

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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No. in Survey held at East Wharf Date, First Survey 17.3.49 Last Survey 19.3.1949  
Reg. Book. on the steel screw steamer FRAVATA (ex H.M. Trawler) Tons { Gross Net

Built at Bombay By whom built Alcock Ashdown & Co Yard No. N.C.P. 8 When built 1912

Owners East & West Steamship Co Port belonging to Karachi

Electric Light Installation fitted by Alcock Ashdown & Co Contract No. N.C.P. 8 When fitted 1912

System of Distribution Parallel constant pressure, 2 wire  
Pressure of supply for Lighting 110 V. volts, Heating ✓ volts, Power ✓ volts.

Direct or Alternating Current, Lighting Direct Current Power ✓

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. ✓, if not compound wound state distance between each generator ✓

Where more than one generator is fitted are they arranged to run in parallel No, 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 In 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 ✓, 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 Adjacent to generators in Engine Room

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 ✓, 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 D.P. switches and fuses

Instruments on main switchboard ammeters 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 Earth lamps and switches; megger test

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

**Insulation of Cables**, state type of cables, single or twin Single 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 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 Clipped to trays and bulkheads

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 yes

**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

**Earthing Connections**, state what earthing connections are fitted and their respective sectional areas Generator earthed by copper strap 0.2 sq. in area. are their connections made as per Rule 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 yes

**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 no, 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 None so fitted, 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 yes, where are the controlling switches situated yes

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

**Arc Lamps**, other than searchlight lamps, No. of yes, 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 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 yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors yes and yes

**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 yes

**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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	one	15	110	136	500	Steam engine		
AUXILIARY	one	10	110	91.97	1000	Natural combustion engine	Light diesel oil above 150°F	
EMERGENCY								
ROTARY TRANSFORMER								

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	0.15	37	0.072	136	12	V.I.R.	Lead covered
	AUXILIARY GENERATOR	1	0.15	37	0.072	136	14	V.I.R.	Lead covered
	EMERGENCY GENERATOR					92			
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	0.01	7	0.044	6	64	V.I.R.	Lead covered
	BOILER ROOM	1	0.01	7	0.044	6	95	V.I.R.	Lead covered
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT...	1	0.01	7	0.044	3	165	V.I.R.	Lead covered
	SIDE LIGHTS	1	0.01	7	0.044	3	104	V.I.R.	Lead covered
	COMPASS LIGHTS								
	POOP LIGHTS								
	CARGO LIGHTS	1	0.01	7	0.044	4	180	V.I.R.	Lead covered
	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.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR								
	VENTILATING FANS								

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 46 feet

Distance between electric generators or motors and steering compass 40 feet

The nearest cables to the compasses are as follows:—

A cable carrying 3 Ampères 5 feet from standard compass 11 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 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 \_\_\_\_\_ degrees on small for measurement course in the case of the standard compass, and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

Builder's Signature. Date \_\_\_\_\_

Is this installation a duplicate of a previous case Yes If so, state name of vessel FIRISHTA

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

This installation differs slightly from FIRISHTA as regards the position of wiring.

The workmanship is good and megger tests satisfactory

The generator and wiring comply with the Rules and the installation is eligible in my opinion to be classed as contemplated

Noted Sent 16/6/49

Total Capacity of Generators 25 Kilowatts

The amount of Fee ... ..	<u>£ 562-8</u> :	} When applied for, ..... 19.....
Travelling Expenses (if any)	<u>£ 10-0</u> :	

[Signature]  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_

Assigned FRL 17 JUN 1949

Im. 9. 22.—Transfer.  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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