

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 9.10.1926 When handed in at Local Office 30.10.1926 Port of GLASGOW.

No. in Survey held at GLASGOW.
Reg. Book.Date, First Survey 6th June Last Survey 5th Octr 1926
(Number of Visits 13)

82970 on the "M. V. SHROPSHIRE"

Tons { Gross 10560
Net

Built at GLASGOW.

By whom built THE FAIRFIELD S. B. & CO. LTD. Yard No. 619 When built 1926.

Owners THE BIBBY S. S. CO. LTD.

Port belonging to LIVERPOOL.

Electric Light Installation fitted by MESSRS THE FAIRFIELD S. B. & CO. LTD. Contract No. 619 When fitted 1926.

System of Distribution

2 WIRE ✓

Pressure of supply for Lighting

220 ✓

volts, Heating

220 ✓

volts, Power

220 ✓

volts.

Direct or Alternating Current, Lighting

DIRECT ✓

Power

DIRECT ✓

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

YES

, 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 STARB? SIDE OF ENGINE ROOM, HOLD LEVEL.

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

, are the generators protected from mechanical injury and damage from water, steam or oil

YES

are their axis of rotation fore and aft

YES

YES

are the prime movers and

Earthing, are the bedplates and frames of the generating plant efficiently earthed

YES

their respective generators in metallic contact

Main Switch Boards, where placed AFT END OF ENGINE ROOM, LOWER DECK LEVEL.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

YES

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

YES

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

YES

, if situated near unprotected

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

NONE

and NONE

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

HAS 1200 AMP. T.P. CIRCUIT BREAKER WITH OVERLOAD COILS, TIME LAGS, POLARISED REVERSE AND MAGNETIC BLOWOUTS. OUTGOING CIRCUITS HAVE EITHER D.P. OVERLOAD CIRCUIT BREAKERS OR D.P. SWITCHES AND FUSES.

Instruments on main switchboard

14

ommeters

3

voltmeters

1

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 WITH

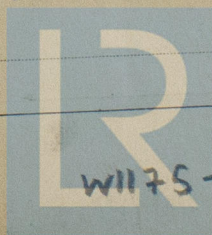
SWITCHES AND FUSES ON EACH POLE.

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

YES

YES

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



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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 **LIGHTING 4-2 VOLTS. POWER 7-4 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 **NONE**

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 **L.C. CABLES AND L.A.B. CABLES FIXED ON SHEET IRON PLATES WITH GALV. IRON CLIPS. V.I.R. CABLES IN WOOD CASING.**

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 **SHEET LEAD & WOOD**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas **NONE**

are their connections made as per Rule **—**

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 **EMERGENCY GENERATOR AND SWITCHBOARD IN EMERGENCY DYNAMO ROOM ON BOAT DECK AFT, A DUPLICATE SUPPLY TO EMERGENCY BOARD FROM MAIN BOARD, GENERATOR DRIVEN BY A 60 B.H.P., 2 CYCLE, HEAVY FUEL OIL ENGINE.**

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 **NONE**

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected **NONE**

how are the cables led **—**

where are the controlling switches situated **—**

where are the controlling switches situated **—**

Searchlight Lamps, No. of **1 - 18"**, whether fixed or portable **FIXED**, are their fittings as per Rule **YES**

Arc Lamps, other than searchlight lamps, No. of **NONE**, are their live parts insulated from the frame or case **—**, are their fittings as per Rule **—**

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, WHERE POSSIBLE**

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 **—** and **—**

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 **—**

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

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	3	265	220	1200	240	B & W 4 CYCLE DIESEL ENG.	SHELL - MEX	218°F
AUXILIARY	1	86	220	1000	240	B & W 4 CYCLE DIESEL ENG.	SHELL - MEX	218°F
EMERGENCY	1	86	220	1000	240	B & W 4 CYCLE DIESEL ENG.	SHELL - MEX	218°F
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.				
	EACH MAIN GENERATOR	4	1	91	.093	1200	180	PURE RUBBER	LEAD COVERED
	AUXILIARY GENERATOR	2	2	37	.083	163.5	35	"	"
	EMERGENCY GENERATOR	2	2	37	.083	163.5	456	"	"
	ROTARY TRANSFORMER	2	2	37	.083	163.5	456	"	"
86	ENGINE ROOM	3	.04	19	.052	25.36	60	"	"
	Bottom Room								
S1	CREW ROOM & RADIATORS	2	.06	19	.064	64.52	675	"	V.I.R. & L.C. & ARMoured
J2	CREW ROOM, BOAT & STORES	2	.1	19	.083	95.82	90	"	V.I.R.
J3	CREW ROOM, BOAT & STORES	2	.04	19	.052	34.72	135	"	"
S4	CREW ROOM, ENGINEERS, AND LAUNDRY	2	.045	7	.052	12.59	465	"	LEAD COVERED
S5	GALLEY, PAINTY & STORES	2	.01	7	.052	13.27	240	"	"
S7	FANS & RADIATORS	2	.4	61	.093	249.06	96	"	V.I.R.
SE1	POLICE LIGHTS	2	.04	19	.052	21.9	360	"	V.I.R. & L.C. & ARMoured
DE2	NAVIGATION ETC.	2	.045	7	.052	4.94	750	"	"
	BOAT LIGHTS	2	.0045	7	.029	4.09	750	"	"
	"	2	.0045	7	.029	4.09	750	"	"
	WIRELESS	2	.0225	7	.064	12.5	390	"	"
	SEARCHLIGHT	2	.06	19	.064	60	480	"	V.I.R.
	MASTHEAD LIGHT								
	SIDE LIGHTS								
	COMPASS LIGHTS								
	POOP LIGHTS								
S8	CARGO LIGHTS	2	.0225	7	.064	20.63	120	"	V.I.R.
	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	1	.075	19	.072	85	195	PURE RUBBER	LEAD COVERED
	TURBO BLOWER	2	.837	127	.093	1450	228	"	"
	MAIN BILGE PUMP	1	.06	19	.064	80	120	"	"
	GENERAL SERVICE PUMP	1	.06	19	.064	48	675	"	L.C. & L.C. & ARMoured
	EMERGENCY BILGE PUMP	1	.06	19	.064	85	180	"	LEAD COVERED
	SANITARY PUMP	1	.075	19	.072	85	180	"	"
	JACKET COOLING	2	.25	37	.093	185	255	"	"
	CHINA WATER PUMPS	2	.1	19	.083	97	300	"	"
	PISTON COOLING OIL	2	.1	19	.083	97	300	"	"
	CHINA WATER PUMPS	2	.1	19	.083	97	300	"	"
	AIR COMPRESSORS	2	.1	19	.083	97	300	"	"
	AUX. ENG. COOLING	2	.007	7	.036	24	150	"	"
	FRESH WATER PUMP	2	.15	37	.072	129	50	"	"
S11	ENGINE ROOM SMALL MOTORS	8	.15	37	.072	129	50	"	"
	ENGINE ROOM SMALL MOTORS	2	.1	19	.083	96	105	"	"
	CO2 MACHINES	2	.04	19	.052	60	300	"	"
	ENGINE ROOM SMALL MOTORS	2	.0045	7	.029	17.5	225	"	"
J14	OIL FUEL TRANSFER PUMP	2	.0045	7	.029	17.5	225	"	V.I.R. & L.C. & ARMoured
	WINDLASS	7	.837	127	.093	832	765	"	"
J15	WINCHES, FORWARD	6	.5	61	.103	520	225	"	"
	WINCHES, AFT & CAPSTANS	2	.12	37	.072	152	750	"	LEAD COVERED
	STEERING GEAR	6	.0225	7	.064	41.7	225	"	"
S12	ENGINE ROOM SMALL MOTORS	6	.04	19	.052	59.2	180	"	V.I.R.
S9	VENTILATING FANS	13	.3	37	.103	218.14	174	"	"
S10	GALLEY MACHINERY	6	.04	19	.052	49.4	630	"	LEAD COVERED
S16	LAUNDRY	2	.2	37	.083	220	135	"	V.I.R.
S13	BOAT WINCHES	2	.2	37	.083	220	135	"	"

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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.

E. Kinney

Electrical Engineers.

Date *16/10/26*

COMPASSES.

Distance between electric generators or motors and standard compass *28 FEET FROM FAN MOTOR*

Distance between electric generators or motors and steering compass *66 " " " "*

The nearest cables to the compasses are as follows:—

A cable carrying *127* Amperes *1/4* inch feet from standard compass feet from steering compass.

A cable carrying *127* Amperes feet from standard compass *1/4* inch 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 *YES.*

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

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

THE FAIRFIELD SHIPBUILDING
AND ENGINEERING CO., LIMITED.

Builder's Signature.

Date *16 OCT. 1926*

J. H. H. H. H.
MANAGER

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 and found satisfactory. The workmanship was found to be good and sound.

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

J. W. D.
5/11/26

Total Capacity of Generators *195* Kilowatts

The amount of Fee *£ 51-4-6*

When applied for,

16/10/26

When received,

4.2.27

Travelling Expenses (if any) £ :

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

Committee's Minute *GLASGOW 2-NOV 1926*

Assigned

Elec. Light.



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A. L.
30/10/26