

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

29 SEP 1944

Received at London Office.....

Date of writing Report. 16TH SEPTEMBER 1944 When handed in at Local Office. 26.9.44 Port of GLASGOWNo. in Survey held at PORT GLASGOW Date, First Survey 26TH JUNE Last Survey 17TH SEPTEMBER 1944
Reg. Book. (Number of Visits.....)89333 on the EMPIRE BALFOUR Tons { Gross 7201
Net 4946

Built at PORT GLASGOW By whom built LITHGOWS LTD Yard No. 998 When built 1944

Owners MINISTRY OF WAR TRANSPORT Port belonging to GREENOCK

Electrical Installation fitted by MESSRS W. MUIR GOODFELLOW & CO LTD Contract No. 998 When fitted 1944

Is vessel fitted for carrying Petroleum in bulk. — 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 Voltage of supply for Lighting 110

Heating. — 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. YES, 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 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. Sindanga, 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

300 AMP D.P. Circuit breakers fitted with reverse current and overload trips

with time lags, and interlocked equaliser switch.

and for each outgoing circuit. 100 AMP and 60 AMP D.P. Knife pattern switches and fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. — 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. YES 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 load current did they open when tested. Full load, are the reversed current

protection devices connected on the pole opposite to the equaliser connection. YES, have they been tested under working conditions, and at what current

did they operate. 10% - 15% 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. —, 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. LIGHTING 4.5 VOLTS. POWER 4.7 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				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	3	30	110	273	500	STEAM ENGINES.		
EMERGENCY ...								
ROTARY TRANSFORMER								

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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	30	1	39/083	273	296	78	V.C.	L.C.
" " EQUALISER		1	19/083	-	191	39	V.C.	L.C.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

[illegible]

MOTOR CABLES.

✓ ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
N° 2 HOLD CARGO FANS. ✓	2	8.25	1	19/064	68	83 ✓	390	W.E.	IN STEEL PIPE.
N° 3 HOLD CARGO FANS. ✓	2	8.25	1	19/064	68	83 ✓	270	W.E.	IN STEEL PIPE.
N° 4 HOLD CARGO FANS. ✓	2	8.25	1	19/064	68	83 ✓	168	W.E.	IN STEEL PIPE.
REFRIG. CIRCULATING PUMP. ✓	1	10	1	19/064	79	83 ✓	90	W.E.	L.C.
DOMESTIC REFRIGERATOR.	1	3	1	7/064	17	46 ✓	150	W.E.	IN STEEL PIPE.

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 W. MUIR GOODFELLOW & CO LTD

Electrical Engineers.

Date SEPT 20th 1944

COMPASSES.

Minimum distance between electric generators or motors and standard compass Twenty feet

Minimum distance between electric generators or motors and steering compass Eighteen feet

The nearest cables to the compasses are as follows:—

A cable carrying 5 Ampères 9 feet from standard compass 7 feet from steering compass.

A cable carrying 23 Ampères led into ~~foot from~~ standard compass led into ~~foot 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.

LITHGOWS LIMITED
John M. Fullan Secretary

Builder's Signature.

Date 22/9/44

Is this installation a duplicate of a previous case Yes If so, state name of vessel Empire Talisman

Plans. Are approved plans forwarded herewith No If not, state date of approval 9/10/43 & 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 M.O.W.T. Specification have been carried out. The material and workmanship are good.

Noted.
L.F.
2/10/44

Total Capacity of Generators 90 Kilowatts.

The amount of Fee ...	£ 31 : 10 :	When applied for, 19...
SPECIFICATION FEE ...	£ 7 : 17/6	
Travelling Expenses (if any) £	2 : 2 :	When received, 19...

W. Gardiner
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 SEP 1944

Assigned