

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office MAY 20 1938

Date of writing Report 19 When handed in at Local Office 19.5.38 Port of Antwerp
 No. in Survey held at Hoboken, Antwerp Date, First Survey 7.2.38 Last Survey 2.5.1938
 Reg. Book. on the M. V. "Exaut" (Number of Visits 9)
 Tons { Gross
 Net
 Built at Hoboken By whom built Phantix Naval Dockyard No. 657 When built 1938
 Owners Cremont Leffe & Co. Port belonging to Antwerp
 Electric Light Installation fitted by E. B. Campbell & Fisherwoods S.A. Contract No. When fitted 1938
 Is the Vessel fitted for carrying Petroleum in bulk no.

System of Distribution two wire ✓
 Pressure of supply for Lighting 220 volts, Heating 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
 Position of Generators In engine room: one on port and one on 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
 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 In engine room above thrust
 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 ✓, 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 breaker one pole for equalizer, making contact before main poles, and breaking contact after overload coils on both poles, no volt and reverse coils
 Instruments on main switchboard 4 ammeters 4 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 megohmmeter
 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 and twin 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 4.4 Volt

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 none used

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 on trays securely clipped up and protected by covers through holds

If cables are run in wood casings, are the casings and caps secured by screws none, are the cap screws of brass none, are the cables run in separate grooves none. 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 none

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 lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas all cable ends earthed in special glands

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 none

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 none

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 none

how are the cables led

where are the controlling switches situated

Searchlight Lamps, No. of none, whether fixed or portable none, are their fittings as per Rule

Arc Lamps, other than searchlight lamps, No. of none, are their live parts insulated from the frame or case none, 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 yes, 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 and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule none

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

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 ...	2	50	220	227.2		Diesel engine			
AUXILIARY ...	1	45	220	34.1		Diesel engine	removed & replaced by set		
EMERGENCY ...	1	15	220	68.2		Diesel engine			
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...	1	0.3000	37	.103	227.2	240	72	rubber	lead covered & armoured
EQUALISER CONNECTIONS ...	1	0.3000	37	.103				rubber	lead covered & armoured
AUXILIARY GENERATOR...	1	0.0145	7	.052	34.1	37	26	rubber	lead covered & armoured
EMERGENCY GENERATOR									
ROTARY TRANSFORMER { MOTOR GENERATOR...									
ENGINE ROOM...	1	0.0030	3	.036	1.1	12.9	120	rubber	lead covered & armoured
BOILER ROOM...									
AUXILIARY SWITCHBOARDS									
Navigation	1	0.0030	3	.036	3.5	12.9	362	rubber	lead covered & braided
Star & Midship	1	0.0030	3	.036	8.8	12.9	362	rubber	lead covered & braided
Aft	1	0.0030	3	.036	4.1	12.9	49	rubber	lead covered & braided
ACCOMMODATION ...									
WIRELESS ...									
SEARCHLIGHT ...									
MASTHEAD LIGHT ...	1	0.0030	3	.036	0.18	12.9	263	rubber	lead covered & armoured
SIDE LIGHTS ...	1	0.0030	3	.036	0.18	12.9	39.5	rubber	lead covered & armoured
COMPASS LIGHTS ...	1	0.0030	3	.036	0.18	12.9	39.5	rubber	lead covered & armoured
POOP LIGHTS ...	1	0.0030	3	.036	0.18	12.9	430	rubber	lead covered & armoured
CARGO LIGHTS ...	1	0.0030	3	.036	1.09	12.9	176	rubber	lead covered & armoured
ARC LAMPS ...									
HEATERS ...									

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 Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...	1	1	0.0145	7	.052	33.45	37	116	rubber	lead covered & armoured
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP	1	1	0.0070	7	.036	20.5	24	66	rubber	lead covered & armoured
EMERGENCY BILGE PUMP										
San. water pump. SANITARY PUMP	1	1	0.0070	7	.036	20.52	24	116	rubber	lead covered & armoured
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS...										
Air compressor	1	1	0.0030	3	.036	8.36	12.9	49	rubber	lead covered & armoured
FRESH WATER PUMP ...	1	1	0.0070	7	.036	12	24	39	rubber	lead covered & armoured
ENGINE TURNING GEAR...	1	1	0.0145	7	.036	27.86	37	26	rubber	lead covered & armoured
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	1	1	0.0600	10	.064	78	83	66	rubber	lead covered & armoured
OIL FUEL TRANSFER PUMP...	1	1	0.0070	7	.036	14.64	24	59	rubber	lead covered & armoured
WINDLASS ...	1	1	0.07592	13	.072	92.9	97	460	rubber	lead covered & braided
WINCHES, FORWARD ...	2	1	0.07592	13	.072	92.9	97	395	rubber	lead covered & braided
WINCHES, AFT ...	4	1	0.07592	13	.072	92.9	97	230	rubber	lead covered & braided
STEERING GEAR—										
(a) MOTOR GENERATOR...										
(b) MAIN MOTOR ...	1	1	0.0243	7	.0264	14.64	24	66	rubber	lead covered & armoured
WORKSHOP MOTOR ...	3	1	0.0070	7	.036	21.8	24	144	rubber	lead covered & armoured
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

ISSEMENTS BELGES
CAMPBELL & ISHERWOOD S. A.

Harold W. Ruff Electrical Engineers.

Date 22-4-38

Un Administrateur,

COMPASSES.

Distance between electric generators or motors and standard compass 138 ft

Distance between electric generators or motors and steering compass 144 ft

The nearest cables to the compasses are as follows:—

A cable carrying 2.5 Ampères 4 feet from standard compass 8 feet from steering compass.

A cable carrying 2.5 Ampères 6 feet from standard compass 10 feet from steering compass.

A cable carrying Ampères 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, see attached compass adjustment Rept.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

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.

C. E. Ruff

Builder's Signature.

Date

Directeur,

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 electric installation has

been fitted and tried under working conditions and is accordance with the rule requirements and approved plan. The materials have been tested in accordance with the rule requirements. The materials and workmanship are good

The electric installation has been examined under working conditions and megger tests made.

The electric installation of this vessel is in good condition, and eligible in my opinion to be classed in the Society's Register Book and to have notation of "Electric Light"

For the list of spare gear see attached sheets: also certificate of tests made at the maker works on electric motors fitted in this vessel.

W. L. R. 23/5/38

Total Capacity of Generators 107.5 Kilowatts.

The amount of Fee ...

£ 58/8/75

When applied for,

15.5.1938

Travelling Expenses (if any) £

When received,

17/7.38

Committee's Minute

TUE. 31 MAY 1938

Assigned

See Ant. J.E. 21930

J. L. Rabaez

Surveyor to Lloyd's Register of Shipping.