

ch. 13.

Size of
1/2"

No. 10,641

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

22 JUN 1931

of writing Report

19

When handed in at Local Office

19th June 1931

Port of

Received at London Office

Belfast

in Survey held at

Belfast

Date, First Survey

18th April

Last Survey

16th June

1931

Book.

(Number of Visits.....)

No. and on the

Steel TWIN. SC.

MARACAY

Tons

Gross
Net

at

Belfast

By whom built

Harland Wolff Ltd.

Yard No.

915

When built

1931

ers

Rago Shipping Co. Ltd.

Port belonging to

London

Electric Light Installation fitted by

Harland Wolff Ltd.

Contract No.

When fitted

1931

e Vessel fitted for carrying Petroleum in bulk

Yes.

ater beam of Distribution

Two Wire Direct Current to Distribution Boxes

sure of supply for Lighting

110

volts, Heating

—

volts, Power

110

volts.

ing prot or Alternating Current, Lighting

Direct

Power

Direct

autic t ernating current system, state frequency of periods per second

—

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

Yes

rators, do they comply with the requirements regarding rating

Yes

, are they compound wound

Yes

ey over compounded 5 per cent.

Yes

, if not compound wound state distance between each generator

more than one generator is fitted are they arranged to run in parallel

No

, is an adjustable regulating resistance fitted in

with each shunt field

Yes

l terminals accessible, clearly marked, and furnished with sockets

Yes

, are they so spaced or shielded that they cannot be accidentally earthed,

with circuted, or touched

Yes

Are the lubricating arrangements of the generators as per Rule

Yes

ion of Generators

In Engine Room Aft

ventilation in way of the generators satisfactory

Yes

, are they clear of all inflammable material

Yes

uated 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

air axes of rotation fore and aft

Yes

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

Yes

are the prime movers and

pective generators in metallic contact

Yes

Switch Boards, where placed

In Engine Room on Aft Bulkhead

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

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

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

Yes

y protected from mechanical injury and damage from water, steam or oil

Yes

, if situated near unprotected

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

and

y constructed wholly of durable, non-ignitable non-absorbent materials

Yes

, is all insulation of high dielectric strength and of

ently high insulation resistance

Yes

, if semi-insulating material is used, are all conducting parts insulated from the slab

ica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

the frame effectively earthed

Yes

Are the fittings as per Rule regarding:— spacing or shielding of live parts

, accessibility of all parts

Yes

, absence of fuses on back of board

Yes

, proportion of omnibus

, individual fuses to voltmeter, pilot or earth lamp

Yes

, connections of switches

Yes

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

Each Generator is

ected to separate sets of bus-bars with double pole switches and fuses and each outgoing

it has double pole change over switches and double pole fuses.

ments on main switchboard

two

ammeters

one

voltmeters

synchronising device for paralleling purposes.

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

Earth Indicator

ster of with change over switch to each set of bus-bars

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

Yes

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

Yes

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Cables: Single, twin, concentric, or multicore are the cables insulated and protected as per Tables IV or V of the Rules *Yes*
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *5 volts*

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 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

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 *Cables are lead covered and passed through steel piping along deck*

If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII *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 *All joints are made in properly constructed junction boxes*

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 Partitions, 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 *All portable fittings, sockets etc. fitted other than to the steel work of the ship are provided with an earthing connection equivalent to working conductor* 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 —

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*

Secondary Batteries, are they constructed and fitted as per Rule —

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 —

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* *Special gas tight fittings* how are the cables led *No main cables in this space. Branch circuits in lead covered, steel armoured and braided clipped to steel work of ship*

where are the controlling switches situated *Passage in forward accommodation*

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

Arc 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 *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 axes 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 —, 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 and fitted as per Rule *Yes*

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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	7	110	63.5	620/600	enclosed type vertical steam engine 6" x 4" cylinder	—	—
AUXILIARY	—	—	—	—	—	—	—	—
EMERGENCY	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER	—	—	—	—	—	—	—	—

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	0.04	19	.052		64	30	Rubber	Lead covered
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	.003	3	.036	6.3	12	90	Rubber	Lead covered
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
Accom. Aft	1	.01	7	.044	2.2	31	150	Rubber	Lead covered
Navigation and Wireless etc.	1	.01	7	.044	8.2	31	600	Rubber	Lead covered
Officers accom. and Pump Room Ford	1	.01	7	.044	13.4	31	570	Rubber	Lead covered
ACCOMMODATION									
WIRELESS	1	.01	7	.044	2.3	31	600	Rubber	Lead covered
SEARCHLIGHT									
MASTHEAD LIGHT	1	.002	3	.029	0.36	7.8	384	Rubber	Lead covered
SIDE LIGHTS	1	.002	3	.029	0.36	7.8	85		Armoured + Braided
COMPASS LIGHTS	1	.002	3	.029	0.18	7.8	50	Rubber	Lead covered
POOP LIGHTS									
CARGO LIGHTS	1	.0048	110	.0076	1.8	130	288	Rubber	L. I. S.
ARC LAMPS									
HEATERS									

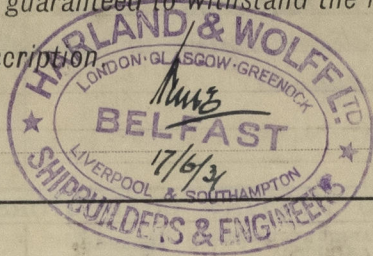
MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
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—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
Blower motors for Galley Range	2	1	.003	3	.036	5.5	12	60	Rubber	Lead covered
C.O.2 Machine	1	1	.007	7	.036	22.4	24	50		
Brine Pump	1	1	.003	3	.036	5.8	12	120		

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



Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass 250 ft.

Distance between electric generators or motors and steering compass 245 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 8.2 Ampères 8 feet from standard compass 6 feet from steering compass.

A cable carrying 13.4 Ampères 24 feet from standard compass 18 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

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.



Builder's Signature.

Date

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 under special survey & in accordance with the rules. The materials and workmanship are sound & good. It has been tested under working conditions with satisfactory results.

It is submitted that
this vessel is suitable for
Elec. Light.

om.

23/6/31.

Jl.

Total Capacity of Generators 14 Kilowatts.

The amount of Fee ... £ 14 : - : When applied for, 19th June 31

Travelling Expenses (if any) £ - : : When received, 5 - 8 - 31

R. Lee Ames

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 26 JUN 1931

Assigned

Elec. Light



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