

CITY OF KHIOS

Rpt. 13.

RX

No. 4350

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 27.1.1925 When handed in at Local Office

Port of GLASGOW.

No. in Survey held at

GLASGOW.

Date, First Survey

23.12.24

Last Survey

30.1.1925

1925

Reg. Book.

90849 on the

"S.S. RYDAL HALL."

Tons { Gross  
Net

Built at

GLASGOW.

By whom built

BARCLAY CURLE &amp; CO. Yard No. 604

When built 1925.

Owners

MESSRS ELLERMAN LINES LTD

Port belonging to

LIVERPOOL.

Electric Light Installation fitted by MESSRS ARCHD WATSON &amp; CO.

Contract No. 604

When fitted 1925.

System of Distribution

Double Wire Distribution 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

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

Port side of Engine Room.

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

Yes

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

Yes

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

Coupled by metallic half coupling

Main Switch Boards, where placed

Adjacent to Main 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

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

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

D.P. Knife switch

and 2 Porcelain fuses for dynamo.

S.P. knife switch and 2 S.P.

Porcelain fuses for each outgoing circuit

Instruments on main switchboard

1

ammeters

1

volts

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

2 Earth testing

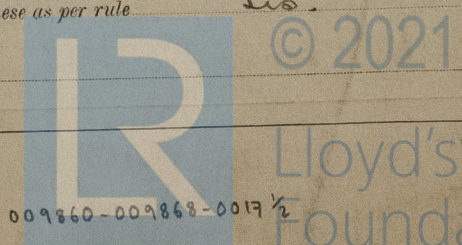
lamps with switches &amp; fuses.

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 Yes

**Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load 4.5 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

**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 led on under side of deck in tween decks etc. & in accommodation clipped to grounds or bulkhead  
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

**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 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 Fibre

**Earthing Connections**, state what earthing connections are fitted and their respective sectional areas

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

**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 fitted

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 —, 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 —, 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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	10	110	90	300	Open type Vertical 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.				
	MAIN GENERATOR...	2	1000	19	0.83	910	52	V.R.	L.C.A.B.
	AUXILIARY GENERATOR	—	—	—	—	—	—	—	—
	EMERGENCY GENERATOR	—	—	—	—	—	—	—	—
	ROTARY TRANSFORMER...	—	—	—	—	—	—	—	—
	AUXILIARY SWITCHBOARDS	—	—	—	—	—	—	—	—
	ENGINE ROOM	—	—	—	—	—	—	—	—
	BOILER ROOM	2	0030	3	0.36	700	30	V.R.	L.C.A.B.
	Officers' Engines	2	0100	7	0.44	1100	300	"	"
	Navigation Main	2	0030	3	0.36	700	290	"	"
	Aft Comp.	2	0070	7	0.36	550	350	"	"
	Cargo Lights	2	0045	7	0.29	200	290	"	"
	WIRELESS	2	0070	7	0.36	50	180	V.R.	L.C.A.B.
	SEARCHLIGHT	—	—	—	—	—	—	—	—
	MASTHEAD LIGHT	2	0015	1	0.44	10	190	V.R.	L.C.A.B.
	SIDE LIGHTS	2	0015	1	0.44	10	60	"	L.C.
	COMPASS LIGHTS	2	0015	1	0.44	10	40	"	L.C.
	POOP LIGHTS	—	—	—	—	—	—	—	—
	CARGO LIGHTS	2	0015	1	0.44	20	50	V.R.	L.C.A.B.
	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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Lloyd's Register Foundation



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.

Archd Watson & Co Ltd. Electrical Engineers. Date 29-1-25.  
W.B.

COMPASSES.

Distance between electric generators or motors and standard compass 120 feet.

Distance between electric generators or motors and steering compass 112 "

The nearest cables to the compasses are as follows :—

A cable carrying 7 Ampères 8 feet from standard compass 8 feet from steering compass.

A cable carrying 2 Ampères in feet from standard compass 6 feet from steering compass.

A cable carrying 2 Ampères 6 feet from standard compass in 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.

FOR BARCLAY, CURLE & CO., LTD

H. J. J. J. J.

Builder's Signature.

Date 4/2/25

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

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. D. J. D. J. D.

Total Capacity of Generators 10 Kilowatts

The amount of Fee ... £ 10.0.0. When applied for, 3.3.25.

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

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

Committee's Minute

GLASGOW 17 FEB 1925

Assigned

Elec. Light J. S. Rankin



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