

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)-8 SEP 1925

Received at London Office.....

Date of writing Report Sep 4 1925 When handed in at Local Office Sep 4 1925 Port of TriesteNo. in Survey held at Monfalcone Date, First Survey Jan 5 Last Survey Aug 24 1925
Reg. Book. (Number of Visits...10...)27173 on the Twin screw Motorship Manly Tons { Gross 5943
Net 3812Built at Monfalcone By whom built Cantiere Nav. Triest. Yard No. 137 When built 1925Owners Cornish for Triest. Navig. Port belonging to TriesteElectric Light Installation fitted by Cantiere Navale Triestino Contract No. When fitted 1925System of Distribution Double pole ✓Pressure of supply for Lighting 110 ✓ volts, Heating 1 ✓ volts, Power 220 ✓ volts.Direct or Alternating Current, Lighting Direct ✓ Power Direct ✓If alternating current system, state frequency of periods per second 1 ✓.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 1 ✓.Where more than one generator is fitted are they arranged to run in parallel yes ✓, is an adjustable regulating resistance fitted inseries 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 ✓ Are the lubricating arrangements of the generators as per Rule yes ✓Position of Generators in Engine room platform ✓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

1 ✓. and 1 ✓, 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 andtheir 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 1 ✓.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 unprotectedwoodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards 1 ✓. and 1 ✓.are they constructed wholly of durable, incombustible non-absorbent materials yes ✓, is all insulation of high dielectric strength and ofpermanently high insulation resistance yes ✓, if semi-insulating material is used, are all conducting parts connected to one poleinsulated from the slab with mica or micanite and the slab similarly insulated from its framework yes ✓, and is theframe effectively earthed yes ✓. Are the following fittings as per Rule, viz.:— spacing or shielding of live partsyes ✓, accessibility of all parts yes ✓, absence of fuses on back of board yes ✓, proportion of omnibusbars 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 and an interlocked switch for equalizer for each generator. A double pole with overload automatic switch for two outgoing circuit for power. A single pole automatic switch with overload on one pole and a link switch on other pole for three outgoing circuit for winches and windlass. One double pole link switch for steering engine. One single pole automatic switch with overload on one pole and a link switch on other pole for Rotary Transformer. Double pole switches for light and all link switch on other pole for synchronising device for paralleling purposes.Instruments on main switchboard 11 ✓ ammeters 6 ✓ voltmetersEarth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system contacts forvoltmeterSwitches, 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 *twinn* 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

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 *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 VI

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *none*

Joints in Cables, state if any, and how made, insulated, and protected *no joints in cables*

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 *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. Also 3 lamps at 220 V.*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *✓*.

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 *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 *no*, how are the cables led *✓*, where are the controlling switches situated *✓*.

Searchlight Lamps, No. of *none*, whether fixed or portable *✓*, are their fittings as per Rule *✓*.

Are 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 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	70	220	320	250	<i>Triat Diesel 20 S.A.</i>	<i>Diesel oil</i>	<i>More 150° F</i>	
AUXILIARY	1	13	220	59	425	<i>Hot bulb 19 1/2 S.C.S.A</i>	"	"	
EMERGENCY									
ROTARY TRANSFORMER	1	10	220-110	82-118	1400	<i>Calcium motor</i>			

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...	1	322 ✓	61	2.6	320	36	<i>rubber</i>	<i>Armoured</i>
	AUXILIARY GENERATOR	1	38.7 ✓	19	1.6	59	240	"	"
	EMERGENCY GENERATOR	✓	✓	✓	✓	✓	✓	"	"
	ROTARY TRANSFORMER...	1	38.7 ✓	19	1.6	59	35	"	"
	AUXILIARY SWITCHBOARDS	✓	64.5 ✓	✓	✓	120	35	"	"
1	ENGINE ROOM	1	4.5 ✓	7	0.9	15.4	26	"	"
	BOILER ROOM								
2	<i>Crew Accomod.</i>	1	4.5 ✓	7	0.9	23.3	120	"	<i>Arm. or lead cover.</i>
3	<i>Officers Accom.</i>	1	4.5 ✓	7	0.9	14.1	400	"	"
4	<i>Engineers Accom.</i>	1	4.5 ✓	7	0.9	15	170	"	"
5	WIRELESS	1	6.4 ✓	7	1.10	9	170	"	<i>Armoured</i>
	SEARCHLIGHT								
3	MASTHEAD LIGHT...	4	1.3 ✓	1	1	1	240	"	"
3	SIDE LIGHTS	1	1.3 ✓	1	1	1	60	"	"
3	COMPASS LIGHTS	1	1.3 ✓	1	1	0.3	25	"	<i>Lead covered</i>
3	POOP LIGHTS	1	1.3 ✓	1	1	1	250	"	<i>Armoured</i>
6	CARGO LIGHTS	1	4.5 ✓	7	0.9	13	130	"	"
	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.				
1	BALLAST PUMP	1	97 ✓	37	1.85	132	80	<i>rubber</i>	<i>Armoured</i>
1	MAIN BILGE LINE PUMPS	1	38.7 ✓	19	1.6	68	80	"	"
1	GENERAL SERVICE PUMP	1	9.35 ✓	7	1.3	28	80	"	"
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
2	CIRC. SEA WATER PUMPS	1	38.7 ✓	19	1.6	66	80	"	"
	CIRC. FRESH WATER PUMPS								
3	AIR COMPRESSOR	1	38.7 ✓	19	2.35	354	80	"	"
	FRESH WATER PUMP								
1-2	ENGINE TURNING GEAR	1	14.5 ✓	7	1.6	40	60	"	"
	ENGINE REVERSING GEAR								
2	LUBRICATING OIL PUMPS	1	38.7 ✓	19	1.6	68	80	"	"
2	OIL FUEL TRANSFER PUMP	1	38.7 ✓	19	1.6	68	60	"	"
4	WINDLASS	1	193 ✓	37	2.6	210	480	"	"
5	WINCHES, FORWARD	2	161 x 2 ✓	27	2.35	328	90	"	"
6	WINCHES, AFT	2	193 x 2 ✓	27	2.60	470	90	"	"
7	STEERING GEAR	1	25.8 ✓	19	1.3	50	250	"	"
2	WORKSHOP MOTOR	1	4.5 ✓	7	0.9	21	90	"	"
	VENTILATING FANS								
8	<i>Winch Aft</i>	1	48.5 ✓	19	1.85	86	220	"	"
9	<i>Oil filter</i>	1	4.5 ✓	7	0.9	6	30	"	"
10	<i>Refrigerator</i>	1	4.5 ✓	7	0.9	16	60	"	"
5	<i>From Adv. S.C. Winches</i>	6	38.7 ✓	19	1.6	62	400	"	"
6	" " " "	6	38.7 ✓	19	1.6	62	400	"	"

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
OFFICINE ELETTROMECCANICHE

Electrical Engineers.

Date August 22nd 1925

COMPASSES.

Distance between electric generators or motors and standard compass about 70'

Distance between electric generators or motors and steering compass " 65'

The nearest cables to the compasses are as follows:—

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

A cable carrying — Ampères — feet from standard compass — feet from steering compass.

A cable carrying 0.3 Ampères in the feet from standard compass in the 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.

CANTIERE NAVALE TRIESTINO

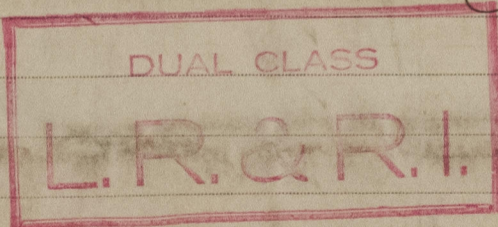
Builder's Signature.

Date Aug 22nd 1925

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 made in accordance with the Rule, the material and workmanship are good. The whole installation and generators have been tested under full working condition and found satisfactory.

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



Total Capacity of Generators 223 Kilowatts

The amount of Fee ...

£4842.

When applied for, 19

Travelling Expenses (if any) £

When received, 25

Committee's Minute

FRI. 11 SEP 1925

Assigned

Elec Lt

FRI. 4 JUN 1926



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