

Rpt. 13.

No. 48411

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

17 OCT 1928

Date of writing Report 20.9.1928 When handed in at Local Office

Port of GLASGOW.

No. in Survey held at GLASGOW.

Date, First Survey 5.9.28. Last Survey 17.10.1928

Reg. Book.

90766 on the

S.S. "KERMA."

(Number of Visits.....)

Tons

Gross 4333

Net

Built at GLASGOW.

By whom built

MESSRS D &amp; W. HENDERSON Card No. 831.

When built 1928.

Owners MESSRS F. C. STRICK &amp; CO LTD

Port belonging to

LONDON.

Electric Light Installation fitted by MESSRS CLARK CHAPMAN &amp; CO

Contract No. 831

When fitted 1928.

System of Distribution

Double wire system

Pressure of supply for Lighting

110

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 rating

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

1 foot

, is an adjustable regulating resistance fitted in

series with each shunt field

Yes

Are all terminals accessible, clearly marked, and furnished with sockets

Yes

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

short circuited, or touched

Yes

Are the lubricating arrangements of the generators as per Rule

Yes

Position of Generators

Engine Room 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 axes of rotation fore and aft

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

Yes

Main Switch Boards, where placed

Engine Room starboard side near 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

Yes

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

and

are they constructed wholly of durable, non-ignitable 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 insulated from the slab

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

Yes

and is the frame effectively earthed

Yes

Are the fittings as per Rule regarding:— 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

Double pole switches &amp; fuses in dynamo mains, single pole switches &amp; double pole fuses in each outgoing circuit

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

Bottle lamps

coupled to each through switches &amp; fuses

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

Yes

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

Yes

004635-004641-0275

Lloyd's Register  
Foundation



11281  
Cables: Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV and V of the Rules yes  
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2.5 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 yes  
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 Lead covered in engine room, lead covered in boiler room, armoured & braided in cargo hold, cables are under lead  
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  
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 made  
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 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 yes  
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 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 fixed, are their fittings as per Rule yes  
Arc Lamps, other than searchlight lamps, No. of 0, 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 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 yes  
if not of this type, state distance of the combustible material horizontally or vertically above the motors yes  
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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	1	10	110	90	360	Single cylinder steam 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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
1	MAIN GENERATOR...	1	.04892	19	.072	90	30	Pure rubber	Lead covered
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
2	ENGINE ROOM	2	.00701	7	.036	16.7	60	"	Lead covered & Braided
	BOILER ROOM								
	ACCOMMODATION								
3	Forward engine room	2	.01462	7	.052	30.4	180	"	Armoured & Braided
4	Engine room aft	2	.01046	7	.044	9.6	120	"	Armoured & Braided
5	WIRELESS	2	.00401	19	.036	15	200	"	Armoured & Braided
6	SEARCHLIGHT	2	.00152	1	.044	9	240	"	In iron boxes
7	MASTHEAD LIGHT	2	.00152	1	.044	9	20	"	Lead covered
8	SIDE LIGHTS	2	.00152	1	.044	5	120	"	"
9	COMPASS LIGHTS	2	.00152	1	.044	9	360	"	Armoured & Braided
10	PORT LIGHT	2	.00152	1	.044	9	100	"	Braided & Compounded
11	CARGO LIGHTS	2	.00455	168	.036	2.5			
12	ARC LAMPS								
13	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								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	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 of the installation.

Chapman & Co., Ltd.

Director. Electrical Engineers.

Date

Sept. 28. 1928

#### COMPASSES.

Distance between electric generators or motors and standard compass

96 ft

Distance between electric generators or motors and steering compass

90 "

The nearest cables to the compasses are as follows:—

A cable carrying .5 Amperes 12 feet from standard compass 6 feet from steering compass.

A cable carrying .5 Amperes 6 feet from standard compass 12 feet from steering compass.

A cable carrying .5 Amperes 6 feet from standard compass 12 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

12 degrees on

all

course in the case of the standard

compass, and

12 degrees on

all

course in the case of the steering compass.

WILLIAM HENDERSON & CO. LIMITED

Wm. Henderson & Co. Ltd.

Builder's Signature.

Date

3/10/28

Is this installation a duplicate of a previous case

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 load conditions and found  
satisfactory

The materials and workmanship were found  
to be good and sound.

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

26/10/28

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ...

£ 10.0.0

When applied for,  
26 SEP 1928

Travelling Expenses (if any) £

When received,  
20 OCT 1928

Committee's Minute

GLASGOW 16 OCT 1928

Assigned

Elec. Light

J. Rankin

Surveyor to Lloyd's Register of Shipping.



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