

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 9387

Received at London Office 23 NOV 1931

Date of writing Report 9th November 1931 When handed in at Local Office

19 Port of TRIESTE

No. in Survey held at Venice

Date, First Survey Oct 2

Last Survey Nov 5

19 31

(Number of Visits 1)

Reg. Book.

39729 on the STEEL TWIN SCREW "CABO DELGADO"

Tons { Gross 372.5
Net 121.0

Built at VENICE

By whom built CANTIERI NAVALI ED OFFICINE
MECCANICHE DI VENEZIA

Yard No. 74

When built 1931

Owners GOVERNMENT OF PORTUGUESE COLONY IN MOZAMBIQUE Port belonging to PORTO AMELIA.

Electric Light Installation fitted by DITTA ZANNINI BELIZARIO

Contract No. 74 When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk NO.

System of Distribution Two Wire volts, Power ✓

Pressure of supply for Lighting 110 Volts volts, Heating ✓

Direct or Alternating Current, Lighting Direct 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 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 ✓, is an adjustable regulating resistance fitted in series with each shunt field ✓

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, 60

short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Engine Room Flat Forward, Port Side Yes, 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 Yes

and ✓, are the generators protected from mechanical injury and damage from water, steam or oil ✓

are their axes of rotation fore and aft Yes are the prime movers and

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes

their respective generators in metallic contact Yes

Main Switch Boards, where placed Behind 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, if situated near unprotected are they protected from mechanical injury and damage from water, steam or oil Yes and ✓

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards ✓

are they constructed wholly of durable, non-ignitable non-absorbent materials Parble, is all insulation of high dielectric strength and of permanently high insulation resistance ✓

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 link

switches each circuit, with fuses each pole.

Instruments on main switchboard one ammeters one 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

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

Cables: Single, twin, concentric, or multicore. Twin 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. 1 volt

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. 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. metal clips. Lead covered steel braided cables

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. ✓

Joints in Cables, state if any, and how made, insulated, and protected. 2 Small size cables made in watertight junction boxes. no joints in large size 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 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.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas.

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule. ✓

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

Secondary Batteries, are they constructed and fitted as per Rule. ✓

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. none.

, how are the cables led.

where are the controlling switches situated. ✓

Searchlight Lamps, No. of One, whether fixed or portable. portable, 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. none, are the coils self-contained and readily removable for replacement. ✓, are the brushes, brush holders, terminals and lubricating arrangements as per Rule. ✓, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material. ✓

are they protected from mechanical injury and damage from water, steam or oil. ✓, are their axes of rotation fore and aft. ✓

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. ✓

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. ✓

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	<u>One</u>	<u>7</u>	<u>110</u>	<u>63.6</u>	<u>600</u>	<u>Steam reciprocating engine</u>	<u>✓</u>	<u>✓</u>
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet. Meters.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. In. Sq. Mm.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	<u>one</u>	<u>14.00</u>	<u>7</u>	<u>1.60</u>	<u>63.60</u>	<u>75.00</u>	<u>3</u>	<u>paper</u>	<u>Lead covered, steel braided</u>
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>1.25</u>	<u>6.10</u>	<u>16</u>	<u>"</u>	<u>"</u>
BOILER ROOM	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>1.25</u>	<u>6.10</u>	<u>36</u>	<u>"</u>	<u>"</u>
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
Crew's quarters	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>2.50</u>	<u>6.10</u>	<u>110</u>	<u>"</u>	<u>"</u>
European quarters	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>6.00</u>	<u>6.10</u>	<u>46</u>	<u>"</u>	<u>"</u>
WIRELESS									
SEARCHLIGHT	<u>one</u>	<u>6.75</u>	<u>7</u>	<u>1.10</u>	<u>42.00</u>	<u>42.00</u>	<u>60</u>	<u>"</u>	<u>"</u>
MASTHEAD LIGHT	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>4.00</u>	<u>6.10</u>	<u>50</u>	<u>"</u>	<u>"</u>
SIDE LIGHTS	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>0.3</u>	<u>6.10</u>	<u>50</u>	<u>"</u>	<u>"</u>
COMPASS LIGHTS	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>0.2</u>	<u>6.10</u>		<u>"</u>	<u>"</u>
POOP LIGHTS	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>2.00</u>	<u>6.10</u>	<u>50</u>	<u>"</u>	<u>"</u>
CARGO LIGHTS	<u>one</u>	<u>1.00</u>	<u>1</u>	<u>1.13</u>	<u>2.00</u>	<u>6.10</u>	<u>120</u>	<u>"</u>	<u>"</u>
ARO LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. In. Sq. Mm.	No.	Diameter.	In Circuit.	Rule.			
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—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
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.

Belkiss Lamin Electrical Engineers.

Date *11-XI-1931*

COMPASSES.

Distance between electric generators or motors and standard compass *16 1/2 metres*

Distance between electric generators or motors and steering compass *18 metres*

The nearest cables to the compasses are as follows:—

A cable carrying *02* Ampères *in* *feet from* standard compass *in* *feet from* steering compass.

A cable carrying *2* Ampères *2 1/2 metres* *feet from* standard compass *1 1/2 metres* *feet from* steering compass.

A cable carrying *4* Ampères *2 1/2 metres* *feet from* standard compass *2 1/2 metres* *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 *nil* degrees on *✓* course in the case of the standard compass, and *nil* degrees on *✓* course in the case of the steering compass.

CANTIERI NAVALI E OFFICINE MECCANICHE DI VENEZIA

Builder's Signature.

Date *11-XI-1931*

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 Electrical installation has been built under Special Survey. The Materials and Workmanship are good.

On completion the installation was tested under working conditions with satisfactory results.

Elec. Light

26/11/31

Total Capacity of Generators *7* Kilowatts.

The amount of Fee ... *£ 6.50-*

When applied for, *17/11/31*

Travelling Expenses (if any) £

When received, *8/12/31*

Surveyor's Signature

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *4 DEC 1931*

Assigned

Elec. Light