

YACHT.

Rpt. 13.

17744
No. 13972

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

11 JUN 1930

Date of writing Report 10-6-1930 When handed in at Local Office 10-6-1930 Port of SOUTHAMPTON

No. in Survey held at Southampton Date, First Survey 2-4-30 Last Survey 7-6-1930
Reg. Book. on the Twin Se Yacht. ANNA MARIE

Built at Woolston, Southampton By whom built J. S. Thornicroft & Co Yard No. 1099 When built 5-30
Owners V. G. GRAAE Port belonging to Copenhagen.

Electric Light Installation fitted by J. S. Thornicroft & Co Contract No. - When fitted 5-30

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution Two wire

Pressure of supply for Lighting 110 volts, Heating 110 volts, Power 110 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 No, is an adjustable regulating resistance fitted in series with each shunt field Yes. for battery charging purposes.

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.

Position of Generators Engine Room. Starboard side. 8½ K.W. for 18 K.W. offt. 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 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. For'd bulk-head. adjacent to Generator.

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. Slate, is all insulation of high dielectric strength and of permanently high insulation resistance. Semi insulated, 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.

All Double pole switches with fuses on each pole.

Instruments on main switchboard 25 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 lamps.

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.

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 ...	One	18	110/170	164	1000	Gasolene 3 L. 2. Type Heavy Oil Eng.	Heavy Oil	Above 150° F.
AUXILIARY ...	One	8 1/2	110/170	77	800	" 2 L. Type " " "	"	" " "
EMERGENCY ...	✓							
ROTARY TRANSFORMER	✓							

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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	0.2	37	0.83	164	184	46	V.I.R.	Lead Covered
EQUALISER CONNECTIONS ...	✓								
AUXILIARY GENERATOR ...	1	0.075	19	0.72	77	97	46	V.I.R.	Lead Covered
EMERGENCY GENERATOR ...	✓								
ROTARY TRANSFORMER MOTOR ...	✓								
ENGINE ROOM 2 L. D. Accom.	1	0.003	3	0.36	10	12	20	V.I.R.	Lead Covered
BOILER ROOM ...	✓								
AUXILIARY SWITCHBOARDS ...	✓								
Navigation ...	1	0.003	3	0.36	9	12	100	V.I.R.	Lead Covered
Searchlight Box, No. 1 (Indica)	1	0.0225	7	0.64	39	46	44	V.I.R.	Lead Covered
" " No. 2 "	1	0.01	7	0.44	24	31	30	V.I.R.	Lead Covered
ACCOMMODATION ...									
Off.	1	0.0045	7	0.29	12	18.2	100	V.I.R.	Lead Covered
Upper Deck.	1	0.003	3	0.36	9	12	100	V.I.R.	Lead Covered
WIRELESS ...	✓								
SEARCHLIGHT ...	1	0.0015	1	0.44	4.4	6.1	30	V.I.R.	Lead Covered
MASTHEAD LIGHTS ...	1	0.0015	1	0.44	5.4	6.1	120 F. 370 F.	V.I.R.	Lead Covered
SIDE LIGHTS ...	1	0.0015	1	0.44	5.4	6.1	50	V.I.R.	Lead Covered
COMPASS LIGHTS ...	1	0.0015	1	0.44	3.6	6.1	160 F.	V.I.R.	Lead Covered
POOP LIGHTS ...	✓								
CARGO LIGHTS ...	✓								
ARC LAMPS ...	✓								
HEATERS ...	1	0.01	7	0.44	27	31	160	V.I.R.	Lead Covered

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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 ...	✓									
MAIN BILGE LINE PUMPS ...	✓									
GENERAL SERVICE PUMP ...	1	1	0.007	7	0.36	19	24	120	V.I.R.	Lead Covered
EMERGENCY BILGE PUMP ...	✓									
SANITARY PUMP ...	1	1	0.007	7	0.36	19	24	100	V.I.R.	Lead Covered
CIRC. SEA WATER PUMPS ...	✓									
CIRC. FRESH WATER PUMPS ...	✓									
AIR COMPRESSOR ...	✓									
FRESH WATER PUMP ...	1	1	0.0015	1	0.44	3	6.1	140	V.I.R.	Lead Covered
ENGINE TURNING GEAR ...	✓									
ENGINE REVERSING GEAR ...	✓									
LUBRICATING OIL PUMPS ...	✓									
OIL FUEL TRANSFER PUMP ...	✓									
WINDLASS ...	1	1	0.06	19	0.64	64	83	120	V.I.R.	Lead Covered
WINCHES, FORWARD ...	✓									
Capstan ...	1	1	0.0225	7	0.64	33	46	260	V.I.R.	Lead Covered
WINCHES, AFT ...	✓									
STEERING GEAR—										
(a) MOTOR GENERATOR ...	✓									
(b) MAIN MOTOR ...	1	1	0.0225	7	0.64	42	46	270	V.I.R.	Lead Covered
WORKSHOP MOTOR ...	✓									
VENTILATING FANS ...	1	1	0.003	3	0.36	5	12	230	V.I.R.	Lead Covered
Refrigerators ...	2	1	0.003	3	0.36	5	12	80 each.	V.I.R.	Lead Covered
Powered Motors ...	2	1	0.003	3	0.36	5	12	ER. 30 414.7. 112	V.I.R.	Lead Covered

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 None.

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. Clipped to ship's structure or to cable plates fixed to ship's structure

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, 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 ✓.

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 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 None.

✓, how are the cables led

where are the controlling switches situated ✓

Searchlight Lamps, No. of One, whether fixed or portable Fixed, are their fittings as per Rule Yes.

Arc Lamps, other than searchlight lamps, No. of ✓, are their live parts insulated from the frame or case ✓, 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 Small pumps.

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 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 ✓.

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.



Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass *Dynamo 28 feet. Alundlan Motor 38 feet.*

Distance between electric generators or motors and steering compass *Dynamo 35 feet. Alundlan Motor 28 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying *.18* Amperes *on* feet from standard compass *15* feet from steering compass.

A cable carrying *.36* Amperes *15* feet from standard compass *on* feet from steering compass.

A cable carrying *8.5* Amperes *10* 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 *any* course in the case of the standard compass, and *Nil* degrees on *any* course in the case of the steering compass.



Builder's Signature.

Date

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.)

This Electric Light Installation has been satisfactorily fitted on board in accordance with the Rules.

The workmanship & materials are good; The Installation was found satisfactory when tested by Megger.

This Yacht is eligible, in my opinion, to have the record "Elec. Light".

It is submitted that this vessel is eligible for the record Elec Light.

12/6/30

Total Capacity of Generators *26 1/2* Kilowatts.

The amount of Fee ... £ *21 : 0* : *4/6* 19*30*

Travelling Expenses (if any) £ *✓* : *✓* : *6/6* 19*30*

Lyke J. Johnson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *Elec Lt.*