

1 DEC 1942

Rpt. 13.

No. 18356

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report. 21-11-1942 When handed in at Local Office. 26/11/1942 Port of West Hartlepool

No. in Survey held at West Hartlepool Date, First Survey 15-9-42 Last Survey 19-11-1942  
Reg. Book. (Number of Visits.....)86305 on the S/S. "EMPIRE DRIVER" Tons {Gross 7041.89  
Net 4889.66

Built at West Hartlepool By whom built Wm. Gray &amp; Co Ltd Yard No. 1137 When built 1942

Owners The Ministry of War Transport Port belonging to West Hartlepool

Electrical Installation fitted by Wm. Gray &amp; Co. Ltd Contract No. 1137 When fitted 1942

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 Ins. 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. None fitted 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 floor level, standard of main

engine, 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 raised platform above 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. "Sindamyo" 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 switches. a double-pole, air-

break circuit-breaker fitted with overload with time-lag tripping devices

and for each outgoing circuit. a double-pole, double-flow 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 E through two 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. 150 A, are the reversed current

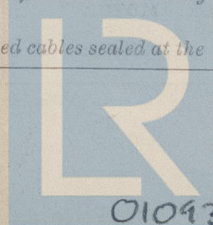
protection devices connected on the pole opposite to the equaliser connection. —, have they been tested under working conditions, and at what current

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. less than 4.4V, 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. None fitted

Lloyd's Register  
Foundation

010433-010442-0193 1/2



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 ... ..	2	15	110	136.6		Single Cylinder Vertical Steam Engines		
EMERGENCY ... ..								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return test).	INSULA- TED 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 ... <i>No. 1.</i> ...	<i>15</i>	<i>2</i>	<i>19/064</i>	<i>136.6</i>	<i>166</i>	<i>20</i>	<i>V.I.R.</i>	<i>H. S. Armored Cables</i>
" " <del>Equation</del> ...								
... <i>No. 2.</i> ...	<i>15</i>	<i>2</i>	<i>19/064</i>	<i>136.6</i>	<i>166</i>	<i>20</i>	<i>V.I.R.</i>	<i>H. S. Armored Cables</i>
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								

[illegible]

WIRELESS	1	7/064	13	46	384	21.6	H. V. Standard Product
NAVIGATION LIGHTS	1	7/064	10	46	447	"	" " "
LIGHTING AND HEATING							
Engineers Accommodation	1	7/064	13.5	46	81	21.6	H. V. Standard Product
Gen. Store R.F.	1	7/064	11.5	46	342	"	" " "
Machinery Space	1	7/044	18	31	36	"	" " "
Emergency W.T. Supply	1	7/044	10	31	96	"	" " "

[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.

FOR WILLIAM GRAY & CO. LIMITED.

Mr. S. Simpson

Electrical Engineers.

Date 23rd Nov/42

GENERAL MANAGER.

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 146'

Minimum distance between electric generators or motors and steering compass 139'

The nearest cables to the compasses are as follows:—

A cable carrying 1/4 Ampères 7 feet from standard compass on the feet from steering compass.

A cable carrying 1/4 Ampères on the feet from standard compass 7 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 4/12

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted 4/12

The maximum deviation due to electric currents was found to be nil degrees on every course in the case of the standard compass, and nil degrees on every course in the case of the steering compass.

FOR WILLIAM GRAY & CO. LIMITED.

Mr. S. Simpson

Builder's Signature.

Date 23 Nov/42

GENERAL MANAGER.

Is this installation a duplicate of a previous case No If so, state name of vessel

Plans. Are approved plans forwarded herewith No If not, state date of approval 18-5-42.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith No

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 installed under special survey in accordance with the approved plans and the Ministry of Shipping Specification and amendments thereto. The materials used are of good quality and design and the workmanship is good. On completion the equipment was operated under load with satisfactory results and the insulation resistance of each circuit was measured and found good. This equipment is in my opinion suitable for a classed vessel

Noted  
L.Y.  
4/12/42

Total Capacity of Generators (2x15) 30 Kilowatts.

The amount of Fee

£22. 10. 0.  
5. 12. 6.

When applied for,

30/11/1942

Travelling Expenses (if any) £

When received.

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Surveyor to Lloyd's Register of Shipping.

TUE 8 DEC 1942

Committee's Minute

Assigned

See H/L 18356



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