

Rpt. 13.

No. 3571

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

22 AUG 1942

Date of writing Report. 14<sup>th</sup> Aug 1942 When handed in at Local Office.....19..... Port of LISBON

No. in Survey held at LISBON Date, First Survey 4<sup>th</sup> June Last Survey 12<sup>th</sup> Aug. 1942  
Reg. Book. (Number of Visits.....12.....)

on the Motor Trawler "PORT NATAL." Tons {Gross...307  
Net...128

Built at Lisbon By whom built Cia. Uniao Fabril Yard No. 114 When built 1942

Owners Loch Fishing Co. of Hull Ltd. Port belonging to.....

Electrical Installation fitted by Cia. Uniao Fabril Contract No. 2 When fitted 1942

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

Have plans been submitted and approved Yes System of Distribution Two wire Voltage of supply for Lighting 110

Heating ✓ Power 110 Direct or Alternating Current, Lighting Direct Power Direct If Alternating Current state frequency ✓ Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

trip switch as per Rule ✓ Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

if not compound wound state distance between generators ✓ and from switchboard ✓ Where more than one generator is fitted are they

arranged to run in parallel ✓, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓ 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 Starboard side 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 ✓ 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 Forward end of Engine Room.

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 ✓ and vertically ✓, what insulation

material is used for the panels Ebony Sindanyo, if of synthetic insulating material is it an Approved Type Yes, 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 Double pole

linked switch with fuse on each pole.

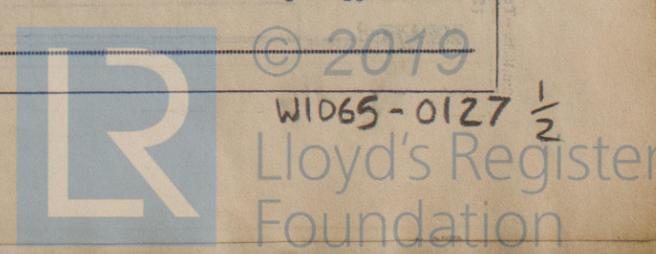
and for each outgoing circuit Double pole linked switch with fuse on each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule ✓ Instruments on main switchboard 1

ammeters 1 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 Earth lamps.

RPT. 107  
4-5-40  
745  
OF  
MATERIALS  
ENGINE  
SUITABLE  
SOCIETY



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, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions Yes. 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 Yes, state maximum fall of pressure between bus bars and any point under maximum load Nil, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends Yes with insulating compound Yes & 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 Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes. State how the cables are supported and protected Clipped to perforated plates or bulkheads as per Rule. Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. 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 effectively 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 Yes and method of control Yes. 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. 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 Yes.

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 Yes, whether fixed or portable Yes, are their fittings as per Rule Yes. Heating and Cooking, is the general construction as per Rule Yes. 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 Yes and vertically 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 they of an approved type Yes. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type 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 megger 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 ...	1	17.5	100	160	1000	Aux. Oil engine	Diesel Oil above 150° F.	
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	17.5	1	37/.083	160	296	20	Paper	Lead covered + armoured
" EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
AUX. SWITCHBOARDS AND SECTION BOARDS								
After lighting		1	3/.036	5	12	76	Paper	Lead covered + armoured
Forward lighting		1	3/.036	5	12	120	"	" " "
Bridge lighting		1	7/.036	5	28	90	"	" " "

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
WIRELESS		1	7/.036	20	24	50	Rubber	Lead covered + braided
NAVIGATION LIGHTS		1	7/.036	6	28	50	Paper	" " " armoured
LIGHTING AND HEATING								
Engine Room lighting		1	3/.029	3	5	64	Rubber	Lead covered + braided
"		1	3/.029	3	5	64	"	" " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
Wireless	1	15	1	19/.083	117	191	160	Paper	Lead covered + armoured
Steering Gear	1	4	1	7/.052	35	37	70	Rubber	" " " braided

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.

*[Signature]*  
COMPANHIA UNIAO FABRIL  
Arrendataria do  
ESTALEIRO NAVAL DA A.G.P.L.

Electrical Engineers.

Date 14/8/42

COMPASSES.

Minimum distance between electric generators or motors and standard compass 24'

Minimum distance between electric generators or motors and steering compass 8'

The nearest cables to the compasses are as follows:—

A cable carrying 6 Ampères 5 feet from standard compass 4 feet from steering compass.

A cable carrying 117 Ampères 17 feet from standard compass 10 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

*[Signature]*  
COMPANHIA UNIAO FABRIL  
Arrendataria do  
ESTALEIRO NAVAL DA A.G.P.L.

Builder's Signature.

Date 14/8/42

Is this installation a duplicate of a previous case Yes If so, state name of vessel PORT JACKSON - PORT MADOC

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

The above electrical installation has been satisfactorily fitted on board this vessel in accordance with the approved plan & the Society's Rules. The materials and workmanship are good. The insulation has been tested throughout and the installation examined under working conditions & found in order.

The dynamo test certificate was not forwarded to this office.

The installation in my opinion is eligible to be classed.

Noted  
L.P.  
25/8/42

Total Capacity of Generators 17.5 Kilowatts.

The amount of Fee ... 19.....

Travelling Expenses (if any) : : When received. 19.....

Inclusive  
See Hull Rpt.

*[Signature]*

Surveyor to Lloyd's Register of Shipping.

FRI. 28 AUG 1942

Committee's Minute

Assigned See Lis JE 3571

2m.10.33.—Transfer. (MADE IN ENGLAND.)  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

