

Rpt. 13.

No. 93783

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

29 MAY 1928

24 MAY 1928

Port of

Liverpool

Date of writing Report

10

When handed in at Local Office

No. in Survey held at

Birkenhead

Date, First Survey

Dec 12th/27

Last Survey

May 16th

1928

Reg. Book.

41031

on the

S.S. "Gretafield"

(Number of Visits.....44.....)

Tons

Gross 10190

Net 6070

Built at

Birkenhead

By whom built

Messrs Cammell Laird & Co

Yard No. 931

When built

1928

Owners

Messrs Huntingdon

Port belonging to

Newcastle

Electric Light Installation fitted by

Sunderland Forge & Eng^y Co Ltd

Contract No. 931

When fitted 1928

System of Distribution

Pressure of supply for Lighting

110

vols, Heating

vols, Power

110

vols.

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

No

, 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

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

Main Engine Room beside Main 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

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

D.P. Switch + Fuses on each Generator

D.P. Switch + Fuses on each outgoing circuit.

Instruments on main switchboard

2

ammeters

2

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

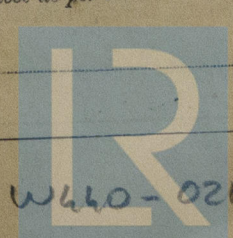
Lamp Switch + Fuse on each pole

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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W440-0218 (112)

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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 4.9

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 L.C.A. = B. cables in Engine Room
- exposed places. L.C. = B. cables in Accommodation.

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 Yes

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 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 Fibre

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 Heavy Cast Iron
Gas tight fittings with stout glass bowls arranged to shine into spaces, how are the cables led
in screwed Galvanised Wrought Iron Pipe made watertight
where are the controlling switches situated outside compartment.

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

Arc 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.	Rev. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	15	110	136	340	Steam Engine			
AUXILIARY	1	25	110	226	450	Oil	Diesel Oil		
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. Amps.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	15	37	.072	136	80	V.I.R	L.C.A. = B
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR	2	3	37	.103	226	110	-do-	-do-
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.003	3	.036	10.6	60	-do-	-do-
	BOILER ROOM								
	ACCOMMODATION								
	Navigation etc	2	.01	7	.044	4.52	750	-do-	-do-
	Aft Accommodation	2	.007	7	.036	22.38	100	-do-	-do-
	Wireless	2	.0225	7	.064	25	700	-do-	-do-
	Midship Accom	2	.0225	7	.064	13.64	670	-do-	-do-
	Cargo - Pump Room	2	.06	19	.064	39.64	100	-do-	-do-
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.002	3	.029	55	380	-do-	-do-
	SIDE LIGHTS	2	.002	3	.029	55	144	-do-	L.C. = B
	COMPASS LIGHTS	2	.002	3	.029	18	30	-do-	-do-
	POOP LIGHTS								
	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. Amps.	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	1	.007	7	.036	16	50	V.I.R	L.C.A. = B
	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	1	.04	19	.052	48	40	-do-	-do-
	WORKSHOP MOTOR								
	VENTILATING FANS								
	Ref. No. M/C	1	.0225	7	.064	40	40	-do-	-do-
	Lathe Motor	1	.007	7	.036	24	50	-do-	-do-
	Crane	1	.01	7	.044	28	160	-do-	-do-
	Galley Fan	1	.007	7	.036	8	200	-do-	-do-

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.

P.P. The Sunderland Forging Co. Ltd.

Electrical Engineers.

Date 2. 5. 28

COMPASSES.

Distance between electric generators or motors and standard compass

320 ft
316 ft

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 4.52 Amperes 6 feet from standard compass 6 feet from steering compass.

A cable carrying 1.18 Amperes 2 feet from standard compass 2 feet from steering compass.

A cable carrying Amperes feet from standard compass 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 1° E degrees on all courses N.-N.E. course in the case of the standard compass, and 2° E degrees on all courses E. by N. course in the case of the steering compass.

CAMMELL LAIRD AND COMPANY LIMITED

W. S. Johnson

Builder's Signature.

Date

MANAGING DIRECTOR

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, and the workmanship is good. On completion it was examined under full working conditions and found satisfactory & is eligible in our opinion for record of Elec light in Register book.

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

Total Capacity of Generators 55 Kilowatts.

The amount of Fee £ 28 : 0 : 0

When applied for, 25 MAY 1928

Travelling Expenses (if any) £

When received, 14. 6. 28

Committee's Minute

LIVERPOOL 25 MAY 1928

Assigned

Electric Light.

J. H. D.

J. P. Milton & W. S. Shields.

Surveyors to Lloyd's Register of Shipping.

Im. 127.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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