

Rpt. 13.

No. 8532

**REPORT ON ELECTRIC FITTINGS.**

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 13 SEP 1929

Date of writing Report

19

When handed in at Local Office

4/9/

19

29

Port of Trieste

No. in

Survey held at

Manfalcone

Date, First Survey

17/1/29

Last Survey

19/8/

19

Reg. Book.

23951

on the T. S. M. S. Infante Don Jaime

(Number of Visits... 9)

Tons

Gross 3959

Net

2405

Built at

Manfalcone

By whom built

Lant. Nav. Triest.

Yard No. 206

When built

1929

Owners

Compagnia Transmediterranea

Port belonging to

Palma de Mallorca

Electric Light Installation fitted by Lantiere Navale Triestino

Contract No. -

When fitted 1929

System of Distribution

Two wire

Pressure of supply for Lighting

110

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 yes

Position of Generators

In Engine room

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 near 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 (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 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

Double pole circuit breaker with overload and reverse current trip with interlocked fuses for Equalizers for each generator. Double pole circuit breaker with overload and reverse current trips with Equalizer for the Transformers. Single pole automatic breaker with overload and fuse for other pole for Power circuits. Double pole link switches with fuses to each pole for all other circuits.

Instruments on main switchboard

17

ammeters

7

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

contacts for

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



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WS33-01401/2



Cables: Single, twin, concentric, or multicore *single skin* 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 —

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 *armoured or lead covered cables supported by clips*

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 *yes*

Joints in Cables, state if any, and how made, insulated, and protected *in WT junction boxes*

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 or hard wood*

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 *One 2 cylinder Hot bulb 60HP motor direct coupled to a 40 KW 220V generator and a Rotary Transformer 220/110V fitted in the Main Deck and arranged to feed the principal circuit of power and light.*

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 —

—, 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 —

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

—, 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 *steel marks*

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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	110	220	500	330	Diene motor	Diene oil	
AUXILIARY								
EMERGENCY	1	40	220	182	385	Hot bulb motor	Do	
ROTARY TRANSFORMER	2	27/20	220/110	123/182	1600	Electric motor	General arrangement	
	1	12/9	220/110	55/82	1800	"	For Emergency	

## LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor.	COMPOSITION OF STRAND.		Total Maximum Current.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
23.24.25	MAIN GENERATOR...	2	243	61	2.25	500	36	rubber	Armoured
23.24.25	EQUALISER CONNECTIONS...	1	243	61	2.25	—	36	"	"
29.30	ROTARY TRANSFORMER...	1	74/47	37	1.6/2.25	123/182	30	"	"
29.30	EMERGENCY GENERATOR...	1	147	37	2.25	182	35	"	"
31	ROTARY TRANSFORMER Emer.	1	22/38	19	1.2/1.6	55/82	15	"	"
25	AUXILIARY SWITCHBOARDS...	1	38	19	1.6	61	90	"	"
19	ENGINE ROOM SB (220 V.)	1	7	7	1.1	8	120	"	"
20	BOILER ROOM " " "	1	7	7	1.1	8	120	"	"
1.5.8	ACCOMMODATION SB 1.5.8...	1	4.5	7	0.9	10.6	240	"	"
2.15	" " 2.15	1	4.5	7	0.9	11.5	130	"	"
3	" " 3	1	4.5	7	0.9	26.5	200	"	"
4	" " 4	1	4.5	7	0.9	23.8	80	"	"
6.26	" " 6.26	1	4.5	7	0.9	15.5	80	"	"
7	" " 7	1	4.5	7	0.9	20.8	150	"	"
10	" " 10	1	4.5	7	0.9	30.4	200	"	"
11.27	" " 11.27	1	4.5	7	0.9	17.4	70	"	"
12	" " 12	1	4.5	7	0.9	23	100	"	"
13	" " 13	1	4.5	7	0.9	14.2	150	"	"
14	" " 14	1	4.5	7	0.9	19.5	160	"	"
15	" " 15	1	4.5	7	0.9	9.5	200	"	"
16	" " 16	1	4.5	7	0.9	20	300	"	"
18	" " 18	1	4.5	7	0.9	8	150	"	"
20	" " 20	1	4.5	7	0.9	13	15	"	"
21	" " 21	1	4.5	7	0.9	10	120	"	"
22	" " 22	1	4.5	7	0.9	8	40	"	"
16	" " 16	1	4.5	7	0.9	2.3	250	"	"
18	WIRELESS SB	1	9	7	1.3	14	280	"	"
24	SEARCHLIGHT	1	7	7	1.1	30	300	"	"
	MASTHEAD LIGHT...	1	1.3	1	1.3	0.6	350	"	"
	SIDE LIGHTS...	1	1.3	1	1.3	0.6	300	"	"
	COMPASS LIGHTS...	1	1.3	1	1.3	0.17	300	"	Lead
	POOP LIGHTS...	1	1.3	1	1.3	0.3	450	"	Armoured
26	CARGO LIGHTS	1	7	7	1.1	23	320	"	"
27	Second Bath.	1	4.5	7	0.9	23	—	"	"
	HEATERS								

## MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor.	COMPOSITION OF STRAND.		Total Maximum Current.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
C1/4	BALLAST PUMP	1	38	19	1.6	79	60	rubber	Armoured
C1/1	MAIN BILGE LINE PUMPS	1	14	7	1.6	47	40	"	"
C1/2	GENERAL SERVICE PUMP	1	1.3	1	1.3	6	70	"	"
	EMERGENCY BILGE PUMP								
C2/9	SANITARY PUMP	1	14	7	1.6	36	40	"	"
C2/13.14	CIRC. SEA WATER PUMPS	2	74	37	1.6	115	70	"	"
C2/8	CIRC. WATER PUMPS	1	1.3	1	1.3	2	45	"	"
	AIR COMPRESSOR								
C2/10	FRESH WATER PUMP	1	1.3	1	1.3	2	30	"	"
C2/1.9/2	ENGINE TURNING GEAR	2	4.5	7	0.9	12	80	"	"
16	Ship's Store Refrigerator	6	7	7	1.1	22	100	"	"
C2/11.12	LUBRICATING OIL PUMPS	2	99	37	1.85	135	80	"	"
C1/3	OIL FUEL TRANSFER PUMP	1	4.5	7	0.9	20	50	"	"
5	WINDLASS 1 h. rating.	1	147	37	2.25	226	300	"	"
7	WINCHES, FORWARD x SB	4	243	61	2.25	370	250	"	"
8	WINCHES, AFT x SB	2	74	37	1.6	142	180	"	"
6	STEERING GEAR	1	25	19	1.3	59	—	"	"
C1/5.6	Oil filter	2	1.3	1	1.3	6	300	"	"
9	Caps tank SB	2	74	37	1.6	158	180	"	"
17	WORKSHOP MOTOR SB	3	4.5	7	0.9	22	80	"	"
3.4	Blower	2	128	37	2.1	173	100	"	"
10	Galley SB	9	38	19	1.6	82	150	"	"
11	Boat Winches SB	2	60	19	2	118	200	"	"
12	Form. Hold Ventil. SB	4	7	7	1.1	28	250	"	"
13	Aft. Hold Ventil. SB	2	4.5	7	0.9	14	150	"	"
14	Thermotanks SB	4	14	7	1.6	44	150	"	"
15	Air Extractor SB	4	4.5	7	0.9	12	200	"	"
1	FR. Power Port SB	10	182	37	2.5	217	80	"	"
2	FR. Power Port SB	5	243	61	2.25	262	80	"	"
22	Laundry	4	14	7	1.6	22	100	"	"

x = 1/2 h. rating



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.

CANTIERE NAVALE TRIESTINO

*Angelo Fano*

Electrical Engineers.

Date

#### COMPASSES.

Distance between electric generators or motors and standard compass *100*

Distance between electric generators or motors and steering compass *90*

The nearest cables to the compasses are as follows:—

A cable carrying *5.5* Ampères *8* feet from standard compass *6* feet from steering compass.

A cable carrying *0.17* Ampères *in the* feet from standard compass *in 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 *none* degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

CANTIERE NAVALE TRIESTINO

*Angelo Fano*

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 installation has been made in accordance with the Rule and under special survey. The material and workmanship are good. The whole installation was examined under working condition and found satisfactory.*

It is submitted that  
this vessel is eligible for  
THE RECORD.

*Elec. Light*

*D.A.*

*17/9/29*

*J.*

Total Capacity of Generators *330* Kilowatts.

The amount of Fee ... *Line 3697*

When applied for,

*10/9/29*

When received,

*19.10.29*

Travelling Expenses (if any) £

*P. Luparic*

Secretary to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*Elec. Light*



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