

## REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 JAN 1925

Received at London Office.....

Date of writing Report

19

When handed in at Local Office

19/1/

19

25

Port of

Middlesbrough

No. in

Survey held at

Stockton-on-Tees

Date, First Survey

31/12/24

Last Survey

12/1/

1925

Reg. Book.

87829

Subt

on the

Steel Rensselaer Steamer "Ambassador"

Messrs. The Rensselaer Shipbuilding &amp; Repairing Co. (Stockton) Ltd. Yard No. 547

Tons

Gross 4450

Net 2658

Built at

Stockton-on-Tees

By whom built

Messrs. The Rensselaer Shipbuilding &amp; Repairing Co. (Stockton) Ltd. Yard No. 547

When built

1925

Owners

Hall Bros S.S. Coy. Ltd.

Port belonging to

Newcastle

Electric Light Installation fitted by

Messrs. R. S. S. &amp; Son Ltd.

Contract No.

When fitted

1925

## System of Distribution

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.

-

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

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 of ship bottom 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

4 ft.

and Asbestos lined

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

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

on Starboard side of Engine Room near Generators

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

1'-0"

and Asbestos lined

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

Main Double Pole Switch with Single Pole Circuit Switches &amp;

Double Pole fuses to various Distribution Stations

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

Each Pole

Each Lamp

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

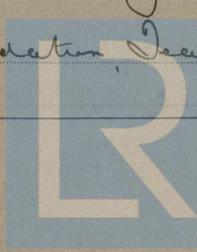
yes

Engine Room Iron Frame, Asbestos lined, Accommodation Deck Base

Asbestos lined

W426-0209

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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

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

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 By Iron clips, Lead covered & Armoured in Engine Room, Holders etc. Accommodation - Lead covered & Brass clips

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 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 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 Main Switchboard & Generator

are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule

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

has each navigation lamp an automatic indicator as per Rule yes, are separate screens provided for the use of oil and electric side lights

are separate oil lanterns provided for the mast head lights and side lights

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 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

where are the controlling switches situated

Searchlight Lamps, No. of none, whether fixed or portable —, are their fittings as per Rule —

Are 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 —, are the coils self-contained and readily removable for replacement —

are the brushes, brush holders, terminals and lubricating arrangements as per Rule —

are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material —

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

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 as per Rule —

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 —

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 ...	1	6	100	60	550	Allen & Sons.		
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...	2	.0750	19	.092	9.17	13 ft	Rubber	Leaky
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM ...	2	.0100	7	.044	10	50 ft	So	to 6 & 8 mounds
	BOILER ROOM ...	2	.0030	3	.036	3	120 ft	So	
	Engine Room	2	.0100	7	.044	10	80 ft	So	
	Officers - 20 -	2	.045	7	.052	14.5	160 ft	So	
	WIRELESS ...	2	.0100	7	.044	10	160 ft	Rubber	
	SEARCHLIGHT ...	2	.0030	3	.036	3	100 ft	So	
	MASTHEAD LIGHT...	2	.0015	1	.044	1.5	30 ft	So	
	SIDE LIGHTS ...	2	.0015	1	.044	1.5	14 ft	So	
	COMPASS LIGHTS ...	2	.0100	7	.044	10	26 ft	So	
	POOP LIGHTS ...	2	.0145	7	.052	14.5	130 ft	So	
	CARGO LIGHTS ...								
	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 ...								

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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.

*per*  
**RICHARD PICKERSGILL & SONS, LTD.**

Electrical Engineers.

Date *January 10<sup>th</sup> 1925*

COMPASSES.

Distance between electric generators or motors and standard compass

*230 ft*

Distance between electric generators or motors and steering compass

*230 ft*

The nearest cables to the compasses are as follows:—

A cable carrying — Ampères — feet from standard compass — feet from steering compass.

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

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 *20* degrees on *all* course in the case of the standard compass, and *20* degrees on *all* course in the case of the steering compass.

FOR THE ROYAL SHIPBUILDING  
AND REPAIRING CO. (STOCKTON) LIM.

Builder's Signature.

Date *Jan 12/1925*

*H. J. Forster*  
Secretary.

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 in accordance with the Rules, is of good materials and workmanship, and on completion was examined under full working conditions and found satisfactory.*

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

*W.D.*  
*21/1/25*

Total Capacity of Generators *6* Kilowatts

The amount of Fee ... £ *6* : - : *16<sup>th</sup> Jan 1925*

Travelling Expenses (if any) £ : : *See debit book*

*W. A. Roberts*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned