

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

15 APR 1929

Date of writing Report 19 When handed in at Local Office 3. 4. 10 29 Port of Trieste
 No. in Survey held at Trieste Date, First Survey 3/11/28 Last Survey 23/3/1929
 Reg. Book. 90126 on the Motor Vessel "FUSIJAMA" (Number of Visits.....20.....)
 Built at Trieste By whom built Stabilimento Tecnico Triestino Yard No. 773 Tons { Gross 6669
 Net 4196
 Owners Lloyd Triestino Port belonging to Trieste When built 1929
 Electric Light Installation fitted by Stabilimento Tecnico Triestino Contract No. ✓ When fitted 1929

System of Distribution Two wire insulated.

Pressure of supply for Lighting 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 overload 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 and clearly marked Yes., are they so spaced or shielded that they cannot be accidentally earthed, or short circuited Yes.

Position of Generators In engine room, two on port side, one on starboard side.

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 axis 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 Forward end of engine room, transversely in shed.

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, incombustible non-absorbent materials Marble, 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 frame 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

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 Generators—

two pole circuit breakers with overload and reverse current trips and with equaliser switches mechanically arranged as per Rule. Outgoing circuit—two pole knife switches with rush release.

Instruments on main switchboard 3 ammeters 2 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 Lamps to earth

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

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes.



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Insulation of Cables, state type of cables, single or twin *both* 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 *4 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 *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 *Supported by galvanised iron clips and protected where necessary with sheet iron.*

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 *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 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 *Lead and wood.*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *Dynamo baseplate secured to ship's structure. Also framework of main switchboard.*

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 *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*, are separate screens provided for the use of oil and electric side lights *Yes*, 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 *Lamps in cargo spaces protected by cages.*

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 *None*, whether fixed or portable *fixed*, are their fittings as per Rule *Yes*.

Arc Lamps, other than searchlight lamps, No. of *None*, 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 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 *✓*

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	100	220	455	870	3 cylinder Diesel engine	Refract oil	Above 150° F.
AUXILIARY ...	None							
EMERGENCY ...	None							
ROTARY TRANSFORMER	None							

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. MM.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Metres.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR... ..	2	324	61	2.6	455	1x36 2x47	India Rubber	Steel wire armour.
	AUXILIARY GENERATOR	✓						do	
	EQUALISER CABLE	✓	324	61	2.6	✓	3x45		
	EMERGENCY GENERATOR	✓							
	ROTARY TRANSFORMER...	✓							
	AUXILIARY SWITCHBOARDS	✓							
	ENGINE ROOM								
	BOILER ROOM								
	DISTRIBUTION BOARDS								
	Engine Room No. 1.	1	67	7	1.1	28	8	do	do
	Engine room No. 2	1	93	7	1.3	868	30 + 34	do	do
	Engine room No. 3.	1	93	7	1.3	1848	30 + 34	do	do
	Saloon No. 4.	1	14.5	19	1	14.63	60	do	do
	Office room No. 5	1	93	7	1.3	10	16	do	do
	Bridge No. 6	1	93	7	1.3	392	22	do	do

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. MM.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) METRES.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	65	19	2.1	75	22	Insul Rubber	Steel wire
	MAIN BILGE LINE PUMPS ...	1	14.5	19	1	37	15	do	armour.
	GENERAL SERVICE PUMP	1	4.5	7	0.9	18.8	12	do	do
	EMERGENCY BILGE PUMP ...	✓							
	SANITARY PUMP	✓							
	CIRC. SEA WATER PUMPS ...	2	77	37	1.6	113	1 x 28 2 x 40	do	do
	CIRC. FRESH WATER PUMPS	✓							
	AIR COMPRESSOR	✓							
	FRESH WATER PUMP	1	4.5	7	0.9	376	30	do	do
	ENGINE TURNING GEAR	2	14.5	19	1	376	1 x 30 1 x 70	do	do
	ENGINE REVERSING GEAR	✓							
	LUBRICATING OIL PUMPS ...	2	65	19	2.1	75	1 x 25 1 x 30	do	do
	OIL FUEL TRANSFER PUMP	1	65	19	2.1	56	80	do	do
	WINDLASS	1	16.1	37	2.35	226	150	do	do
	WINCHES, FORWARD	1	324	61	2.6	498	110	do	do
	WINCHES, AFT	1	124	37	2.1	204	80	do	do
	STEERING GEAR	1	324	61	2.6	240	140	do	do
	WORKSHOP MOTORS	1	66	19	2.1	130	220	do	do
	SUPERCHARGER	1	4.5	7	0.9	18.8	1 x 30 1 x 70	do	do
	VENTILATING FANS	2	324	61	2.6	250	1 x 60 1 x 30	do	do

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.

Luigi Marziano Montegrosso Electrical Engineers. Date 30-3-29.

COMPASSES.

Distance between electric generators or motors and standard compass 9 m. from wireless motor.
Distance between electric generators or motors and steering compass 12 m do do.

The nearest cables to the compasses are as follows:—

A cable carrying 30 Amperes 3 m feet from standard compass 6 m feet from steering compass.
A cable carrying 5 Amperes 2.5 m feet from standard compass 5.5 m feet from steering compass.
A cable carrying 3 Amperes 2.5 m feet from standard compass 5.5 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 no
The maximum deviation due to electric currents was found to be ✓ degrees on ✓ course in the case of the standard compass, and ✓ degrees on ✓ course in the case of the steering compass.

Stabilimento Tecnico Triestino

h. Spilly Builder's Signature. Date 30-III-29-

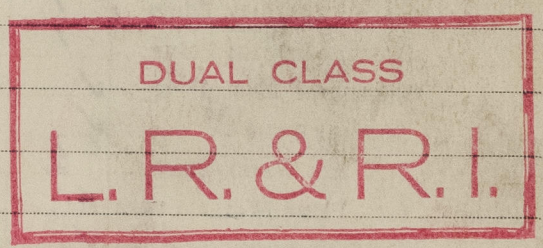
Is this installation a duplicate of a previous case no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The electric installation of this vessel has been fitted on board in accordance with the requirements of the Rules. The generators and motors were tested in the shops, before being fitted on board, and on completion the whole installation was tested under full working conditions, and found satisfactory.

wireless fitted.

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

Y Run
17.4.29



Total Capacity of Generators 300 Kilowatts

The amount of Fee ... L. 3.627.- { When applied for, to be combined with R.I.
Travelling Expenses (if any) £ ✓ : { When received, 13.5.29

V. Lockrey
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Elec Light

1m, 9m, 2m—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)