

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 2/1/1941 When handed in at Local Office... 3/1/1941 Port of... Hartlepool

No. in Survey held at... London Date, First Survey... 28-11-40 Last Survey... 27-12-1940
Reg. Book. Suppl. (Number of Visits... 7)

87994 on the... S.S. Empire Strait Tons { Gross... 2824
Net... 1575

Built at... L. Sunderland By whom built... L. Gray and Co. Ltd. Yard No. 1112 When built... 1940

Owners... H.M. Ministry of Shipping Port belonging to... Home Sunderland

Electrical Installation fitted by... L. Gray & Co. Ltd. Contract No. 1112 When fitted... 1940

Is vessel fitted for carrying Petroleum in bulk... Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. Yes

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

Heating... Power... Direct or Alternating Current, Lighting... Two 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... 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... 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... 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 of main

raised platform 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... Engine room, off bulkhead near

generator sets

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... Comy Sinsimp, 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

Quick break knife switches and double pole fuses

and for each outgoing circuit... Double pole quick break knife switches and

double pole fuses

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

ammeters... one 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... End lamps coupled & end wire with fuses

and where are the controlling switches fitted....., are all fittings suitably ventilated.....

are all fittings and accessories constructed and installed as per Rule..... 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..... 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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	8	110	73	600	Single act. indirect 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 Fals.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	8	1	19/066	73	83✓	12	V.I.R	In l. g. conduit
" " EQUALISER	8	1	19/066	73	83✓	12	V.I.R	" " "
<i>Repassing generator</i>	8	1	19/066	73	83✓	12	V.I.R	" " "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible]

	No.	Date	Miles	Hrs	Secs	Remarks	V.I.R.	"	"	"	"
WIRELESS	1	7/064	13	46	450		V.I.R.	"	"	"	"
NAVIGATION LIGHTS						Alternative engine change	D.P.D.T switch from				
LIGHTING AND HEATING						Sector lighting S.B.					
Large lighting	1	7/064	18	46	440		V.I.R.	"	"	"	"
Cool air exhaust accomm.	1	7/064	18	46	60+60		V.I.R.	"	"	"	"
Engine and boiler room	1	7/026	13	24	24		V.I.R.	"	"	"	"

[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.

W. S. Simpson

Electrical Engineers.

Date *30th Decr 1940*

GENERAL MANAGER.

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... *156'*

Minimum distance between electric generators or motors and steering compass..... *154'*

The nearest cables to the compasses are as follows:—

A cable carrying *.14* Ampères *inside* feet from standard compass — feet from steering compass.

A cable carrying *.14* Ampères — feet from standard compass *inside* 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.

FOR WILLIAM GRAY & CO. LIMITED.

W. S. Simpson

Builder's Signature.

Date *30th Decr 1940*

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *'Empire Lough'*

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

The electrical equipment of this vessel was installed with special survey and is in accordance with the approved plans and specifications. The materials and workmanship are good.

The governing compensating and regulation of the generator sets were tested, the insulation resistances of each circuit measured and found satisfactory.

In my opinion the installation is suitable for a classed vessel

Noted.
14/1/41.

Total Capacity of Generators..... *8* Kilowatts.

Deausing genr. *8* Kilowatts.

The amount of Fee ... £ *8 : 0* : When applied for,
Specification £ *2 : 0* :19.....

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

H. B. Bowen

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE 21 JAN 1941*

Assigned *See Hpl. 26. 18702*