

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

18 OCT 1941

Date of writing Report. 8. 10. 1941 When handed in at Local Office. 14 OCT 1941 Port of HULL Received at London Office.

No. in Survey held at Home Date, First Survey 4. 9. 41 Last Survey 7. 10. 1941
Reg. Book.on the ~~SS~~ **EMPIRE WILLOW.** Tons { Gross 129
Net 118

Built at Home By whom built R. Dunlop & Co Yard No. 359 When built 1941-10

Owners Ministry of Shipping Port belonging to

Electrical Installation fitted by Humber Electrical Engineering Co Contract No. When fitted 1941-10

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

Have plans been submitted and approved. Yes System of Distribution Parallel (between main & line) Voltage of supply for Lighting 110

Heating Power Direct or Alternating Current, Lighting D.C. Power If Alternating Current state frequency Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off. Yes Are turbine emergency governors fitted with a

trip switch as per Rule. Yes Generators, are they compound wound. Yes, are they level compounded under working conditions. Yes

if not compound wound state distance between generators. Yes and from switchboard. Yes 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. Yes 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 Starboard side

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. Yes and vertically. Yes, 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. Between D. 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. Yes and vertically. Yes, what insulation

material is used for the panels. Sandalwood, 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. Yes 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.

D.P. Switches & fuses

and for each outgoing circuit. SP or DP Switches & DP fuses.

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

ammeters. One voltmeters. Yes 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.

Cables, are they insulated and protected as per the appropriate Tables of the Rules.....Yes....., if otherwise than as per Rule are they of unapproved type.....No....., state maximum fall of pressure between bus bars and any point under maximum load.....2 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 exposed ends.....No..... with insulating compound.....Yes..... 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.....Yes..... Are cables in machinery spaces, galleys, laundries, etc., lead covered.....Yes..... or run in conduit.....No..... State how the cables are supported and protected.....Cables to slide on wood work. Run in conduit up mast &

Navigation Lamps, are they separately wired Yn controlled by separate double pole switches Yn and fuses Yn. Are the switches and fuses in a position accessible only to the officers on watch Yn, is an automatic indicator fitted NO. Secondary Batteries, are they constructed and fitted as per Rule ✓, are they adequately ventilated ✓.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yn. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present NO, if so, how are they protected ✓.

are the frames effectually earthed....., are heaters in the accommodation of the convection type..... Motors, are all motors constructed and installed as per Rule above and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil....., if situated near unprotected combustible material state minimum distance from same horizontally..... and vertically..... 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..... ☒..... **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..... ☒....., are all fuses of the cartridge type..... ☒..... are they of an approved type..... ☒..... If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type..... ☒..... **Spare Gear**, if the vessel is for open sea service have spares been provided as per Rule..... ☒....., are they suitably stored in dry situations..... ☒..... **Insulation Tests**, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory..... ☒.....

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 ...	One	3	110	27	500	Steam Engine	✓	✓
EMERGENCY ...								
ROTARY TRANSFORMER								

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.	Rals.			
MAIN GENERATOR	3	02	7/044	27.	31	18	V.I.R.	L.C. - Arm ^d
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible][illegible][illegible]

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.

Geo Ramage

Electrical Engineers.

Date Oct 9-41

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....

Minimum distance between electric generators or motors and steering compass.....

The nearest cables to the compasses are as follows:—

A cable carrying 0.25 Ampères feet from standard compass to the feet from steering compass.

A cable carrying 4 Ampères 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 degrees on course in the case of the

standard compass, and degrees on course in the case of the steering compass.

PER PRO RICHARD DUNSTON, LTD

Builder's Signature.

Date

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

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.).....

This Electrical installation has been fitted on board in accordance with the approved plans, to Rules & the Specification.
The Workmanship & materials are good & when tried under working conditions & subjected to the tests prescribed in the Rules it was found satisfactory in every respect.

Noted

L.H.

24/10/41.

Total Capacity of Generators..... 3 Kilowatts.

The amount of Fee £ 3 : 0 : 15

Travelling Expenses (if any) £ : :

When applied for,

16 OCT 1941

When received,

.....19.....

Signature of Surveyor

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 28 OCT 1941

Assigned

See Arch JE 51373