

YACHT.

No. 11574

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) SAT. 28 JUL. 1923

Date of writing Report 18th July 1923 When handed in at Local Office 24th July 1923 Port of Southampton

To. in Survey held at Gosport Date, First Survey 7th May Last Survey 17th July 1923
Reg. Book. on the T.S.M.Y. "Karen" (Number of Visits 8)

Built at Gosport By whom built Camper & Nicholson Yard No. 314 When built 1923.

Owners J.W. Lykes Port belonging to Portsmouth

Electric Light Installation fitted by Camper & Nicholson Contract No. 314 When fitted 1923.

System of Distribution 2 Wire Pressure of supply for Lighting 100 volts, Heating 100 volts, Power 100 volts.

Direct or Alternating Current, Lighting Direct Power Direct

alternating current system, state frequency of periods per second ✓

Is 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 overload Yes, are they compound wound No

Are they over compounded 5 per cent. ✓, if not compound wound state distance between each generator ✓

When more than one generator is fitted are they arranged to run in parallel ✓, is an adjustable regulating resistance fitted in

Generators with shunt field Yes

Are all terminals accessible and clearly marked Yes, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Centre Line aft end of Engine Room, are they clear of all inflammable material Yes

Is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

Are they 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

Are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and

connecting rods in their respective generators in metallic contact Yes

Main Switch Boards, where placed Aft end of Engine Room.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

use on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓

Are switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes ✓, if situated near unprotected

are they protected from mechanical injury and damage from water, steam or oil ✓ and ✓, 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, incombustible non-absorbent materials Enameled Slate, is all insulation of high dielectric strength and of

permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes, and is the

effectively earthed Yes. Are the following fittings as per Rule, viz.:— spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus

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

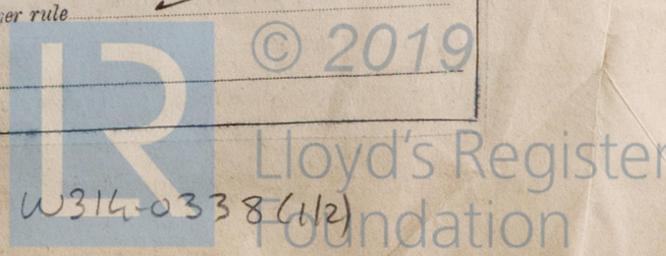
I.D.P. Change over switch also 1 Circuit breaker for Generator

Instruments on main switchboard 2 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 Lamp

Are switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes.

Are the Construction and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule ✓



Insulation of Cables, state type of cables, single or twin Single are the cables insulated and protected as per Tables III or IV of the Rules Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 25 Volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 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 ✓

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 Wood Casing & channel Plate with clips

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 VI Yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements ✓

Joints in Cables, state if any, and how made, insulated, and protected ✓

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 Positions, 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

Earthing Connections, state what earthing connections are fitted and their respective sectional areas ✓

are their connections made as per Rule ✓

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 Battery on main Switch Board

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, are separate screens provided for the use of oil and electric side lights

are separate oil lanterns provided for the mast head lights and side lights 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 None

how are the cables led

where are the controlling switches situated ✓

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

Arc Lamps, other than searchlight lamps, No. of ✓, 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 ✓ are their axis 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

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed 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 ✓

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				Revs. per Min.	DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.				Fuel Used.	Flash Point of Fuel.
MAIN	1	17 1/2	100/160	175/109	800	Paraffin Engine	Paraffin		
AUXILIARY	1	5				Motor			
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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	.19640	37	.093	175	20	Rubber	Lead covered
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	Dis Boxes								
	Forward	2	.02214	7	.064	5		Rubber	Lead covered
	Midships	2	.02214	7	.064	12		"	"
	Navigation	2	.02214	7	.064	8		"	"
	Engine Room	2	.02214	7	.064	5		"	"
	Aft	2	.02214	7	.064	8		"	"
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	.00299	3	.036	5	150	Rubber	Casing & Pipe
	SIDE LIGHTS	4	.00299	3	.036	1	30	"	"
	COMPASS LIGHTS								
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP	1	.01046	7	.044	19.5	52	Rubber	Lead covered
	EMERGENCY BILGE PUMP	1	.01046	7	.044	19.5	25	"	"
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR	1	.10090	19	.088	91	80	Rubber	Lead covered
	FRESH WATER PUMP	1	.01046	7	.044	15		"	"
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS							Rubber	Lead covered
	OIL FUEL TRANSFER PUMP	1	.01046	7	.044	15		"	"
	WINDLASS	1	.06000	19	.064	55	150	"	"
	WINCHES, FORWARD						25		
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR								
	VENTILATING FANS								
	Hot Water	1	.00701	7	.088	5	35	Rubber	Lead covered
	Caps Tar	1	.06000	19	.064	40	80	"	"

All Conductors are of annealed copper conforming to British Standard Specification No. 7. *Yes*
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
The foregoing is a correct description.

CAMPER & NICHOLSONS, LTD
F. Blake
WORKS MANAGER

Electrical Engineers. Date *30th July 1923*

COMPASSES.

Distance between electric generators or motors and standard compass *20'-0"*
Distance between electric generators or motors and steering compass *25'-0"*

The nearest cables to the compasses are as follows:—
A cable carrying *5* Amperes *9* feet from standard compass *9* feet from steering compass.
A cable carrying *37* Amperes *12* feet from standard compass *12* feet from steering compass.
A cable carrying *10* Amperes *14* feet from standard compass *14* 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 *Nil* course in the case of the standard compass, and *Nil* degrees on *Nil* course in the case of the steering compass.

Compasses will be Tested again to Wivenhoe.
F. Blake
Builder's Signature. Date *30th July*

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. The installation has been fitted in accordance with the requirements of the Rules, tried under full working conditions and found satisfactory. The vessel is eligible in my opinion for the notation "Elec. Light."

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

J.W.D.
1/8/23.

Total Capacity of Generators *123* Kilowatts

The amount of Fee ... £ *16 10* : { When applied for, *27 July 23*
Travelling Expenses (if any) £ *✓* : { When received, *30-7-23*

L. A. F. Young
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 3 AUG. 1923*
Assigned *Elec Light*

1m. 3. 22.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

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