

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

27 DEC 1928

Date of writing Report

19

When handed in at Local Office

24/12/1928

Port of

Newcastle-on-Tyne

Received at London Office

No. in Survey held at

Newcastle.

Date, First Survey 2:00.

Last Survey 3:00

1928

Reg. Book, Subh.

(Number of Visits 13)

91576 on the M. V. "Port Alma"

Tons { Gross
Net

Built at Newcastle.

By whom built Swan Hunter & Wigham Richardson Ltd No. 1341 When built 1928

Owners Commonwealth & Dominion Line Ltd Port belonging to London

Electric Light Installation fitted by Swan Hunter & Wigham Richardson Ltd Contract No. 1341 When fitted 1928.

System of Distribution

Double wire system

Pressure of supply for Lighting

220

volts, Heating

220

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 port & 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

end of Yes

Main Switch Boards, where placed

Forward engine room fixed to bulkhead on special

platform

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

3 pole circuit

breakers on generators, one pole acting as equaliser switch. Outgoing circuits having double pole breakers or double pole switch & fuse acc^t to capacity of circuits

Instruments on main switchboard

4

ammeters

3

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

Switches & lamps

coupled to earth through switches & 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.

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 on power, 4 Volts on lighting

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 braided cables clipped to heavy tray plating & protected by tray plating in tween decks. Lead covered, arm & braided in engine room
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 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 lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas 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 Fitted in dynamo room on lower deck forward of engine room. Circuits controlled by D.P. switches & fuses. Generator driven by Diesel Engine.

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 Yes

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

how are the cables led Yes

where are the controlling switches situated Yes

Searchlight Lamps, No. of Lamp not fitted whether fixed or portable Yes, are their fittings as per Rule Yes

Arc Lamps, other than searchlight lamps, No. of Yes, 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	3	257	220	1168	250	Diesel Oil Engine		
AUXILIARY								
EMERGENCY	1	25	220	114	375	Do		
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 pole	4	.4064	61	.093	1168	182	V. Cambric	Lead cov. arm & braided
	EQUALISER CONNECTIONS	1	.4064	61	.093	584	91	Do	Do
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR	2	.07592	19	.072	114	40	V. I. R.	Do
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM	2	.00455	7	.029	8	190	Do	Do
	ACCOMMODATION								
	Lighting Linchman	4	.07592	19	.072	95	2280	Do	Do
	Forward Hatch	4	.4985	61	.103	1088	1860	V. Cambric	Do
	Aft	4	.4985	61	.103	944	1380	Do	Do
	Refrig. machinery	4	.4064	61	.093	1206	300	Do	Do
	Forward Heater	2	.1964	37	.083	167	300	Rubber	Do
	Aft	2	.1478	37	.072	129	130	Do	Do
	Galley Circuit	2	.1168	37	.064	108	80	Do	Do
	Galley Seat	2	.02214	7	.064	46	60	Do	Lead cov. & braided
	Gyro Compass	2	.00455	7	.029	15	220	Do	Lead cov. arm & braided
	WIRELESS	2	.01046	7	.044	30	170	Do	Lead cov. & braided
	SEARCHLIGHT	2	.06	19	.064	55	480	Do	Lead cov. arm & braided
	MASTHEAD LIGHT	2	.00194	3	.029	.5	350	Do	Do
	SIDE LIGHTS	2	.00194	3	.029	.5	54	Do	Lead cov. & braided
	COMPASS LIGHTS	2	.00194	3	.029	.25	40	Do	Do
	POOP LIGHTS	2	.00194	3	.029	.5	450	Do	Lead cov. arm & braided
	CARGO LIGHTS	2	.00194	3	.029	2.5	60	Do	Do
	ARC LAMPS								
	HEATERS	2	.00194	3	.029	3.0	74	Do	Lead cov. & braided
	alone 1000 watts	2	.00299	3	.036	5.0	26	Do	Do

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	1	.1964	37	.083	167	180	V. I. R.	Lead cov. arm & braided
	MAIN BILGE LINE PUMPS	1	.0396	19	.052	52	120	Do	Do
	GENERAL SERVICE PUMP	1	.07592	19	.072	88	160	Do	Do
	San. Sanitary Pump	1	.01462	7	.052	28	15	Do	Do
	SANITARY PUMP	1	.0396	19	.052	52	180	Do	Do
	CIRC. SEA WATER PUMPS	1	.1964	37	.083	167	180	Do	Do
	CIRC. FRESH WATER PUMPS	1	.1964	37	.083	167	180	Do	Do
	AIR COMPRESSOR	2	.1478	37	.072	278	250	V. Cambric	Do
	FRESH WATER PUMP	1	.01462	7	.052	28	15	Rubber	Do
	ENGINE TURNING GEAR	2	.06	19	.064	69	80	Do	Do
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	.07592	19	.072	93	90	Do	Do
	OIL FUEL TRANSFER PUMP	2	.01046	7	.044	28	60	Do	Do
	WINDLASS	1	.2465	37	.093	210	40	Do	Do
	WINCHES, FORWARD	8	.2465	37	.093	212	70	Do	Do
	WINCHES, AFT	6	.2465	37	.093	212	70	Do	Do
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	2	.1478	37	.072	135	650	Do	Do
	WORKSHOP MOTOR	1	.01046	7	.044	25	136	Do	Lead cov. & braided
	VENTILATING FANS	5	.00455	7	.029	11.5	81	Do	Do
	Captain's	2	.1964	37	.083	154	40	Do	Lead cov. arm & braided
	Ref. Motors	2	.3024	37	.103	440X	100	V. Cambric	Lead cov. & braided
	Bine pumps	3	.0396	19	.052	51	90	V. I. R.	Do
	Bine pump	1	.00455	7	.029	12	70	Do	Do
	Cooler Fans	2	.01046	7	.044	20.5	460	Do	Do
	Ref. Air pump	1	.1964	37	.083	167	170	Do	Lead cov. arm & braided
	Oil Purifiers	4	.00299	3	.036	11.5	60	Do	Do
	Brane.	1	.00455	7	.029	14.5	100	Do	Do
	Oil fuel pump	1	.1009	19	.083	96.0	45	Do	Do
	Oil fuel blower	1	.00299	3	.036	8.0	130	Do	Do
	Workshop motor	1	.00299	3	.036	8.0	60	Do	Do
	Ref. Air pump	1	.00299	3	.036	8.0	40	Do	Lead cov. & braided
	Oil fuel heat. (1000 watts)	1	.00194	3	.029	5.0	60	Do	Lead cov. arm & braided

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

17th Dec 28

COMPASSES.

Distance between electric generators or motors and standard compass 120 feet.

Distance between electric generators or motors and steering compass 115 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .25 Ampères on the feet from standard compass 10 feet from steering compass.

A cable carrying .25 Ampères 10 feet from standard compass on the feet from steering compass.

A cable carrying .5 Ampères 15 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 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 17. Dec 1928.

Is this installation a duplicate of a previous case Yes. If so, state name of vessel M.V. "Port Fairy"

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 dec light wireless

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

Dec. Light

28/12/28.

Total Capacity of Generators 196 Kilowatts.

The amount of Fee ... £ 51 : 8 : When applied for, 7/12/28.

Travelling Expenses (if any) £ : : When received, 27-12-28.

Committee's Minute

Assigned

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

1m.228.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)