

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

16 SEP 1943

Received at London Office.

Date of writing Report... 4-9-1943 When handed in at Local Office... 9-9-1943 Port of... West Hartlepool

No. in Survey held at... West Hartlepool Date, First Survey... 29-6-43 Last Survey... 2-9-1943
Reg. Book. (Number of Visits... 9...)37313 on the S/S. "EMPIRE RIVAL" Tons {Gross... 1044.81
Net... 4844.82

Built at... West Hartlepool By whom built... Wm Gray & Co Ltd Yard No... 1151 When built... 1943

Owners... The Ministry of War Transport Port belonging to... West Hartlepool

Electrical Installation fitted by... Wm Gray & Co Ltd Contract No... 1151 When fitted... 1943

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 - Wye 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 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 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... Heavy "Sindunyo" 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 quick

break Rump switch and double pole fuse: A double pole double throw quick-break

Rump switch for supplying D.F. from either generator

and for each outgoing circuit... a double-pole double-throw quick-break Rump 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 connected to E through no 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... No

state maximum fall of pressure between bus bars and any point under maximum load... 2.4.4 V. 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

PARTICULARS OF GENERATING PLANT

GENERATOR CABLES

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WIRE.	HOW PROTECTED.
		No. in Parallel For Fols.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	15	2	19/064	136	166 ✓	20	V.I.R.	H.G. Screened Conduit
" " EQUALIZER								
" "	15	2	19/064	136	166 ✓	20	V.I.R.	H.G. Screened Conduit
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES

LIGHTING AND HEATING, ETC., CABLES.

MOTOR CABLES[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.
Wm. S. Simpson
GENERAL MANAGER

Electrical Engineers.

Date *6th Sept. 1943*

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 *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 *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.
Wm. S. Simpson
GENERAL MANAGER

Builder's Signature.

Date *6th Sept. 1943*

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *S/S "Empire Drive"*

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 *yes*

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.H.

21/9/43

Total Capacity of Generators *(2x15) 30* Kilowatts.

The amount of Fee ... *£22. 10. 0.* When applied for, *Sept. 15. 1943.*
Specification *5. 12. 6.*
Travelling Expenses (if any) £ : : When received, *19*

S.D. Wm. S.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 28. SEP 1943*

Assigned *see minute on JERph.*



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Foundation