	<u>nil</u>	Amperes
C	<u>nil</u>	lights each of	<u>nil</u>	candle power requiring a total current of	<u>nil</u>	Amperes
D	<u>nil</u>	lights each of	<u>nil</u>	candle power requiring a total current of	<u>nil</u>	Amperes
E	<u>nil</u>	lights each of	<u>nil</u>	candle power requiring a total current of	<u>nil</u>	Amperes
<u>2</u>	<u>Mast head light with 2 lamps each of</u>	<u>50</u>		candle power requiring a total current of	<u>.8</u>	Amperes
<u>2</u>	<u>Side light with 2 lamps each of</u>	<u>50</u>		candle power requiring a total current of	<u>.8</u>	Amperes
<u>24</u>	<u>Cargo lights of</u>	<u>150</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>	

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

SWITCHES AND CUT-OUTS.—

Main Switch Board In the Engine Room having switches to groups of lights as above
 other switch boards and numbers of switches on each There are 19 B. D. Boards N° 1-6 switches
1-S, N° 3-6S, N° 4 only fuses N° 5 only fuses N° 6-4S N° 7-4S, N° 8-4S, N° 9-4S,
2-S, N° 11. only fuses. Captain's Room 1-B. D. with 14 switches, N° 12.
3-S, N° 14-4-S, N° 15 only 2 fuses N° 16-5S, N° 17-4-S, N° 18-3-S N° 19-4
 are fitted to main circuit Fuse cutouts are fitted and to each auxiliary circuit Fuse cutouts are fitted
 at each position where cable is branched or reduced in size cutouts are fitted
 If vessel is wired on the double wire system are cut outs fitted on each wire Single wire cutouts are fitted to one wire
 Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 5% 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 with bulkhead, & well glass fittings
 Are all switches and cut-outs constructed of unflammable materials and fitted on unflammable bases yes

DESCRIPTION OF CABLES.—

Main cable carrying	<u>92</u>	Amperes, comprised of	<u>14/16</u>	wires, each	<u>N° 16</u>	legal standard wire gauge diameter
Branch cables carrying	<u>48</u>	Amperes, comprised of	<u>14/20</u>	wires, each	<u>N° 20</u>	legal standard wire gauge diameter
Branch cables carrying	<u>24</u>	Amperes, comprised of	<u>7/20</u>	wires, each	<u>N° 20</u>	legal standard wire gauge diameter
Leads to lamps	<u>50/0.2 lbs</u>	Amperes, comprised of	<u>35/40 Flex</u>	wires, each	<u>N° 40</u>	legal standard wire gauge diameter
Cargo light cables carrying	<u>1.2</u>	Amperes, comprised of	<u>35/30</u>	wires, each	<u>N° 30</u>	legal standard wire gauge diameter

The copper used has a conductivity of 100% per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours immersion in seawater



DESCRIPTION OF INSULATION, PROTECTION, &c.—

Cables and wires are lead covered, taped and braided and armoured cables are in use on the vessel.

Joints in cables, how made, insulated, and protected *Mechanical protected in brass & teak wood boxes*

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

How are cables led throughout the ship *with Stanley clips*

What special protection has been provided for the cables in open alleyways *with wooden & Stanley's protectors*

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 *cables run on wooden battens*

What special protection has been provided for the cables in engine room *Stanley's protectors*

How are cables carried through decks *through W.T. piping* and through bulkheads *through lashed holes*

Are any cables run through coal bunkers *no* or cargo spaces *no* If so, how are they protected

Are any lamps fitted in coal bunkers or spaces which may be used for cargo *no*

If so, how are they specially protected

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *with flexible to W.T. plug*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *negative terminal bolted to frame*

How are the returns from the lamps connected to the hull *bolted*

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 *2* hours' duration *yes*

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

The installation is *has 3* supplied with a voltmeter and *3* amperemeter fixed *on main boards*

General Remarks.—

Main cables have not been renewed, and only general repair work has been carried out.

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.

The Russa Engineering Works Ltd.
For KILBURN & Co.

[Signature]
Managing Agents

Electrical Engineers

Date *19-5-19*

COMPASSES.—

Distance between dynamo and standard compass _____

Distance between dynamo and steering compass _____

The nearest cables to the compasses are as follows:—

A cable carrying _____ Amperes _____ 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 _____

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.

Builder's Signature _____ Date _____

Thomas W.C. Napier

Surveyor's Signature _____ Date *4th June 1919*



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