

# REPORT ON ELECTRIC FITTINGS

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

30 OCT 1925

Date of writing Report 22/10/1925 When handed in at Local Office 27/10/1925 Port of Trieste

No. in Survey held at Trieste Date, First Survey Jan 15 Last Survey Oct 7 1925  
Reg. Book. 25688 on the MOTOR VESSEL "LEME" (Number of Visits...ten)

Built at Trieste By whom built Stato Tecnico Triestino Yard No. 743 When built 1925  
Tons { Gross 8652  
Net 5503

Owners Navigatione Libera Triestina Port belonging to Trieste

Electric Light Installation fitted by Stabilimento Tecnico Triestino Contract No. \_\_\_\_\_ When fitted 1925

System of Distribution Two wires

Pressure of supply for Lighting 110 volts, Heating  volts, Power 110 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 No.  
are they over compounded 5 per cent. , if not compound wound state distance between each generator 500 mm nearest.

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. Are the lubricating arrangements of the generators as per Rule Yes.

Position of Generators Port side engine room - 2 on platform - 1 (steam driven) on flat above, 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 In engine room, above diesel driven generator.

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 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 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. The generators have 2-pole overload circuit breakers, with regulating gear and a time relay, and the circuits have quick break knife switches.

Instruments on main switchboard 5 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 Camps.

Switches, Circuit Breakers and Fusible Out-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.



**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 *Y/s.*

**Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load *2-3 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 *Y/s.*

**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 *Y/s.*

**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 *Y/s.*

**Support and Protection of Cables**, state how the cables are supported and protected *with iron clips and when necessary wooden rail steel iron.*

If cables are run in wood casings, are the casings and caps secured by screws *Y/s.*, are the cap screws of brass *Y/s.*, are the cables run in separate grooves *Y/s.* If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI *Y/s.*

**Refrigerated Chambers**, if lights are fitted, are the cables and fittings in accordance with the special requirements *Y/s.*

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

**Watertight Glands and Deck Tubes**, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands *Y/s.*

**Bushes in Beams and Non-watertight Positions**, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *Y/s.* state the material of which the bushes are made *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 *Y/s.*

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

**Navigation Lamps**, are these separately wired *Y/s.*, controlled by separate switch and separate fuses *Y/s.* are the fuses double pole *Y/s.*, are the switches and fuses grouped in a position accessible only to the officers on watch *Y/s.*

has each navigation lamp an automatic indicator as per Rule *Y/s.*, are separate screens provided for the use of oil and electric side lights *Y/s.* are separate oil lanterns provided for the mast head lights and side lights *Y/s.*

**Fittings**, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight *Y/s.* 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

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected

where are the controlling switches situated

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

**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 *Y/s.*, are the coils self-contained and readily removable for replacement *Y/s.* are the brushes, brush holders, terminals and lubricating arrangements as per Rule *Y/s.*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *Y/s.*

are they protected from mechanical injury and damage from water, steam or oil *Y/s.* are their axis of rotation fore and aft *all except low for F.W. pumps.*

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 *Y/s.* 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 *Y/s.*

**Lightning Conductors**, where lightning conductors are required, are these fitted as per Rule *Y/s.*

**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	2	52.5	110	478	930	Diesel engine & steam up.	Diesel oil	Above 150° F.
AUXILIARY	1	50	110	454	320	Steam engine		
EMERGENCY	1							
ROTARY TRANSFORMER	<input checked="" type="checkbox"/>							

**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	2	310	61	2.6	478	8	paper.	Lead & armoured.
	AUXILIARY GENERATOR	2	310	61	2.6	454	8	"	"
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS	2	310	61	2.6	454	20	"	"
1 fitting	ENGINE ROOM	1	6	7	1.1	296	74	Rubber.	"
	BOILER ROOM	1	6	7	1.1	296	74	"	"
3	Engine room quarters	1	4	7	0.9	9.4	45	"	"
4	Boiler room quarters	1	4	7	0.9	12.7	35	"	"
5	Bridge	1	6	7	1.1	14.6	130	"	"
6	Navigation lights	1	4	7	0.9	2.5	130	"	"
7	Cargo lights forward	1	10	7	1.8	27.8	120	"	"
	Central lamps	1	1.5	1	1.6	10.5	90	"	"
5 power	WIRELESS	1	6	7	1.1	15	120	"	"
	SEARCHLIGHT								
6 light	MASTHEAD LIGHT	1	1.5	1	1.6	0.5	200	"	"
6	SIDE LIGHTS	1	1.5	1	1.6	0.5	18	"	"
5	COMPASS LIGHTS	1	1.5	1	1.6	0.2	10	"	Lead.
6	POOP LIGHTS	1	1.5	1	1.6	0.5	210	"	Lead & armoured.
2	CARGO LIGHTS aft	1	10	7	1.3	28.8	90	"	"
	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.				
12 power	BALLAST PUMP	1	2x9.5	37	1.85	310	85	paper.	Lead & armoured.
17	MAIN BILGE LINE PUMPS	1	120	37	2.1	162	80	Rubber.	"
13	GENERAL SERVICE PUMP	1	70	37	1.6	115	75	"	"
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
14.5	CIRC. FRESH WATER PUMPS	2	16	7	1.8	46	70	"	"
10	AIR COMPRESSOR	1	2x240	61	2.85	510	80	"	"
	FRESH WATER PUMP								
9	ENGINE TURNING GEAR	1	25	19	1.3	60	30	"	"
	ENGINE REVERSING GEAR								
7.8	LUBRICATING OIL PUMPS	2	150	37	2.35	200	36	"	"
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
3	STEERING GEAR	1	75	37	1.6	170	130	paper.	"
2	WORKSHOP MOTOR	1	16	7	1.9	46	80	Rubber.	"
6	VENTILATING FANS	1	16	7	1.9	50	50	"	"
8 fitting	air separator forward	1	6	7	1.1	16.8	30	"	"
8	oil separator aft	1	6	7	1.1	8.8	40	"	"
1 power	Refinery engine	1	6	7	1.1	28	30	"	"

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.

*Maxie Dvorsey*

Electrical Engineers.

Date 23. 10. 1925

COMPASSES.

Distance between electric generators or motors and standard compass .....  
 Distance between electric generators or motors and steering compass .....  
 The nearest cables to the compasses are as follows :—  
 A cable carrying ..... Ampères ..... feet from standard compass ..... feet from steering compass.  
 A cable carrying ..... Ampères ..... feet from standard compass ..... 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 .....  
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted .....  
 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.

*H. J. Smith*

Builder's Signature.

Date

Is this installation a duplicate of a previous case to If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The electrical installation)  
of this vessel has been fitted in accordance with the  
requirements of the Rules. The generator and motor  
have been tested individually and in conjunction the  
installation was tested under full working conditions  
and found satisfactory.



*blee. Light*  
*[Signature]*  
 30/10/25

Total Capacity of Generators 155 Kilowatts

The amount of Fee ... £ 4117 : { When applied for, Oct 22 1925  
 Travelling Expenses (if any) £ ✓ : { When received, 12/25

*[Signature]* H. V. Lockney  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

50, 1923.—Printer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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