

Rpt. 13.

No. 3710

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 9 JUL 1943

Date of writing Report 20th June 43 When handed in at Local Office 19 Port of LISBONNo. in Survey held at ALFEITE Date, First Survey 10th Nov 1942 Last Survey 15th June 1943
Reg. Book. (Number of Visits 12)

on the PORTAFERRY Tons Gross 307 Net 128

Built at Alfite By whom built Arsenal do Alfite Yard No. C 8 When built 1943

Owners Loch Fishing Co. of Stue Port belonging to

Electrical Installation fitted by Arsenal do Alfite Contract No. When fitted 1943

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

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 Yes 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 Eng. 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 Lin damps, 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.



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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 ✓, have they been tested under working conditions ✓. 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 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 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 Yes or run in conduit ✓. 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 —. 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 ✓ 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 ✓, are they adequately ventilated ✓. 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 ✓, if so, how are they protected ✓.

and where are the controlling switches fitted ✓, are all fittings suitably ventilated ✓, are all fittings and accessories constructed and installed as per Rule ✓. Searchlight Lamps, No. of ✓, whether fixed or portable ✓, are their fittings as per Rule ✓. Heating and Cooking, is the general construction as per Rule ✓, are the frames effectually earthed ✓, are heaters in the accommodation of the convection type ✓. 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 ✓ and vertically ✓. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing ✓. 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 ✓. 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 ✓, are all fuses of the cartridge type ✓, are they of an approved type ✓. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type ✓. 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. | Amps. | Revs. per Min. | | Fuel Used. | Flash Point of Fuel. |
| MAIN ... | 1 | 17.5 | 110 | 160 | 1000 | Aux. Oil Engine | Diesel oil | above 150° F. |
| EMERGENCY ... | | | | | | | | |
| ROTARY TRANSFORMER | | | | | | | | |

GENERATOR CABLES.

| DESCRIPTION. | KILOWATTS. | CONDUCTORS. | | MAXIMUM CURRENT IN AMPERES. | | APPROX. LENGTH (used 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.

| | | | | | | | |
|--|---|--------|---|----|-----|-------|-------------------------|
| AUX. SWITCHBOARDS AND SECTION BOARDS ... | | | | | | | |
| after lighting | 1 | 3/.036 | 5 | 12 | 76 | Paper | Lead covered & armoured |
| Harbour | 1 | 3/.036 | 5 | 12 | 120 | | |
| Bridge | 1 | 7/.036 | 5 | 28 | 90 | | |
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LIGHTING AND HEATING, ETC., CABLES.

| | | | | | | | |
|-----------------------|---|--------|----|----|----|--------|--------------------------|
| WIRELESS ... | 1 | 7/.036 | 20 | 24 | 50 | Rubber | Lead covered & braided. |
| NAVIGATION LIGHTS ... | 1 | 7/.036 | 12 | 28 | 50 | Paper | Lead covered & armoured. |
| LIGHTING AND HEATING | | | | | | | |
| Eng. 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. | | | | | | |
|--|-----|--------|---|---------|-----|-----|-----|--------------------------------|
| Windlass | 1 | 15 | 1 | 19/.083 | 117 | 191 | 160 | Paper Lead covered & armoured. |
| Steering Gear | 1 | 4 | 1 | 7/.052 | 35 | 37 | 70 | Rubber Lead covered & braided. |



The foregoing is a correct description.

Electrical Engineers.

Date 10-6-43

COMPASSES.

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

Minimum distance between electric generators or motors and steering compass.....18.....

The nearest cables to the compasses are as follows:—

A cable carrying 6 Amperes 5 feet from standard compass 4 feet from steering compass

A cable carrying 117 amperes 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 the degrees on any course in the case of the

standard compass, and nil degrees on any course in the case of the steering compass.

Builder's Signature.

Date 12-6-43

Is this installation a duplicate of a previous case.

If so, state name of vessel

ILHA GRACIOSA, ILHA FAIAL

PORT JACKSON, PORTISHAM ETC

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 and the Society's Rules.

The insulation has been tested throughout & the installation examined under working conditions & found satisfactory.

The installation in our opinion is eligible to be classed

Noted

24

15-7-43

Total Capacity of Generators.....17.5.....Kilowatts.

The amount of Fee

£ 1000

When applied for,

.....19.....

Travelling Expenses (if any)

£

When received.

.....19.....

Committee's Minute

FRI 23 JUL 1943

Assigned

see minute on

78 Rpt.

Surveyor to Lloyd's Register of Shipping