

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report. 4th April 1945 When handed in at Local Office. 23. 4. 1945 Port of GlasgowNo. in Survey held at Glasgow Date, First Survey 9. 3. 45 Last Survey 17th April 1945
Reg. Book. 89458 on the S. S. EMPIRE SHETLAND (Number of Visits.....)Built at Glasgow By whom built A & J. Inglis Ltd. Yard No. 1288P When built 1945
Owners Ministry of War Transport Port belonging to Glasgow Tons {Gross 813
Net 334

Electrical Installation fitted by W. Muir Goodfellows & Co. Ltd. Contract No. 1288P When fitted 1945

Is vessel fitted for carrying Petroleum in bulk Yes 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 110 Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. 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 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 No, 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 in 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 near generators

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 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 D. P. Switch and

Fuses.

and for each outgoing circuit D. P. Switch and Fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule — Instruments on main switchboard 2

ammeters 2 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

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 —, 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

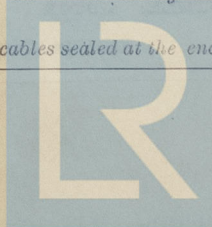
did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

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 W.E.

state maximum fall of pressure between bus bars and any point under maximum load 3 volts, 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 ends

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supported and protected ~~main~~ L.C. ~~Pipetox~~ Machinery space ~~Pipetox~~ = L.C.A. Cables to Ford pump room
and ~~flexible~~ ~~Pipetox~~ Accommodation L.C. Cables clipped to tray

Navigation Lamps, are they separately wired Yes controlled by separate 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, weather proof Yes Are fittings

protected from any combustible materials or inflammable or explosive dust or gases are likely to be present Yes, if so, how are they protected.....

are the fittings as per Rule. Heating and Cooking, is the general construction as per above, are the frames effectually earthed, are heaters in the accommodation of the convection type. Motors, are all motors constructed and

100 BHP intended for essential services been supplied and the results found as per Rule _____ 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 _____

and found satisfactory..... <i>yes</i>		PARTICULARS OF GENERATING PLANT.				WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
DESCRIPTION OF GENERATOR	No. of	RATED AT				DRIVEN BY	Fuel Used.	Flash Point of Fuel.
		Kilowatts.	Volts.	Ampères.	Rev. per Min.			
					550			

[illegible]

27	29	GENERATOR ...							
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CONDUCTORS.		MAXIMUM C
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LIGHTING AND HEATING, ETC., CABLES.									
1	7/064	20	46	116	Rubber	L.C. B.			

	1	7/6-264	20	46
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[illegible]

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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.

FOR AND BEHALF OF
W. MUIR GOODFELLOW & COY LTD

Electrical Engineers.

Date 10/4/45

COMPASSES.

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

100 feet

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

90 feet

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères led into feet from standard compass led into feet from steering compass.

A cable carrying 6 Ampères 6 feet from standard compass 6 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.

A. & J. INGLIS LIMITED.

Builder's Signature.

Date 14-5-44

Is this installation a duplicate of a previous case. Yes. If so, state name of vessel S.S. EMPIRE ORKNEY

Plans. Are approved plans forwarded herewith. If not, state date of approval 2-5-44

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 of this vessel has been fitted on board under special survey, tested under working conditions, and found satisfactory. All the requirements of the approved plans, and Ministry of War Transport specifications have been carried out. The materials and workmanship are good.

Noted

Then

2-5-45

Total Capacity of Generators 20 Kilowatts.

The amount of Fee ... £ 17 : 10 : 24 APR 1945
SPEC. £ 4 : 7

Travelling Expenses (if any) £ : : When received.10....

J. C. Wright
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 24 APR 1945

Assigned SEE ACCOMPANYING MACHINERY REPORT



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Foundation