

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 17 OCT 1929

Date of writing Report 19 When handed in at Local Office 16 OCT. 1929 Port of SUNDERLAND

No. in Survey held at Sunderland. Date, First Survey July 12th. Last Survey July 29th. 1929.
Reg. Book. Subh. (Number of Visits 5)

40868 on the S.S. John Charrington

Tons { Gross 1576
Net 883

Built at Sunderland. By whom built Messrs J. Brown & Co Ltd Yard No. 181 When built 1929

Owners Charrington Gardner Lockett & Co Ltd Port belonging to London.

Electric Light Installation fitted by The Sunderland Forge & Eng Co Ltd. Contract No. 181 When fitted 1929.

System of Distribution Double wire

Pressure of supply for Lighting 110 volts, Heating ——— volts, Power ——— volts.

Direct or Alternating Current, Lighting ——— 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 ———, 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

Position of Generators In main Engine Room, are the lubricating arrangements of the generators as per Rule Yes

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 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 In main Engine Room

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, 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

Double Pole Switch & Fuses for main Generator, Single Pole Switch &

D.P. Fuses for feeder circuits

Instruments on main switchboard 1 ammeters 1 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 Lamp, Switch & Fuse on each pole

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.

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 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, upstake 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 main V.I.R. cables run in G.I. l.c.l. pipe made watertight & accommodation lead covered cables secured by 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 _____ 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 none

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 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 Earth Indicating Lamps
 _____, 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 _____

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 _____
 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 _____
 are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected _____
 _____, 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 _____

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	3 3/4	110	34.1	480	Single Cylinder Steam Engine		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	.01462	4	.052	34.1	30	V.I.R.	Lead covered & braided
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM	2	.00194	3	.029	2.72	30	V.I.R.	Lead covered & braided in Pipe
	Navigation & Forward	2	.00194	4	.044	10.82	384	V.I.R.	Braided in Pipe
	Aft Accom.	2	.00194	3	.029	3.68	80	V.I.R.	Braided in Pipe
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	.00194	3	.029	.36	300	V.I.R.	Braided in Pipe
	SIDE LIGHTS	2	.00194	3	.029	.36	64	V.I.R.	Lead covered
	COMPASS LIGHTS	2	.00194	3	.029	.88	40	V.I.R.	Lead covered
	STEER POPE LIGHTS	2	.00194	3	.029	.36	200	V.I.R.	Lead covered
	CARGO LIGHTS	2	.00194	3	.029	1.1	46	V.I.R.	Lead covered
	ARC LAMPS								
	HEATERS								

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

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. pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

H. Haffner

Electrical Engineers.

Date 8/10/29

COMPASSES.

Distance between electric generators or motors and standard compass 130
 Distance between electric generators or motors and steering compass 120

The nearest cables to the compasses are as follows:—

A cable carrying 3.36 Ampères 10 feet from standard compass 10 feet from steering compass.
 A cable carrying .18 Ampères 10 feet from standard compass Led into feet from steering compass.
 A cable carrying .18 Ampères Led into feet from standard compass 10 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 course in the case of the standard compass, and Nil degrees on All courses course in the case of the steering compass.

Per Pro JOHN CROWN & SONS, Ltd.

W. Chamberlain

Secretary.

Builder's Signature.

Date 11 Oct 1929

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 rotation elec light.

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

W.T. Badger
29/10/29

Total Capacity of Generators 3.75 Kilowatts

The amount of Fee ... £ 5 :
 Travelling Expenses (if any) £ :
 When applied for, 26 July 1929
 When received, 29 July 1929

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

Committee's Minute

Assigned

Elec. Lt.

1 in 1924.—T. transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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