

Rpt. 13.

No. 42395.

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 21. 12. 1922 When handed in at Local Office 12. 1. 1923 Port of Glasgow

Received at London Office JAN. 17 1923

No. in Survey held at GLASGOW.

Date, First Survey 6. 10. 22 Last Survey 19. 12. 1922

Reg. Book.

(Number of Visits 13)

Y8203 on the S.S. "BRITISH ARCHITECT"

Tons { Gross 8000  
Net 4300

Built at

By whom built THE BLYTHSWOOD S. B. CO. Yard No. 1

When built 1922

Owners THE BRITISH TANKER CO. LTD.

Port belonging to LONDON.

Electric Light Installation fitted by H.T. ROBERTSON &amp; CO

Contract No. When fitted 1922.

System of Distribution

Two wire system.

Pressure of supply for Lighting

110

volts, Heating

volts, Power

volts.

Direct or Alternating Current, Lighting

Direct current.

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

No.

, 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

Starboard Side Engine Room on upper platform

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.

Yes.

are their axis of rotation fore and aft

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

Starboard Side Engine Room on upper platform

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

Yes.

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

, 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

Double pole main switch fuses for each generator, &amp; double pole switches fuses for each outgoing circuit. No equalizer connections

Instruments on main switchboard

2.

ammeters

2.

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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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 Yps.  
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2 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 Yps.  
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 Yps.  
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 Yps.  
Support and Protection of Cables, state how the cables are supported and protected Clipped to beams, brays under side of decks etc.  
If cables are run in wood casings, are the casings and caps secured by screws Yps., are the cap screws of brass Yps., are the cables run in separate grooves Yps.. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI Yps.  
Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements Yps.  
Joints in Cables, state if any, and how made, insulated, and protected No joints  
Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yps.  
Bushes in Beams and Non-watertight Positions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yps. state the material of which the bushes are made Lead.  
Earthing Connections, state what earthing connections are fitted and their respective sectional areas No Earth Connections  
are their connections made as per Rule Yps.  
Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yps.  
Emergency Supply, state position and method of control of the emergency supply and how the generator is driven Yps.  
Navigation Lamps, are these separately wired Yps., controlled by separate switch and separate fuses Yps.  
are the fuses double pole Yps., are the switches and fuses grouped in a position accessible only to the officers on watch Yps.  
has each navigation lamp an automatic indicator as per Rule Yps., are separate screens provided for the use of oil and electric side lights Yps.  
are separate oil lanterns provided for the mast head lights and side lights Yps.  
Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yps.  
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 No.  
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected No.  
how are the cables led Yps.  
where are the controlling switches situated Yps.  
Searchlight Lamps, No. of Yps., whether fixed or portable Yps., are their fittings as per Rule Yps.  
Arc Lamps, other than searchlight lamps, No. of Yps., are their live parts insulated from the frame or case Yps., are their fittings as per Rule Yps.  
Motors, are their working parts readily accessible Yps., are the coils self-contained and readily removable for replacement Yps.  
are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yps., are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yps.  
are they protected from mechanical injury and damage from water, steam or oil Yps. are their axis of rotation fore and aft Yps.  
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 Yps.  
if not of this type, state distance of the combustible material horizontally or vertically above the motors Yps. and Yps.  
Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed as per Rule Yps.  
Lightning Conductors, where lightning conductors are required, are these fitted as per Rule Yps.  
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. Yps.  
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office Yps.

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	2	12	110	109	330	4" x 6" open type engine			
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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
2	MAIN GENERATORS.	2	0.0372	19	14	104	20	J.R. Tape, Lead	Gas Tube
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	0.145	4	0.52	12	6	" "	
	BOILER ROOM	1	0.145	4	0.52	12	6	" "	
	Amidships	1	0.145	4	0.52	20	540	L. S. A.	
	Navigation	1	0.007	7	0.36	10	588	" "	
	Forecastle	1	0.007	7	0.36	8	840	" "	
	WIRELESS	1	0.145	4	0.52	30	550	" "	
	SEARCHLIGHT								
	MASTHEAD LIGHTS	2	0.002	3	0.36	2	250	J.R. Tape, Lead	
	SIDE LIGHTS	2	0.003	"	"	2	80	" "	
	COMPASS LIGHTS	2	0.002	"	0.29	6	20	" "	
	POOP LIGHTS	1	0.145	4	0.52	20	100	L. S. A.	
	CARGO LIGHTS	1	0.145	4	0.52	4	100	" "	
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	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.

*H.T. Robertson & Co.* Electrical Engineers.

Date *20<sup>th</sup> Dec '22*

#### COMPASSES.

Distance between electric generators or motors and standard compass *148 feet*

Distance between electric generators or motors and steering compass *150 "*

The nearest cables to the compasses are as follows:—

A cable carrying *2* Ampères *12* feet from standard compass *10* feet from steering compass.

A cable carrying *2* Ampères *in* feet from standard compass *in* feet from steering compass.

A cable carrying Ampères 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*

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 *any* course in the case of the standard compass, and *nil* degrees on *any* course in the case of the steering compass.

GLYTHSWOOD SHIPBUILDING CO., LTD.

*James S. Halliday*

Builder's Signature.

Date *27<sup>th</sup> Dec 1922*

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 fitted on board under special survey tested under full working conditions & found satisfactory. The requirements of the rules for this type of vessel having been carried out the workmanship was found to be good.*

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

*J.W.D.*  
*27/1/23*

Total Capacity of Generators *24* Kilowatts

The amount of Fee ... £ *19 : 10/-* When applied for, *20/12/22*

Travelling Expenses (if any) £ : : When received, *21/12/22*

*J.S. Rankin*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW* *16 JAN 1923*

Assigned *Elec. Light.*



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