

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....-5 JUL 1934

Date of writing Report **28 June 1934** When handed in at Local Office **28 June 1934** Port of

No. in Survey held at **Valencia** Date, First Survey **26 Jan. 1934** Last Survey **27 June 1934**
Reg. Book. (Number of Visits.....**8**.....)

22909 on the **Steel Twin Sc. M/V "CAMPIL O"** Tons { Gross **3971**
Net **2059**

Built at **Valencia** By whom built **Unión Naval de Levante** Yard No. **22** When built **1934**

Owners **C.A.M.P.S.A.** Port belonging to **Valencia**

Electric Light Installation fitted by **Unión Naval de Levante - Valencia** Contract No. When fitted **1934**

System of Distribution **Constant pressure, Parallel, 2 wire system.**
Pressure of supply for Lighting **110 volts** volts, Heating **220** (As approved) 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 **Diesel Generators fore end of E. Room P&S - Turbo Generator PS E. Room.** **Yes**, are they clear of all inflammable material **Yes**

is the ventilation in way of the generators satisfactory **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**

their respective generators in metallic contact **Yes**

Main Switch Boards, where placed **On platform level forward end E.R. port and starboard.**

..... 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 **same compartment**

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

are they constructed wholly of durable, non-ignitable non-absorbent materials **Steel panel**, 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 mica-nite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

and is the frame effectively earthed **Yes**

Are the fittings as per Rule regarding:— spacing or shielding of live parts **Yes**

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 **Double pole**

automatic switch for each generator with overload and reverse current breakers - interlocked equalizing switches.

Instruments on main switchboard **10** ammeters **6** voltmeters **3** 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 **Voltmeters provided for testing lighting circuits @ 110 volts & for power circuits @ 220 volts**

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**



11/20-01/29-02/12/11/29

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 **3 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 **Cables in trays under fore and aft gangway - Accommodation etc. clipped.**

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

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 **None - (Wireless only)**

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **None**

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 fitted**

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 **Lighting in pump room skylights - all wiring and switches outside.**

Separated from interior by stout glass airtight bowl

where are the controlling switches situated **Upper bridge deck**

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 **6**, 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**

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 **Steel masts**

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.	Amperes.		Revs. per Min.	Fuel Used.
MAIN	2	100	220	454	Diesel Engine Steam Turbine	Fuel oil	Above 150° F
AUXILIARY	1	50	220	227			
EMERGENCY							
ROTARY TRANSFORMER	2	15	110	16.5	Electric motor		

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Nominal Cross-sectional Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current (Lead and Return) Amps.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	185	37	2.5	454 470	32	Rubber	Lead & Metallic braid
	EQUALISER CONNECTIONS	1	185	37	2.5	-	16	"	"
	AUXILIARY GENERATOR	2	120	37	2	227 350	30	"	"
	EMERGENCY GENERATOR	1	120	37	2	-	15	"	"
	ROTARY TRANSFORMER MOTOR	1	35	19	1.5	68 78	24	"	"
	AUXILIARY SWITCHBOARDS	1	95	19	2.5	136 150	24	"	"
	ENGINE ROOM	1	1.5	1	1.4	5.4 9.5	50	"	"
	BOILER ROOM	1	1.5	1	1.4	4.3 9.5	50	"	"
	ACCOMMODATION								
	Aux. Station No 1 (Acc. starbd. aft)	1	25	7	2.1	12.8 63	60	"	"
		1	1.5	1	1.4	2.7 9.5		"	Lead covered.
	Aux. Station No 2 (Acc. port aft)	1	25	7	2.1	14 63	60	"	Lead & Metallic braid
		1	1.5	1	1.4	2.7 9.5		"	Lead covered.
	Aux. Station No 3 (Amidships)	1	35	19	1.5	64 78	100	"	Lead & Metallic braid
		1	1.5	1	1.4	2.7 9.5		"	Lead covered.
	Connection from shore	1	120	37	2	- 175	14	"	Lead & Metallic braid
	WIRELESS	1	8	2	2.3	20	120	"	"
	SEARCHLIGHT	1	10	7	1.3	15 38	120	"	"
	MASTHEAD LIGHT	1	1.5	1	1.4	.54 9.5	130	"	"
	SIDE LIGHTS	1	1.5	1	1.4	.54 9.5	20	"	"
	COMPASS LIGHTS	1	1.5	1	1.4	.10 9.5		"	"
	POOP LIGHTS	1	1.5	1	1.4	.54 9.5	170	"	"
	CARGO LIGHTS (6)	1	1.5	1	1.4	5 9.5	40	"	"
	ARC LAMPS							"	"
	HEATERS (Log. Fuel Oil)	1	70	19	2.2	92 125	40	"	"
	ELECTRIC GALLEY	1	70	19	2.2	100 125	40	"	"

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Nominal Cross-sectional Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current (Lead and Return) Amps.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS (10HP)	2	25	7	2.1	34 63c	66	Rubber	Lead & Metallic braid
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP (15HP)	1	120	37	2	153 175c	60	"	"
	SANITARY PUMP (5HP)	1	10	7	1.3	17 38c	68	"	"
	CIRC. SEA WATER PUMPS (35HP)	1	95	19	2.5	120 150c	70	"	"
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP (2HP)	1	4	1	2.3	6.8 22.5c	70	"	"
	ENGINE TURNING GEAR (8HP)	2	16	7	1.7	27.1 49c	36	"	"
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS (CIRCUIT WATER COMBINED)	1	95	19	2.5	120 150c	70	"	"
	OIL FUEL TRANSFER PUMP (5HP)	2	10	7	1.3	17 38c	56	"	"
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR FROM BRIDGE TO TERMINAL (a) MOTOR GENERATOR	1		11	1.5			"	Lead & 2 layers metallic tape
	(b) MAIN MOTOR	1	25	7	2.1	63c	90	"	Lead & Metallic braid
	WORKSHOP MOTOR (5HP)	1	16	7	1.7	17 49c	90	"	"
	VENTILATING FANS								
	Cyl. cover lifting block (5 HP)	2	10	7	1.3	17 38c	80	"	"
	Centrifugal oil separators (1.5HP)	3	4	1	2.3	5.1 22.5c	40	"	"
	Refrigerating mach. (7.5 HP)	1	16	7	1.7	25.2 49c	70	"	"

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.



UNION NAVAL DE LEVANTE, S.A.
 ASTILLEROS Y TALLERES DE VALENCIA

[Signature] Electrical Engineers. Date 28.VI.34

Ingeniero Jefe de la Sección de Maquinaria

COMPASSES.

Distance between electric generators or motors and standard compass 35 metres
 Distance between electric generators or motors and steering compass 35 metres
 The nearest cables to the compasses are as follows:—
 A cable carrying 0.7 Amperes 1.20 m feet from standard compass 1.20 m feet from steering compass.
 A cable carrying .5 Amperes 1.20 m feet from standard compass 1.20 m feet from steering compass.
 A cable carrying 1.5 Amperes 2 1/2 m feet from standard compass 2 1/2 m 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 course in the case of the standard compass, and Nil degrees on course in the case of the steering compass.



UNION NAVAL DE LEVANTE, S.A.
 ASTILLEROS Y TALLERES DE VALENCIA

[Signature] Builder's Signature. Date 28.VI.34

Ingeniero Jefe de la Sección de Maquinaria

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 installation has been

satisfactorily fitted in accordance with the Rules and approved plans, all tests have been carried out in accordance with the Rules.

Materials and workmanship good.

The Special Requirements of the Rules for vessels carrying oil of flash point under 150° F have been complied with.

In my opinion this installation is eligible to be classed in this Society.

Noted
Mon 19.7.34

Total Capacity of Generators 250 Kilowatts.

The amount of Fee ... Inclusive fee changed
 Travelling Expenses (if any) £ : :
 When applied for, 19.
 When received, 19.

[Signature]
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 20 JUL 1934

Assigned See F.B. Welch Report

Im. 127.—Transfer.
 (The Surveyors are requested not to write off or below the space for Committee's Minute.)



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