

Rpt. 13.

No. 2098

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 13 NOV 1924

Date of writing Report 11 Nov 1924 When handed in at Local Office

19 Port of Barrow-in-Furness

No. in Survey held at Barrow.
Reg. Book.Date, First Survey 10th Aug Last Survey Sept 2nd 1924
(Number of Visits.....)

88528 on the

S. S. "Deane"

Tons { Gross 1043
Net 424

Built at Barrow.

By whom built

Bickers Ltd.

Yard No. 611

When built 1924

Owners London, Midland & Scottish Railway Co. Ltd.

Port belonging to

Goole.

Electric Light Installation fitted by

Bickers Ltd.

Contract No. 611

When fitted 1924

System of Distribution

Double pole - two wire - looping in

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.

No

, 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

Yes

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

Engine room lower platform (starboard side)

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

Alongside Dynamo.

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 so far as practicable

, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards

✓ 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

No. Slab bar.

, 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

No equalizer

In Dynamo - 2 HP switches

In Branch circuits - 2 HP switches

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

Two lamps, switches & fuses

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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Insulation of Cables, state type of cables, single or twin *Single* 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 *Yes*

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 *no paper cables used*

Cable Runs, are the cables fixed 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 *Yes*

Support and Protection of Cables, state how the cables are supported and protected *Supported by clips to bulkheads underside of decks. Protected by Armoring, lead sheathing & tubing.*

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 *Yes*. 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 *Yes*

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

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

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 *Yes*

are their connections made as per Rule *Yes*

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 *None*

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 *Yes*

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 *Yes*

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

how are the cables led *Yes*

where are the controlling switches situated *Yes*

Searchlight Lamps, No. of *1*, whether fixed or portable *Yes*, are their fittings as per Rule *Yes*

Are Lamps, other than searchlight lamps, No. of *1*, are their live parts insulated from the frame or case *Yes*, are their fittings as per Rule *Yes*

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

are the brushes, brush holders, terminals and lubricating arrangements as per Rule *Yes*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *Yes*

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

if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type *Yes*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *Yes* and *Yes*

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed as per Rule *Yes*

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

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings *Yes*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *Yes*

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN ...	<i>One</i>	<i>10</i>	<i>100</i>	<i>100</i>	<i>360</i>	<i>Reciprocating Steam Engine</i>	<i>Oil</i>	<i>150° F.</i>	<i>Yes</i>
AUXILIARY ...									
EMERGENCY ...									
ROTARY TRANSFORMER									

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	<i>2</i>	<i>1</i>	<i>19</i>	<i>.013</i>	<i>100</i> ✓	<i>30</i>	<i>V.I.R.</i>	<i>Lead Covered & Armoured</i>
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM ...	<i>2</i>	<i>.0145</i>	<i>Y</i>	<i>.052</i>	<i>14.5</i> ✓	<i>12</i>	<i>V.I.R.</i>	<i>Lead Covered & Armoured</i>
	BOILER ROOM ...								
	WIRELESS ...								
	SEARCHLIGHT ...								
	MASTHEAD LIGHT...	<i>2</i>	<i>.012</i>	<i>3</i>	<i>.029</i>	<i>2</i> ✓	<i>200 & 300</i>	<i>V.I.R.</i>	<i>HB in Conduits</i>
	SIDE LIGHTS ...	<i>2</i>	<i>.012</i>	<i>3</i>	<i>.029</i>	<i>2</i> ✓	<i>40</i>	<i>"</i>	<i>"</i>
	COMPASS LIGHTS ...	<i>2</i>	<i>.012</i>	<i>3</i>	<i>.029</i>	<i>2.5</i> ✓	<i>40</i>	<i>"</i>	<i>"</i>
	POOP LIGHTS ...	<i>2</i>	<i>.012</i>	<i>3</i>	<i>.029</i>	<i>1</i> ✓	<i>40</i>	<i>"</i>	<i>"</i>
	CARGO LIGHTS ...	<i>2</i>	<i>.012</i>	<i>3</i>	<i>.029</i>	<i>2.4</i> ✓	<i>120 & 240</i>	<i>"</i>	<i>"</i>
	ARC LAMPS ...								
	HEATERS ...								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP ...								
	MAIN BILGE LINE PUMPS ...								
	GENERAL SERVICE PUMP ...								
	EMERGENCY BILGE PUMP ...								
	SANITARY PUMP ...								
	CIRC. SEA WATER PUMPS ...								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR ...								
	FRESH WATER PUMP ...								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...								
	OIL FUEL TRANSFER PUMP								
	WINDLASS ...								
	WINCHES, FORWARD ...								
	WINCHES, AFT ...								
	STEERING GEAR ...								
	WORKSHOP MOTOR ...								
	VENTILATING FANS ...								

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.

For VICKERS Limited.

B. H. Sam

Director.

Electrical Engineers.

Date 17/11/24.

COMPASSES.

Distance between electric generators ~~or motors~~ and standard compass 80 ft.

Distance between electric generators ~~or motors~~ and steering compass 100 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères 6 ft. feet from standard compass 6 ft. feet from steering compass.

A cable carrying 4 Ampères 3 feet from standard compass 4 feet from steering compass.

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

For VICKERS Limited.

B. H. Sam

Director.

Builder's Signature.

Date 17/11/24

Is this installation a duplicate of a previous case *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *This installation has been efficiently fitted, and proved satisfactory under working conditions. In my opinion the vessel is eligible to have the notation of "Electric light" made in the Register Book.*)

It is submitted that
this vessel is eligible for
THE RECORD. Elec. Light.
R. H. A.
20/11/24.

Total Capacity of Generators 10 Kilowatts

The amount of Fee ... £ 10 : - : When applied for, *22nd Sept 1924*
Travelling Expenses (if any): £ : : When received, *22nd Sept 1924*

Mr. Cowie

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

1m. 3.22. Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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