

Rpt. 13.

No 80118

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

-4 MAR 1926

Date of writing Report

19

When handed in at Local Office

3/31 1926 Port of Newcastle

No. in Survey held at

Newcastle

Date, First Survey

13 Nov 1925

Last Survey

8 Feb 1926

Reg. Book. Supt.

38496 on the

"City of Lyons"

(Number of Visits 17)

Tons { Gross
Net

Built at Newcastle

By whom built

Swan Hunter & W. R. Ltd

Yard No. 1284

When built 1925

Owners

The Ellerman Lines Ltd

Port belonging to

Liverpool

Electric Light Installation fitted by Swan Hunter & W. R. Ltd

Contract No. 1284

When fitted 1925

System of Distribution

Double wire system

Pressure of supply for Lighting

220

volts, Heating

volts, Power

220

volts.

Direct or Alternating Current, Lighting

Direct

Power

Direct

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

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

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 effectually 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

700 Amp T.P. circuit breakers for each generator, 200 Amp D.P.C.B. for steering gear pump, D.P. switches & fuses on each of the outgoing circuits

Instruments on main switchboard

2

ammeters

2

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

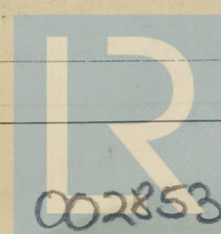
Earth lamps connected through switches & fuses to earth

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 4.4 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 Lead covered arm + braided cables clipped to structure in machinery space + tween decks

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 VIII Yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements None made

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 rubber

Earthing Connections, state what earthing connections are fitted and their respective sectional areas None made

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 None fitted

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 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 Lead covered arm + braided

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 led

where are the controlling switches situated

Searchlight Lamps, No. of 1, whether fixed or portable 1, are their fittings as per Rule Yes

Are Lamps, other than searchlight lamps, No. of 1, 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 and 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	150	220	680	320	Turbine engine		
AUXILIARY	1	15	220	68	320	Comp downstroke acting steam engine		
EMERGENCY						Steam engine comp 4		
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	1.2	124	.111	680	50	rubber	Lead covered arm + braided
	EQUALISER CONNECTIONS	2	.6062	91	.093	340	50	50	50
	AUXILIARY GENERATOR	2	.06	19	.064	68	50	50	50
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.00455	7	.029	5	60	50	Lead covered arm + braided
	BOILER ROOM								
	ACCOMMODATION								
	Navigation	2	.00455	7	.029	2.5	340	50	50
	Eng. officers Acc	2	.01046	7	.044	36	180	50	50
	Crews qts	2	.00455	7	.029	4.0	500	50	50
	WIRELESS	2	.02214	7	.064	13.6	360	50	50
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.00299	3	.036	.46	460	50	Lead covered arm + braided
	SIDE LIGHTS...	2	.00299	3	.036	.46	48	50	50
	COMPASS LIGHTS...	2	.00299	3	.036	.23	26	50	50
	STERN LIGHTS	2	.00299	3	.036	.46	590	50	50
	CARGO LIGHTS	2	.00455	7	.029	10	120	50	Lead covered arm + braided
	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	2	.00701	7	.036	21	30	V.I.R.	Lead covered arm + braided
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	2	.06	19	.064	180	380	50	50
	WORKSHOP MOTOR								
	VENTILATING FANS								
	Oil fuel pump	2	.00455	7	.029	9	30	50	50
	Asph. Heater	1	.00455	7	.029	14	360	50	50
	Evap. feed pump	1	.00299	3	.036	5	240	50	50
	Lub. Oil Purifier	1	.00299	3	.036	5	30	50	50
	Lub. Oil Pumps	3	.00701	7	.036	20	150	50	50
	Pne. Heater EL. Motors	2	.00701	7	.036	18	120	50	50
	Main Circ. Pump	1	.3024	37	.103	210	180	50	50
	Pne. Heater Hot Tank	2	.0396	19	.052	48	300	50	50
	Pne. Heater Cold Tank	1	.06	19	.064	47	120	50	50

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 2nd March 26.

COMPASSES.

Distance between electric generators or motors and standard compass

120 feet ✓

Distance between electric generators or motors and steering compass

120 feet ✓

The nearest cables to the compasses are as follows:—

A cable carrying 2.5 Amperes 7 feet from standard compass 5 feet from steering compass. ✓

A cable carrying 2.3 Amperes on the ~~same~~ standard compass 10 feet from steering compass. ✓

A cable carrying 2.3 Amperes 10 feet from standard compass on the ~~same~~ 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 course 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 2/3/26.

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.)

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation elec light, wireless

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

Blue light

5/3/26

Total Capacity of Generators 315 Kilowatts.

The amount of Fee ... £ 39 : 7 : 6 When applied for, 5/12/19.26

Travelling Expenses (if any) £ : : 12/2/19.26

W.T. Badger
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

1m. 123.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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