

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

25 SEP 1946

Received at London Office.....

Date of writing Report. 5th Sept 1946 When handed in at Local Office. 23.9.46 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 26.5.46 Last Survey 4th Sept 1946  
Reg. Book. (Number of Visits.....10.....)

42931 on the M.V. "EMPIRE TEDITA" Tons { Gross.....891  
Net.....381

Built at Glasgow By whom built Messrs A. & J. Inglis, Ltd. Yard No. 1314<sup>P</sup> When built 1946

Owners Ministry of Transport Port belonging to Glasgow

Electrical Installation fitted by Messrs W. Muir Goodfellows & Co. Ltd. Contract No. 1314 When fitted 1946

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 switch

and fuses.

and for each outgoing circuit Double pole switch 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 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



Pittings, 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 Yes, if so, how are they protected Flameproof fittings installed in pump room in accordance with Rule requirements and where are the controlling switches fitted In Wheelhouse, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. 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 —. Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment Yes. 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 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	224	1100	I. C. Engine	Oil	Above 150° F.
	1	18	110	164	1000	" "	"	" "
	1	6.5	110	59	1000	" "	"	" "
EMERGENCY								
ROTARY TRANSFORMER								

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.	Size.			
MAIN GENERATOR	25	1	0.2	224	296	80	V.C.	L.C.
" " <del>EQUALIZER</del>	18	1	0.1	164	191	14	Pyrotenax	Cable.
	6.5	1	0.06	59	135	90	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible]

WIRELESS	1	0-03	10	84	✓ 300	Pyratenax cable
NAVIGATION LIGHTS	1	0-01	2	42	✓ 300	" "
LIGHTING AND HEATING						
ENGINE ROOM LIGHTING	1	0-004	11	28	✓ 72	Pyratenax cable
MIDSHIP ACCOMM.	1	0-0225	29	75	✓ 270	" "
AET " "	1	0-0225	22	46	✓ 9	" "
ENGINE ROOM D.B. (PUMPS)	1	0-06	65	135	✓ 480	" "
" " " (POWER)	1	0-03	59	84	✓ 96	" "
EMPIRE TENDR						

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
REFRIGERATOR	1	1	1	0-0145	11	54	120	Pyratex Cable	
WINDLASS	1	18	1	0-1	150	191	450	"	
FAN MOTORS AFT D.B.	4	-	1	0-0225	24	25	1/2	"	"
STEERING GEAR	1	5	1	0-03	42	84	120	"	"
CAPSTAN	1	14	1	0-1	115	191	185	"	"
BILGE PUMP MOTOR	1	6 1/2	1	0-04	55	104	168	"	"
BALLAST PUMP MOTOR	1	5 1/2	1	0-03	44	84	84	"	"
F.W. PUMP MOTOR	1	2	1	0-03	18	84	108	"	"



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. N. GUR, GOODFELLOW AND COMPANY LIMITED

Electrical Engineers.

Date 12th SEPT. 1946.

DIRECTOR.

#### 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 0.2 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.

Builder's Signature.

Date 17-9-46

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

Plans. Are approved plans forwarded herewith No. If not, state date of approval 12.4.45.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith Motor Certificate enclosed herewith: Generator Certificate will be forwarded when received. Red film

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 in accordance with the requirements of the Ministry of Transport, tested under full working conditions and found satisfactory. The materials and workmanship are good.

Noted

GRM 1.10.46

Total Capacity of Generators 49 1/2 Kilowatts.

The amount of Fee ... £ 24 : 4 : 6 24 SEP 1946

Specification. Travelling Expenses (if any) £ : : When received. 19.

Committee's Minute

Assigned

G. Haffner.

Surveyor to Lloyd's Register of Shipping.



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