

Rpt. 15

No. 13873

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

NOV 1929

Date of writing Report 30. 10. 1929 When handed in at Local Office 30. 10. 1929 Port of Middleburgh.

No. in Survey held at STOCKTON.

Date, First Survey 2 Aug Last Survey 1. 10. 1929

Reg. Book

(Number of Visits.....)

41768 Survey on the S/S PORTFIELD.

Tons { Gross 4425
Net 2662

Built at Stockton-on-Tees By whom built Craig Taylor & Co Yard No. 225 When built 1929

Owners Messrs Hindle & Co Ltd Port belonging to Cardiff.

Electric Light Installation fitted by Messrs Galeman Cross & Co Ltd Contract No. A4406 When fitted Sept 1929

System of Distribution

Double wires

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, 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

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 bulkhead aft end

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 Double pole

switch & fuses on Dynamo mains & double pole switches & 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 switch & 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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Lloyd's Register
Foundation

W498-0203/2

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 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 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 Lead Covered & Armoured cables clipped to underside deck in large spaces, & Lead Covered 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 silver

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 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 no

how are the cables led clipped direct on to underside of decks through holds & tween deck

where are the controlling switches situated adjacent to fuse boards or to lights

Searchlight Lamps, No. of 1, whether fixed or portable yes, 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 1 ft and 1 ft

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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	1	10	110	90	400	Single Cylinder open type Steam Engine 8" X 6"	✓	✓	
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	.0750	19	.072	99	20	V. I. R.	Lead Covered in short pipes
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.01046	7	.044	8	8	V. I. R.	Lead Covered & Armoured
	BOILER ROOM	2	.01046	7	.044	13.0	140	V. I. R.	Lead Covered & Armoured
	ACCOMMODATION	2	.00701	7	.036	5.6	350	V. I. R.	Lead Covered & Armoured
	WIRELESS	2	.00701	7	.036	5	190	V. I. R.	Lead Covered & Armoured
	SEARCHLIGHT	2	.00152	1	.044	.6	340	V. I. R.	Lead Covered & Armoured
	MASTHEAD LIGHT	2	.00152	1	.044	.6	50	V. I. R.	Lead Covered & Armoured
	SIDE LIGHTS	2	.00152	1	.044	.6	35	V. I. R.	Lead Covered
	POOP LIGHTS	2	.00152	1	.044	.3	380	V. I. R.	Lead Covered & Armoured
	CARGO LIGHTS	2	.00299	3	.086	.6	90	V. I. R.	Lead Covered & Armoured
	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								
	(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 FALCONAR, CROSS & Co. LTD.

Electrical Engineers.

Date October 26th 1929

COMPASSES.

Distance between electric generators or motors and standard compass 100 ft

Distance between electric generators or motors and steering compass 110 ft

The nearest cables to the compasses are as follows:—

A cable carrying 3 Amperes on the feet from standard compass 8 feet from steering compass.

A cable carrying 3 Amperes 8 feet from standard compass feet from steering compass.

A cable carrying 7 Amperes 9 feet from standard compass 11 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 each course in the case of the standard compass, and nil degrees on each course in the case of the steering compass.

For CRAIG, TAYLOR & CO. LIMITED,

Builder's Signature.

Date Oct 30th 1929

C. V. Taylor

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.)

The materials and workmanship are good.
This electric light installation has been fitted aboard under special survey and in accordance with the Rules and is, in my opinion, suitable for a vessel classed with this Society.

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

37/11/29

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10-0-0 When applied for, 5-10-1929

Travelling Expenses (if any) £ : : When received 10-10-1929

Committee's Minute

Assigned

Elec. Lt.

P. J. Macan

Surveyor to Lloyd's Register of Shipping.