

## REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JAN 1946

Received at London Office.....

Date of writing Report... 23<sup>rd</sup> Nov. 45... When handed in at Local Office... 15.12.45... Port of... GlasgowNo. in Survey held at... Glasgow... Date, First Survey... 18.10.45... Last Survey... 23<sup>rd</sup> Nov. 1945  
Reg. Book.

37476 on the... M.V. "EMPIRE GROSVENOR" Tons (Gross... 890 (Net... 379)

Built at... Glasgow... By whom built... A. J. Inglis Ltd... Yard No... 1302 P... When built... 1945

Owners... Ministry of War Transport... Port belonging to... Glasgow

Electrical Installation fitted by... W. Muir Goodfellows &amp; Co. Ltd... Contract No... 1302 P... 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... Double pole switches

and fuses

and for each outgoing circuit... Double pole switches and fuses

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

ammeters... 3... 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

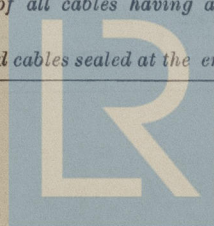
protection devices connected on the pole opposite to the equaliser connection... have they been tested under working conditions, and at what current

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... 5 wts... 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





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. Yes....., are all fuses of the cartridge type. Yes..... are they of an approved type. Yes..... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. Yes..... Are the cables lead covered as per Rule. 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 tested and found satisfactory. Yes.....

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 ✓	25 ✓	110	227 ✓	1100	I. C. engine ✓	oil	above 150°F
	1 ✓	18 ✓	110	164 ✓	1000	I. C. engine	oil	above 150°F
	1 ✓	6½	110	59 ✓	1000	I. C. engine	oil	above 150°F
EMERGENCY ...								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Fols.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.					
				In the Circuit.	Rule.			
MAIN GENERATOR ... ..	25	1	.9	227	385	80	V.C.	L.C.A.B.
" " <del>SEPARATOR</del> ... ..	18	1	.15	164	246	14	Pyrolox	Cable
" " ... ..	6 1/2	1	.06	59	135	90	"	"
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
GENERATOR ... ..								

[illegible]

LIGHTING AND HEATING, ETC., CHARTER.							
WIRELESS	1	.03	10	87	330	Pyrotekmax Cable	
NAVIGATION LIGHTS	1	.01	2	42	330	"	"
LIGHTING AND HEATING							
ENGINE ROOM LIGHTING	1	.007	11	28	45	Pyrotekmax Cable	
MIDSHIP ACCOM. LIGHTING	1	.0225	29	75	270	"	"
AFT ACCOM. LIGHTING	1	.0225	22	46	180	Rubber L.C.	
ENGINE ROOM D.B. (PUMPS)	1	.06	65	135	480	Pyrotekmax Cable	
ENGINE ROOM D.B. (POWER)	1	.03	59	87	36	"	"

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
REFRIGERATOR	1	1	1	.0145	11	57	450	Pyrotech Cable
WINDLASS	1	18	1	.15	150	246	450	" "
FAN MOTORS AFT D.B.	4	-	1	.03	24	87	180	" "
STEERING GEAR	1	5	1	.03	42	87	150	" "
CAPSTAN	1	14	1	.1	115	191	130	" "
BILGE PUMP MOTOR	1	6 1/4	1	.04	55	104	192	" "
BALLAST PUMP MOTOR	1	5 1/2	1	.03	47	87	36	" "
F.W. PUMP MOTOR	1	2	1	.03	18	87	30	" "



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 ON BEHALF OF

W. MUIR, GOODFELLOW AND COMPANY LIMITED

DIRECTOR.

Electrical Engineers.

Date NOVEMBER 26<sup>th</sup> 1945.

#### 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.

W. S. Milne

Builder's Signature.

Date 3-12-45

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

Plans. Are approved plans forwarded herewith         . If not, state date of approval 12-4-45

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 specification have been carried out. The materials and workmanship are good.

Noted.

L.S.

10/1/46

Total Capacity of Generators 49½ Kilowatts.

The amount of Fee ...

£ 27 : 7-6  
SPEC. £ 6 : 17-0

When applied for,

19/12/45

When received,

Travelling Expenses (if any) £ : :

Committee's Minute

GLASGOW

28 DEC 1945

Assigned

See attached machinery report.

J. C. Wright

Surveyor to Lloyd's Register of Shipping.



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Foundation