

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 17.10.42 When handed in at Local Office 19.10.42 Port of Mobile, ALA.
 No. in Survey held at CHICKASAW, ALA. Date, First Survey 19.4 Last Survey 7.11 1942
 Reg. Book. (Number of Visits.....)
 on the STEEL STEAMER "RAPHAEL SEMMES"
 Built at CHICKASAW, ALA. By whom built GULF SHIP BLD. CO. Yard No. 4. When built 1942.
 Owners WATERMAN STEAMSHIP CORP. Port belonging to Mobile, ALA.
 Electric Light Installation fitted by GULF SHIP BUILDING CO. Contract No. When fitted 1942.
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution THREE WIRE — 120/240 VOLTS.

Pressure of supply for Lighting 120 volts, Heating — volts, Power 240. volts.

Direct or Alternating Current, Lighting DIRECT CURRENT. Power DIRECT CURRENT.

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 temperature rise 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. Have certificates of test results for machines under 100 kw. been submitted and

approved YES. A.B. Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing YES. A.B.

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 FORE AND AFT ON OPERATING PLATFORM 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 FORE & AFT OPERATING PLATFORM OUTBOARD.

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.

is it of an approved type 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. is the non-hygroscopic insulating material of an approved

type 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. temperature rise of

omnibus bars YES. individual fuses to voltmeter, pilot or earth lamp YES. are moving parts of switches alive in the

"off" position NO. are all screws and nuts securing connections effectively locked YES. are any fuses fitted on the live side of

switches NO. Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

FIVE BLADE SWITCH AND CIRCUIT BREAKER.

Are turbine driven generators fitted with emergency trip switch as per rule YES. Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material YES. Instruments on main switchboard FOUR. ammeters FOUR.

voltmeters NONE. synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

YES. Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

VOLTMETER TO GROUND.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules YES. are the fusible cutouts of an approved type CIRCUIT

BREAKERS.

current protection devices been tested under working conditions. 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 TWIN are the cables insulated and protected as per Tables IV, V, X or XI of the Rules YES.

If the cables are insulated otherwise than as per Rule, are they of an approved type —

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 3.364%

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets YES.

Paper Insulated and Varnished Cambric Insulated Cables. If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound YES. or waterproof insulating tape 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. Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit LEAD COVERED

Support and Protection of Cables, state how the cables are supported and protected STEEL CABLE HANGERS EVERY 15" AND STRAPPED WITH FORGED STEEL STRAPS EVERY 30"

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 VIII YES.

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements YES. (DOMESTIC.)

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 SUPPORTED BY STEEL FLAT BAR

Earthing Connections, state what earthing connections are fitted and their respective sectional areas NEUTRAL TO GROUND 300,000 C.H.

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 EMERGENCY GENERATOR LOCATED PORTSIDE BRIDGE DECK - DIESEL 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. 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 NONE.

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

FIXTURES (HOLDS AND TWEEN DECKS.) —, how are the cables led —

where are the controlling switches situated DECK ABOVE.

are all fittings suitably ventilated YES., are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials YES.

Heating and Cooking Appliances, are they constructed and fitted as per Rule YES., are air heaters constructed and fitted as per Rule —

Searchlight Lamps, No. of THREE., whether fixed or portable FIXED, are their fittings as per Rule YES.

Arc Lamps, other than searchlight lamps, No. of NONE., are their live parts insulated from the frame or case —, are their fittings as per Rule —

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 —

if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing YES. A.B. 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 —

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 — are all fuses of the filled cartridge type — are they of an approved type —


If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office —

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule YES.

PARTICULARS OF GENERATING PLANT.									
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 ...	TWO.	300	120/240	1250	1200	STEAM TURBINE.			
AUXILIARY ...	—								
EMERGENCY ...	ONE.	15	120/240	67.	1200	DIESEL ENGINE.	DIESEL OIL.	180°F.	
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.				
MAIN GENERATOR ...	4	1.5688	37	.1162	1250	1832	40.		VARNISH CAMBRIC.	LEAD & ARMOUR.
EQUALISER CONNECTIONS	2	.7844	37	.1162		916	40.		"	"
AUXILIARY GENERATOR...										
EMERGENCY GENERATOR	1	.7886	37	.090	67	340	20.		"	"
ROTARY TRANSFORMER } MOTOR GENERATOR...										
ENGINE ROOM... LIGHTING	1	.0261	7	.0688	41.85	80	70.		"	"
BOILER ROOM...										
AUXILIARY SWITCHBOARDS	1	.0261	7	.0688	62.5	80	20.		"	"
ACCOMMODATION LIGHTING										
LIGHTING PANEL	1	.0829	19	.0745	47.13	160	240		"	"
LIGHTING PANEL	1	.1659	19	.1055	59.65	260	260		"	"
LIGHTING PANEL	1	.0829	19	.0745	29.04	160	650		"	"
WIRELESS	1	.0414	7	.0867	.70	112	320.		"	"
SEARCHLIGHT	1	.0130	7	.0486	8.7	50	360.		"	"
MASTHEAD LIGHT	1	.0414	7	.0242	.87	14	180.		"	"
SIDE LIGHTS	1	.0032	7	.0242	.87	14	80		"	"
COMPASS LIGHTS	3	.0032	7	.0242	6.5	14	80		"	"
POOP LIGHTS	NONE						240		"	"
CARGO LIGHTS 2 PANELS	1	.0261	7	.0688	20.86	80	200		"	"
ARC LAMPS	NONE									
HEATERS	NONE									

MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP	2	1	.0164	7	.0385	20	30	150.	VARNISH CAMBRIC.	LEAD & ARMOUR.
CIRC. SEA WATER PUMPS	2	1	.0829	19	.0745	82	180	120.	"	"
CIRC. FRESH WATER PUMPS...										
AIR COMPRESSOR	2	1	.0130	7	.0486	29	50	80.	"	"
FRESH WATER PUMP	2	1	.0414	7	.0867	5.6	112	60.	"	"
ENGINE TURNING GEAR...	2	1	.0051	7	.0305	2.4	20	100	"	"
ENGINE REVERSING GEAR	1	1	.0261	7	.0688	28.7	80	140.	"	"
LUBRICATING OIL PUMPS	2	1	.0658	19	.0604	74	140	80.	"	"
OIL FUEL TRANSFER PUMP...	2	1	.0130	7	.0486	28.5	50	150.	"	"
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR...										
(b) MAIN MOTOR	2	1	.1045	19	.0837	125	191	640	"	"
WORKSHOP MOTOR	4	1	.0658	19	.0604	53.5	140	260	"	"
VENTILATING FANS	4	1	.0414	7	.0867	29	112	180	"	"

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All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass 60 FEET.

Distance between electric generators or motors and steering compass 50 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 2.95 Ampères 10 feet from standard compass 10 feet from steering compass.

A cable carrying 8.7 Ampères 6 feet from standard compass 10 feet from steering compass.

A cable carrying 5 Ampères 6 feet from standard compass 6 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 degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case YES.

If so, state name of vessel

S/S. "FAIRPORT"
S/S. "FAIR ISLE"
S/S. "FAIRLAND"

General Remarks (State quality of workmanship, opinions as to class, &c.)

the electric installation of this vessel has been fitted on board in accordance with the Rules; The workmanship and materials are good.

The generators and motors were surveyed by the American Bureau of Shipping. The certificates were examined and found satisfactory. Tried out at full load and it is now in good and safe working condition and in my opinion the vessel is eligible to receive a character in the Register Book.

Noted

12/1/43.

Total Capacity of Generators 615 Kilowatts.

The amount of Fee ...

\$ 238.00

When applied for,

19-11-42

Travelling Expenses (if any) £

When received,

19

Committee's Minute

NEW YORK DEC 2 1942

Assigned

Elec. light

Surveyor to Lloyd's Register of Shipping.



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