

Rpt. 13.

No. 28715

REPORT ON ELECTRIC FITTINGS

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

SAT. 2 FEB. 1924

Received at London Office.....

Date of writing Report 10 When handed in at Local Office - 1 FEB 1924 Port of SUNDERLAND.

No. in Survey held at SUNDERLAND Date, First Survey Dec 3 Last Survey 11 Jan 1924
Reg. Book. on the S.S. "PENHALE" (Number of Visits.....5.....)Built at Sunderland By whom built Sir J. Priestman & Co. Yard No. 286 Tons { Gross 14071
Net 2451
When built 1924

Owners R. B. Challen & Son, Esq. Port belonging to Cardiff

Electric Light Installation fitted by Messrs. Campbell & Isherwood Ltd. Contract No. C. 8732 When fitted 1923.

System of Distribution Double Wire.

Pressure of supply for Lighting 100. volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting Direct. Power —

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes.

Generators, do they comply with the requirements regarding overload Yes. , are they compound wound Yes

are they over compounded 5 per cent. Yes , if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel — , is an adjustable regulating resistance fitted in series with each shunt field No.

Are all terminals accessible and clearly marked Yes , are they so spaced or shielded that they cannot be accidentally earthed, or short circuited Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Starboard side of Engine room under Stern.

is the ventilation in way of the generators satisfactory Yes , are they clear of all inflammable material Yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and — , are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axis of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes

Main Switch Boards, where placed Aft Bulkhead of Engine room.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes

are they protected from mechanical injury and damage from water, steam or oil Yes , if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards 2 feet and

are they constructed wholly of durable, incombustible non-absorbent materials Yes , is all insulation of high dielectric strength and of permanently high insulation resistance Yes

if semi-insulating material is used, are all conducting parts connected to one pole insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes , and is the frame effectively earthed Yes

Are the following fittings as per Rule, viz.:— spacing or shielding of live parts Yes , accessibility of all parts Yes , absence of fuses on back of board Yes , proportion of omnibus bars Yes

individual fuses to voltmeter, pilot or earth lamp Yes , connections of switches Yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Main double pole switch and fuses for generator. Single pole switch and double pole fuses for circuits.

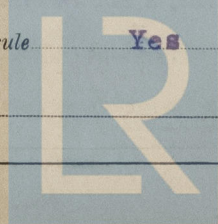
Instruments on main switchboard one ammeters one voltmeters synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

Earth lamps.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes



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Lloyd's Register Foundation

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Insulation of Cables, *state type of cables, single or twin* both *are the cables insulated and protected as per Tables III or IV of the Rules* Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4 Volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets

Paper Insulated Cables. *If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound* _____

Cable Runs, are the cables fired as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage.

Support and Protection of Cables, *state how the cables are supported and protected.* Cabins lead covered clipped up with brass elips. Engine room and Boiler room lead covered and armoured clipped up with galv. iron elips.

If cables are run in wood casings, are the casings and caps secured by screws yes, are the cap screws of brass yes, are the cables run in separate grooves no. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI Yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements

Joints in Cables, state if any, and how made, insulated, and protected **none made.**

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

Bushes in Beams and Non-watertight Positions, *where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently*
bushed **Yes** state the material of which the bushes are made **lead**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas 4 - $\frac{3}{4}$ " Iron Belts. Welding
down bolts.

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven

Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes

are the fuses double pole Yes, are the switches and fuses grouped in a position accessible only to the officers on watch Yes

has each navigation lamp an automatic indicator as per Rule Yes, are separate screens provided for the use of oil and electric side lights Yes

are separate oil lanterns provided for the mast head lights and side lights..... **Yes**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture. watertight

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them: if so, how are they protected

Are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected

....., how are the cables led

where are the controlling switches situated _____ /

Searchlight Lamps, No. of _____, whether fixed or portable _____, are their fittings as per Rule _____

re Lamps, other than searchlight lamps, No. of , are their live parts insulated from the frame or case , are their fittings as per Rule

Motors, are their working parts readily accessible....., are the coils self-contained and readily removable for replacement.....

re the brushes, brush holders, terminals and lubricating arrangements as per Rule....., are the motors placed in well-ventilated compartments in which

flammable gases cannot accumulate and clear of all inflammable material.

are they protected from mechanical injury and damage from water, steam or oil ☒ are their axis of rotation fore and aft ☒

situated near unprotected woodwork or other combustible material are the motors of the totally enclosed mine ventilated fan.

if not of this type, state distance of the combustible material horizontally or vertically above the motors

Control Gear and Resistances. are the generator field and motor speed regulators, starters and controllers constructed as per Paile ✓

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding ventilation?

PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	I	7.5	100	75		Steam Engine		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

[illegible][illegible]

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
The foregoing is a correct description.

CAMPBELL & ISHERWOOD, LTD.

PER

Thomas Meade

Electrical Engineers.

Date 23rd Jan 1924

COMPASSES.

Distance between electric generators or motors and standard compass about 150 feet

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying .3 Ampères 1 feet from standard compass 1 feet from steering compass.

A cable carrying 1.1 Ampères 3 feet from standard compass 6 feet from steering compass.

A cable carrying 5.5 Ampères 15 feet from standard compass 15 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power YES

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted YES

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

B. CHELLEW STEAM NAVIGATION CO. LTD.

Rich E Rapson

Owners

Builder's Signature.

Date 31/1/24

Is this installation a duplicate of a previous case yes If so, state name of vessel "Penduen"

General Remarks (State quality of workmanship, opinions as to class, &c.)

This electric light installation has been fitted in a satisfactory manner and in accordance with the rules and has been tried under working conditions with satisfactory results.

It is submitted that
this vessel is eligible for
THE RECORD. Elec. light.

JWD
5/2/24

Total Capacity of Generators 7.5 Kilowatts

The amount of Fee ... £ 8 : : When applied for, 10th Jan 1924
Travelling Expenses (if any) £ : : When received, See debit book.

G.A. Hark

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned