

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 12/9/48 19..... When handed in at Local Office... 18.11.48 19..... Port of... LEGHORN

No. in Survey held at... LEGHORN Date, First Survey... 15/5/48 Last Survey... 25/8/48 19.....
Reg. Book. (Number of Visits... 12.....)

✓ on the SINGLE SCREW TRAWLER " SANTA MAFALDA " Tons { Gross... 1272
Net... 700

Built at... LEGHORN By whom built... ODERO-TERNI-ORLANDO Yard No... 221 When built... 1948

Owners... EMPRESA DE PESCA DE AVEIRO Port belonging to... AVEIRO

Electrical Installation fitted by... ODERO-TERNI-ORLANDO Contract No... ✓ When fitted... 1948

Is vessel fitted for carrying Petroleum in bulk... No Is vessel equipped with D.F... YES E.S.D... YES Gy.C... ✓ Sub.Sig... ✓

Have plans been submitted and approved... YES System of Distribution... TWO WIRE - PARALLEL SYSTEM WITH CONSTANT PRESSURE Voltage of supply for Lighting... 220

Heating... ✓ Power... 220 Direct or Alternating Current, Lighting... DIRECT Power... DIRECT If Alternating Current state periodicity... ✓ Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off... YES Are turbine emergency governors fitted with a trip switch as per Rule... ✓ Generators, are they level compounded under working conditions... ✓

if not compound wound state distance between generators... 5 m and from switchboard... 3 m Where more than one generator is fitted are they arranged to run in parallel... YES, are shunt field regulators provided... YES Is the compound winding connected to the negative or positive pole... ✓

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing... YES Have certificates of test for machines under 100 kw. been supplied... YES and the results found as per rule... YES Are the lubricating arrangements and the construction of the generators as per rule... YES Position of Generators... FORW. ENDS OF ENGINE ROOM.

is the ventilation in way of generators satisfactory... YES are they clear of inflammable material... YES, if situated near unprotected combustible material state distance from same horizontally... no unprotected combustible material near, and vertically... are the generators protected from mechanical injury and damage from water, steam and oil... YES, are the bedplates and frames earthed... YES and the prime movers and generators in metallic contact... YES Switchboards, where are main switchboards placed... ON FLAT AT THE FORW BULKHEADS OF E.R.

are they in accessible positions, free from inflammable gases and acid fumes... YES, are they protected from mechanical injury and damage from water, steam and oil... YES, if situated near unprotected combustible material state distance from same horizontally... no unprotected combustible material near, and vertically... what insulation material is used for the panels... METALLIC FRAME WITH MICANITE WASHERS & BUSHES, if of synthetic insulating material is it an Approved Type... ✓, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... ✓ Is the frame effectually earthed... YES

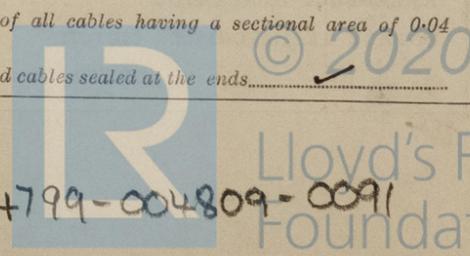
Is the construction as per Rule... YES, including accessibility of parts... YES, absence of fuses on the back of the board... YES, individual fuses to pilot and earth lamps, voltmeters, etc... YES locking of screws and nuts... YES, labelling of apparatus and fuses... YES, fuses on the "dead" side of switches... YES Description of Main Switchgear for each generator and arrangement of equaliser switches... A DOUBLE POLE CIRCUIT BREAKER WITH OVERLOAD AND REVERSE CURRENT TRIPS

and for each outgoing circuit... A FUSE ON EACH POLE AND A DOUBLE POLE LINKED SWITCH.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... YES Instruments on main switchboard... 6 ammeters... 4 voltmeters... ✓ synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection... ✓ Earth Testing, state means provided... ONE OHMMETER.

Switches, Circuit Breakers and Fuses, are they as per Rule... YES, are the fuses an approved type... YES, are all fuses labelled as per Rule... YES If circuit breakers are provided for the generators, at what overload current did they open when tested... 150% are the reversed current protection devices connected on the pole opposite to the equaliser connection... ✓, have they been tested under working conditions, and at what current did they operate... 30 Amp. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... YES

Cables, are they insulated and protected as per the appropriate Tables of the Rules... YES, if otherwise than as per Rule are they of an approved type... ✓, state maximum fall of pressure between bus bars and any point under maximum load... 4 Volts, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets... ✓ Are paper insulated and varnished cambric insulated cables sealed at the ends... ✓



with insulating compound or waterproof insulating tape . Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage . YES, are cables laid under machines or floorplates NO, if so, are they adequately protected . Are cables in machinery spaces, galleys, laundries, etc., lead covered or run in conduit . State how the cables are supported and protected SUPPORTED BY METALLIC CLIPS - ALL CABLES LEAD COVERED AND ARMoured AND WHERE SUBJECTED TO RISK OF MECHANICAL DAMAGE PROTECTED BY SHEETH IRON PLATING.

Are all lead sheaths, armoring and conduits effectually bonded and earthed . Refrigerated chambers, are the cables and fittings as per Rule YES.

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands YES, where unarmoured cables pass through beams, etc., are the holes effectually bushed YES and with what material LEAD. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES. Emergency Supply, state position and method of control .

Navigation Lamps, are they separately wired YES controlled by separate double pole switches YES and fuses YES. Are the switches and fuses in a position accessible only to the officers on watch YES, is an automatic indicator fitted YES. Secondary Batteries, are they constructed and fitted as per Rule YES, are they adequately ventilated YES. what is the battery capacity in ampere hours .

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof YES. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present NO, if so, how are they protected .

and where are the controlling switches fitted YES, are all fittings suitably ventilated YES, are all fittings and accessories constructed and installed as per Rule YES. Searchlight Lamps, No. of ONE, whether fixed or portable FIXED, are their fittings as per Rule YES. Heating and Cooking, is the general construction as per Rule .

are the frames effectually earthed YES, are heaters in the accommodation of the convection type YES. Motors, are all motors constructed and installed as per Rule YES and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil YES, if situated near unprotected combustible material state minimum distance from same horizontally NO UNPROTECTED COMBUSTIBLE MATERIAL NEAR. and vertically YES. Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment YES. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing YES. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule YES. Control Gear and Resistances, are they constructed and fitted as per Rule YES. Lightning Conductors, where required are they fitted as per Rule YES. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with YES, are all fuses of the cartridge type YES. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships YES. Are the cables lead covered as per Rule YES. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule YES, are they suitably stored in dry situations YES. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory 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	2	60	220	243	430	OIL ENGINE	DIESEL OIL ABOVE 150°F.	
FOR TRAWLING WINCH.	1	24	220	409	650	"	"	
EMERGENCY	1	100	220	455	430	"	"	
ROTARY TRANSFORMER	1							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead) m.	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands Sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	60	1	240	243	245	30	RUBBER	LEAD COVERED & ARMoured.
"	24	1	75	109	120	20	"	"
GENERATOR FOR TRAWLING WINCH.	100	2	200	455	480	30	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
"								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead) m.	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands Sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
PORT POWER CIRCUIT.	1	30	64	70	30	RUBBER	LEAD COVERED & ARMoured.
STARTS " "	1	50	95	100	30	"	"
WORKSHOP	1	20	50	54	40	"	"
FORW. LIGHTING CIRCUIT.	1	5.5	24	25	140	"	"
CENT. " "	1	8	30	35	70	"	"
AFT. " "	1	5.5	20	25	50	"	"
E.R. " "	1	5.5	20	25	20	"	"
FISH HOLD " "	1	5.5	15	25	30	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	8	30	35	30	RUBBER	LEAD COVERED & ARMoured.
NAVIGATION LIGHTS	1	5.5	18	25	30	"	"
LIGHTING AND HEATING							
IN CABINS AND ACCOMMODATION	1	1	1.2	5	-	"	LEAD COVERED & ARMoured RED OR LEAD COVERED ONLY.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
TRAWLING WINCH.	1	120	2	200	454	480	30	RUBBER	LEAD COVERED & ARMoured.
WINBLASS	1	20	1	75	83	120	160	"	"
WARPING WINCH.	1	13.5	1	20	55	55	80	"	"
STEERING ENGINE	1	5.5	1	15	25	46	80	"	"
FRESH WATER CIRC. PUMP	1	10	1	15	41	46	12	"	"
BILGE PUMP	1	10	1	15	41	46	12	"	"
GENER. SERVICE PUMP	1	10	1	15	41	46	20	"	"
FUEL OIL TRANSFER PUMP	1	3.5	1	5	15	25	20	"	"
LUB. OIL CIRC. PUMP.	1	4	1	5	17.5	25	20	"	"
SANITARY PUMP	1	2.5	1	2	11	11	14	"	"
FRESH WATER PUMP	1	2.5	1	2	11	11	14	"	"
REFRIGERATOR	1	4	1	5	16.7	25	30	"	"
LUBRIC. OIL PURIFIER	1	2	1	2	8.6	11	16	"	"
FUEL OIL FEED PUMP	1	1.25	1	2	5.5	11	14	"	"
CIRC. WATER PUMP for cooling.	1	1.3	1	2	6	11	20	"	"
COB-LIVER OIL PUMP	1	0.5	1	2	2.5	11	14	"	"

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
 The foregoing is a correct description.

ODERO - TARNI - ORLANDO
 per la costruz di Navi, Macchin. ed Artiglieria.
 LIVORNO

Paulo de Almeida Electrical Engineers. Date.....

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... RADIO CONVERTER: 10 m.

Minimum distance between electric generators or motors and steering compass..... 8 m.

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères 7 feet from standard compass 4 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 NIL degrees on ✓ 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. No If so, state name of vessel ✓

Plans. Are approved plans forwarded herewith ✓ If not, state date of approval 14/1/48 - 17/2/48

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith YES.

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

THE ELECTRICAL EQUIPMENT HAS BEEN CONSTRUCTED AND FITTED UNDER SPECIAL SURVEY AND IS IN ACCORDANCE WITH THE APPROVED PLANS, SECRETARY'S LETTERS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD. ON COMPLETION THE INSTALLATION HAS BEEN TRIED UNDER WORKING CONDITION AND TESTED IN ACCORDANCE WITH THE RULES WITH SATISFACTORY RESULTS.

Notes sent 5/1/49

Total Capacity of Generators 244 Kilowatts.

The amount of Fee (LESH.) LET. 30.100. = 18.11.19.48
 50% TO LONDON AL 30.100. = PAYABLE IN LESHORN, When received.
 Travelling Expenses (if any) £ SEE R.P.V. 46.

R. H. Bennett
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 7 JAN 1949

Assigned.....

5th Ed. 1938.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

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