

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

4 OCT 1935

Date of writing Report 24th Sept. 1935 When handed in at Local Office 28th Sept. 1935 Port of Bilbao

No. in Survey held at Bilbao Date, First Survey 31st Aug. 1934 Last Survey 21st Sept 1935
Reg. Book. FERNANDO POO. (Number of Visits 43)

24900 on the Tw. Sc. M. Y. Tons { Gross 6914
Net 3866

Built at Bilbao By whom built Cia. Euskalduna de Const. Yard No. 97 When built 1935

Owners Cia. Transmediterranea Port belonging to Valencia

Electric Light Installation fitted by Cia. Euskalduna de Const. Contract No. ✓ When fitted 1935

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Parallel, two wire, constant pressure

Pressure of supply for Lighting 110 + 220 volts, Heating 220 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 At forward end of engine room, 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 Yes., 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 On flat at forward end of engine room, above generators.

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.

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite 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 Double pole automatic

switch with reverse current & overload trips & equalizer switch interlocked. Each

outgoing circuit fitted with circuit breaker with overload trip or double pole switch with

fuse on each pole. 3 ammeters 3 voltmeters — synchronising device for paralleling purposes.

Instruments on main switchboard 3 ammeters 3 voltmeters 1 earth indicator

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system combined with voltmeter on lighting & power circuits.

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 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 *5V lighting 11V power*
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 *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 *Yes*

Support and Protection of Cables, state how the cables are supported and protected *Lead covered cables clipped to hull or metal channels. Lighting circuits in accommodation in wood casings*
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 VIII *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 *made in approved junction boxes with isolating links - boxes watertight.*

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 *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 *Dynamo & switchboard housed on boat deck, driven by emergency oil engine.*

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 *Yes, in twin decks. Strong hinged metal covers to each fitting.*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *No*

where are the controlling switches situated *Yes*

Searchlight Lamps, No. of *1*, whether fixed or portable *fixed*, are their fittings as per Rule *Yes*

Arc Lamps, other than searchlight lamps, No. of *1*, 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*

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

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *Yes*

Lighting 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	140 x 3	220	640	375	OIL ENG.	fuel oil	above 150°F
AUXILIARY	1	22	220	100	550	do.	do	do
EMERGENCY	1	22	220	100	550	do.	do	do
ROTARY TRANSFORMER	2	40	110	360	1280	62 HP. motor		

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	2	4985 x 2	61	103	640	664	25	RUBBER	LEAD COVERED & METALIC BRIDGING.
EQUALISER CONNECTIONS	1	4985	61	103	320	332	12	"	"
AUXILIARY GENERATOR	1	4064	61	093	250	288	30	"	"
EMERGENCY GENERATOR	1	1009	19	083	100	118	20	"	"
ROTARY TRANSFORMER	2	3923	37	083	360	368	20	"	"
ENGINE ROOM	1	01046	7	044	30	31	20	"	"
BOILER ROOM	1	00701	7	036	20	24	15	"	"
AUXILIARY SWITCHBOARDS	1	4985	61	103	185	332	30	"	"
POWER	1	"	"	"	350	"	50	"	"
B-V	1	"	"	"	440	384	50	"	"
C&D	1	6062	91	093	315	332	40	"	"
E&H	1	4985	61	103	350	"	60	"	"
F&G	1	"	"	"	360	"	40	"	"
J&K	1	"	"	"	780	"	152	"	"
ACCOMMODATION	1	"	"	"	719	"	145	"	"
PR&T&U	1	"	"	"	210	214	120	"	"
LIGHTING. ABCD&E.	1	2465	37	093	280	"	"	"	"
F&G, H, J&K	1	"	"	"	140	184	70 & 20	"	"
EMERGENCY LIGHTING	1	1964	"	"	25	46	10	"	"
WIRELESS	1	02214	7	064	25	31	45	"	"
SEARCHLIGHT	1	01046	7	044	25	31	185	"	"
MASTHEAD LIGHT	1	00132	1	044	6	6.1	25-30	"	"
SIDE LIGHTS	1	"	"	"	"	"	10	"	"
COMPASS LIGHTS	1	"	"	"	"	"	216	"	"
POOP LIGHTS	1	01462	7	052	15	37	25	"	"
CARGO LIGHTS	1	02214	7	064	30	46	15	"	"
ARC LAMPS	1	"	"	"	"	"	"	"	"
HEATERS	1	"	"	"	"	"	"	"	"

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	1	1	1964	37	083	150	185	25	RUBBER	LEAD COVERED & METALIC BRIDGING.
MAIN BILGE LINE PUMPS	1	1	00455	7	029	13	18.2	25	"	"
GENERAL SERVICE PUMP	1	1	06	"	"	"	"	10	"	"
EMERGENCY BILGE PUMP	1	1	"	"	"	"	"	15	"	"
SANITARY PUMP	1	1	1964	37	083	150	184	40-45	"	"
CIRC. SEA WATER PUMPS	2	1	06	19	064	58.5	83	20	"	"
PISTON COOLING	1	1	06	19	"	"	"	100	"	"
CIRC. FRESH WATER PUMPS	1	1	"	"	"	"	"	20-15	"	"
AIR COMPRESSOR	1	1	"	"	"	"	"	"	"	"
FRESH WATER PUMP	2	1	01462	7	052	39	37	30	"	"
ENGINE TURNING GEAR	1	1	00455	7	029	8	18.2	25	"	"
DIRTY WATER PUMP (SAVES)	1	1	06	19	064	58.5	83	25	"	"
ENGINE REVERSE GEAR	2	1	06	19	036	7	12	30	"	"
LUBRICATING OIL PUMPS	1	1	00299	3	083	220	184	30	"	"
OIL FUEL TRANSFER PUMP	1	1	1964	37	083	134	97	16-20	"	"
WINDLASS	1	1	07592	19	072	118	118	20-50	"	"
WINCHES, FORWARD	2	1	1009	19	083	164	"	"	"	"
WINCHES, AFT	2	1	"	"	"	"	"	"	"	"
WARPING WINCHES	2	1	1168	37	064	133	130	15	"	"
WARPING WINCHES	2	1	06	19	064	73	83	30	"	"
WARPING WINCHES	2	1	1478	37	072	145	152	20	"	"
OIL SEPARATORS	2	1	06	19	064	58.5	83	180	"	"
(a) MOTOR GENERATOR	2	1	"	"	"	"	"	40	"	"
STEERING MOTORS	3	1	00701	7	036	16	24	90 max	"	"
WORKSHOP MOTORS	3	1	00455	7	029	9	18.2	30-35-55	"	"
VENTILATING FANS	1	1	00299	3	036	5	12	80	"	"
F2 & F3	1	1	07592	19	072	118	118	20	"	"
THERMO TANKS	1	1	01046	7	044	25	31	45	"	"
REFRIG. COMPR.	2	1	0396	19	052	67	64	10-15	"	"
BRINE PUMPS	2	1	00299	3	036	8.7	12	20-25	"	"
REFRIG. CIRC. PUMP	1	1	00455	7	029	12.7	18.2	40	"	"
LAUNDRY, KITCHEN ETC	1	1	4985	61	103	max. 214	332	60 max	"	"

WU32-01392

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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

About 20 feet from ventilating fan motor

Distance between electric generators or motors and steering compass

25 "

The nearest cables to the compasses are as follows:

A cable carrying .2 Ampères on the feet from standard compass 6 feet from steering compass.

A cable carrying .2 Ampères 6 feet from standard compass on the 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

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
POR LA COMPAÑIA EUSKALDUNA DE
CONSTRUCCIÓN Y REPARACIÓN DE BUQUES

SUB-DIRECTOR

Builder's Signature

Date

Is this installation a duplicate of a previous one

yes

If so, state name of vessel

DOMINE.

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

The electrical installation as stated above has been satisfactorily fitted on board this vessel, and subsequently tested, in accordance with the Society's Rules & regulations & the approved plans. The workmanship & materials were found to be good with the exception of a number of power switches damaged in fitting. These switches have been efficiently repaired but the owner's require them to be renewed and it is stated this will be done at Barcelona to which port the vessel is proceeding.

The Electrical Installation of this vessel is in our opinion, eligible to be classed.

Total Capacity of Generators 420 Kilowatts.

The amount of Fee

£5: 2275=

When applied for

30/9/35

FOR J.C. KENDALL & SONS

Surveyor to Lloyd's Register of Shipping

Travelling Expenses (if any)

£5: 21=

When received

19/10/35

Committee's Minute

FRI. 22 NOV 1935

Assigned

Sec. Blue J. B. 1935



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