

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

NAVIGATOR  
Date of writing Report. 28<sup>th</sup> OCTOBER 1944

(SECT. H)  
When handed in at Local Office. 7/11/44

Port of GLASGOW

No. in Survey held at PORT GLASGOW Date, First Survey. 22<sup>nd</sup> MAY Last Survey. 2<sup>nd</sup> NOVEMBER 1944  
Reg. Book. (Number of Visits. 21)

— on the EMPIRE REST Tons { Gross... 1327  
Net... 375

Built at PORT GLASGOW By whom built FERGUSON BROTHERS (PORT GLASGOW) LTD Yard No. 371 When built 1944

Owners MINISTRY OF WAR TRANSPORT Port belonging to GREENOCK

Electrical Installation fitted by J. CHARTERS Contract No. 371 When fitted 1944

Is vessel fitted for carrying Petroleum in bulk. — Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES Sub.Sig. —

Have plans been submitted and approved. YES System of Distribution TWO WIRE Voltage of supply for Lighting. 225

Heating. 225 Power. 225 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. No

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

Positive (ADM. PATT.) 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. IN ENGINE ROOM 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. FITTINGS MOUNTED ON INSULATED RODS, if of synthetic insulating material is it an Approved Type ADM. PATT., 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, 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. 60 KW GENERATOR - 300 AMP.

D.P. KNIFE PATTERN SWITCH AND FUSES: 30 KW GENERATOR - 150 AMP D.P. CHANGE OVER

SWITCH AND FUSES

and for each outgoing circuit. 60 AMP. OR 30 AMP. D.P. CHANGE OVER SWITCHES AND FUSES

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. YES Instruments on main switchboard. 3

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. —

state maximum fall of pressure between bus bars and any point under maximum load. 6.6 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. YES

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PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No. of	RATED AT				WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Ampères.	Revs. per Min.	Driven By	Fuel Used.	Flash Point of Fuel.
MAIN ...	1	60. ✓	225 ✓	267 ✓	500 ✓	STEAM ENGINE ✓		
	1	30 ✓	225 ✓	138 ✓	500 ✓	STEAM ENGINE		
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 ... ..	60	1	61.093	267	464 ✓	50	V.C.	L.C.
" " EQUALISER ... ..								
MAIN GENERATOR	30	1	37.072	138	246 ✓	100	V.C.	L.C.
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR								
GENERATOR ... ..								

[illegible]

LIGHTING AND HEATING, ETC., CABLES.							
WIRELESS	1	7.064	15	75	360	Y.C.	L.C.
NAVIGATION LIGHTS	1	3.036	1.6	10	60	H.R.B.	-
LIGHTING AND HEATING							
FORWARD LIGHTING D.B.	1	7.036	18.5	24	40	H.R.B.	-
OFFICERS ACCOMMODATION LIGHTING D.B.	1	7.029	4.4	15	120	H.R.B.	-
MIDSHIP LIGHTING D.B.	1	7.029	9	15	3	H.R.B.	-
HET ACCOMMODATION LIGHTING D.B.	1	7.029	3.6	15	144	H.R.B.	-
ENGINE ROOM & BOILER ROOM LIGHTING D.B.	1	7.044	19.8	31	36	H.R.B.	-
RADAR	1	7.044	13.5	31	360	H.R.B.	-
10" PROJECTORS	1	19.002	37.5	104	360	Y.C.	L.C.
POWER HET D.B. N°1	1	7.064	30.1	75	3	Y.C.	L.C.
POWER HET D.B. N°2	1	7.036	10.5	24	120	H.R.B.	-
POWER FORWARD D.B. N°1	1	7.044	20	31	90	H.R.B.	-
POWER FORWARD D.B. N°2	1	7.036	8.5	24	90	H.R.B.	-
GYRO COMPASS.	1	7.029	10	15	50	H.R.B.	-

MOTOR CABLES.									
ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
DOMESTIC F.W. PUMP.	1	1.5	1	7/029	6.3	15	✓	120	H.R.B.
DOMESTIC REFRIGERATOR	1	2.5	1	7/029	11	15	✓	90	H.R.B.
17½" VENT FAN.	1	3.1	1	7/029	12.5	15	✓	90	H.R.B.
18½" VENT FANS.	2	1.45	1	7/029	6.6	15	✓	-	H.R.B.
10" VENT FANS.	3	1	1	3/036	4.75	10	✓	-	H.R.B.
7½" VENT FANS.	4	1.55	1	3/036	2.5	10	✓	-	H.R.B.
5" VENT FANS.	11	1.8	1	3/029	1	5	✓	-	H.R.B.



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.

*J. Charters* Electrical Engineers.

Date *20 NOV 44*

COMPASSES.

Minimum distance between electric ~~generators~~ or motors and standard compass *LEAD* *TWENTY FEET*

Minimum distance between electric ~~generators~~ or motors and steering compass *FIFTEEN FEET*

The nearest cables to the compasses are as follows:—

A cable carrying *1.6* Amperes *10* feet from standard compass *6* feet from steering compass.

A cable carrying *2* Amperes *LED INTO* ~~feet from~~ standard compass *LED INTO* ~~feet from~~ steering compass.

A cable carrying *2* Amperes *LED INTO* ~~feet from~~ standard compass *LED INTO* ~~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.

*Peter Ferguson* Builder's Signature. Date *3rd Nov 1944*

FERGUSON BROTHERS (PORT-GLASGOW) LTD. MANAGING DIRECTOR

Is this installation a duplicate of a previous case *No* If so, state name of vessel *No*

Plans. Are approved plans forwarded herewith *No* If not, state date of approval *15th JUNE 1944*

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 M.O.W.T Specification have been carried out. The materials and workmanship are good.*

*Held  
Hus  
20.11.44*

1	60	225	267	500	STEAM ENGINE
1	60	225	134	500	STEAM ENGINE

Total Capacity of Generators *90* Kilowatts.

The amount of Fee *£ 34.4.6*

Travelling Expenses (if any) *£ :*

When applied for

When received

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 27 NOV 1944*

Assigned



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