

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

26 FEB 1945

Received at London Office.....

Date of writing Report. 13. 2. 1945 When handed in at Local Office. 20 Feb. 1945 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 9-11-44 Last Survey 17-2-1945
Reg. Book. (Number of Visits. 15)

89422 on the S/S. "EMPIRE MAURITIUS" Tons { Gross 7309.66
Net 5094.32

Built at Sunderland By whom built Barton Sms Ltd Yard No. 302 When built 1945

Owners The Ministry of War Transport Port belonging to Sunderland

Electrical Installation fitted by Barton & Sons Ltd Contract No. 302 When fitted 1945

Is vessel fitted for carrying Petroleum in bulk. No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. No Sub.Sig No.

Have plans been submitted and approved. Yes System of Distribution Two-Wire insulated Voltage of supply for Lighting 110

Heating. Power 110 Direct or Alternating Current, Lighting Yes Power Yes 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

positive 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 engine room situated on raised stools

, 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 on angle framework adjacent to 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. "Wray" "Sinderson" 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. a double-pole single

throw quick-break knife switch and double-pole fuse; a double-pole double-throw

knife switch for supplying D.G. from either generator.

and for each outgoing circuit. a double-pole, double-throw quick-break knife switch and double-

pole fuse.

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

ammeters. Two 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. E lamps coupled to R through fuses & fuses.

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

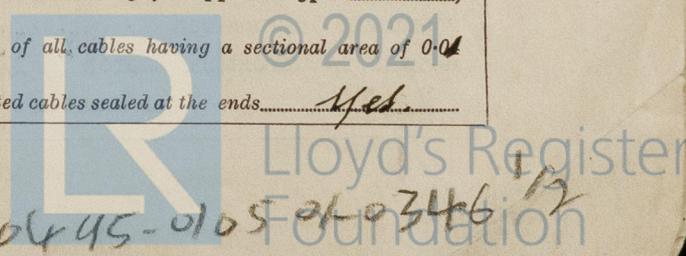
protection devices connected on the pole opposite to the equaliser connection. have they been tested under working conditions, and at what current

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. 2 L.S. 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



with insulating compound or waterproof insulating tape yes. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage yes, are cables laid under machines or floorplates no, if so, are they adequately protected —. Are cables in machinery spaces, galleys, laundries, etc., lead covered — or run in conduit yes. State how the cables are supported and protected In machinery spaces, foreheads, aft accommodation, V.I.A. (W.E) cables drawn into H.Q.B. conduits fastened to the surface. In midship accommodation H.R.T braided cables clipped to the surface and protected as required by wood or metal guards.

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes. Refrigerated chambers, are the cables and fittings as per Rule yes.

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed yes and with what material lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes. Emergency Supply, state position — and method of control —.

Navigation Lamps, are they separately wired yes controlled by separate double pole switches yes and fuses yes. Are the switches and fuses in a position accessible only to the officers on watch yes, is an automatic indicator fitted yes. Secondary Batteries, are they constructed and fitted as per Rule —, are they adequately ventilated — 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, weatherproof yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present —, if so, how are they protected — and where are the controlling switches fitted —, 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 —. 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 —. 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 —. Control Gear and Resistances, are they constructed and fitted as per Rule yes. Lighting 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 —, are all fuses of the cartridge type — are they of an approved type —. Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships —. Are the cables lead covered as per Rule —. 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.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	15	110	136.5	550	Single Cylinder Vertical Steam Engines		
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 For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	No. 1	1	37.083	136.5	296	20	V.C.	L.C.
" " RESERVE	No. 2	1	37.083	136.5	296	24	V.C.	L.C.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Saloon SB.	1	7/064	22	46	280	N.E.	H.Q.S. Conduit
Aft accommodation SB.	1	19/052	49	64	340	"	"
Large Ig SB.	1	7/044	16	31	110	"	"
Edgeworks Ig SB.	1	7/064	27	46	100	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/044	12	31	390	W.E.	H.Q.S. Conduit
NAVIGATION LIGHTS (off Saloon SB)	1	7/044	6	31	110	N.E.	H.R.T Braided
LIGHTING AND HEATING	(alternative supply from G.O. switch in wheelhouse)						
Large DB - Fwd (off Large SB.)	1	7/044	8	31	360	W.E.	H.Q.S. Conduit
" " Aft (" ")	1	7/044	8	31	180	"	"
Engines Ig DB (off Large Ig SB.)	1	7/044	22	31	36	"	"
Machinery Spaces Ig DB	1	7/044	27	31	8	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
No. 1. Thermobank	1	3.5	1	7/036	13.4	24	80	W.E. H.Q.S. Conduit
" " " "	1	3.5	1	7/036	13.4	24	28	" " "
Refrigerating Motor	1	3	1	7/064	26	46	280	" " "
Smoke Compressor Motor No. 1	1	3/4	1	7/029	7.25	15	24	" " "
" " " " No. 2	1	3/4	1	7/029	7.25	15	24	" " "

