

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report

19

When handed in at Local Office

10/9/1926 Port of

Received at London Office

15 DEC 1926

NEWCASTLE-ON-TYNE

No. in Survey held at

Newcastle

Date, First Survey

12 July

Last Survey

20 Aug.

1926

Reg. Book

Supp.

(Number of Visits)

7

88426 on the

City of Oxford.

Tons

Gross 2759

Net 1633

Built at

Newcastle

By whom built

Swan Hunter &amp; Wigham Richardson

No. 1291

When built 1926

Owners

Ellerman Lines Ltd.

Port belonging to

Liverpool

Electric Light Installation fitted by

Swan Hunter &amp; Wigham Richardson Ltd.

Contract No. 1291

When fitted 1926

System of Distribution

Double wire

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

Yes

is an adjustable regulating resistance fitted in

series with each shunt field

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

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

Engine room starboard side.

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

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 micaite 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 switch

fuses on dynamo mains, single pole switch &amp; double pole fuses on 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

earth lamps

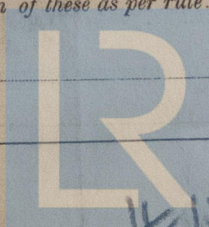
coupled to earth through switches &amp; fuses.

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



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**Cables:** Single, twin, concentric, or multicore. single 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. 3.79 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** *Tram cables lead covered & braided run in galvanised iron pipe, engine room lead covered & armoured clipped to beam, 300" lead cov'd cables clipped sub.*

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**

**Watertight Glands and Deck Tubes,** are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands.

**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

**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 lam. 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 storerooms and engine rooms and where 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

NONE

how are the cables protected

where are the controlling switches situated

Searchlight Lamps, No. of \_\_\_\_\_, whether fired 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 axes 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 and fitted as per Rule.....

**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 ... ..	1	10	110	91	360	Steam engine		
AUXILIARY ... ..								
EMERGENCY ... ..								
ROTARY TRANSFORMER								

## LIGHTING AND HEATING CONDUCTORS

[illegible]

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MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current in cire.	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.

FOR  
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

Electrical Engineers.

Date

15<sup>th</sup> Sept 1926

#### COMPASSES.

Distance between electric generators or motors and standard compass

90 feet.

Distance between electric generators or motors and steering compass

85 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .5 Ampères on the ~~foot~~ from standard compass 8 feet from steering compass.

A cable carrying .5 Ampères 8 feet from standard compass on the ~~foot~~ from steering compass.

A cable carrying 4.5 Ampères 6 feet from standard compass 8 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 all courses in the case of the standard compass, and nil degrees on all course in the case of the steering compass.

FOR  
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

T. Cunningham.

Builder's Signature.

Date

15<sup>th</sup> Sep 1926.

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, etc.)

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion to be classed Elec light, wireless.

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

J.W.D.  
17/12/26

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10 : : When applied for, 11/9/26

Travelling Expenses (if any) £ : : When received, 21.9.1926

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 17 DEC 1926

Assigned

Elec Light

Im. 126. Transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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