

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

24 MAY 1943

Received at London Office

Date of writing Report 15th May 43, When handed in at Local Office 20/5/1943 Port of West Hartlepool

No. in Survey held at West Hartlepool Date, First Survey 25th May, Last Survey 13th May, 1943  
Reg. Book. Suppt.

86407 on the S.S. "EMPIRE STALWART"

Tons { Gross 1044.60  
Net 1034.57

Built at West Hartlepool By whom built Wm Gray & Co., Ltd. Yard No. 1147 When built 1943

Owners Ministry of War Transport Port belonging to West Hartlepool

Electrical Installation fitted by Wm Gray & Co., Ltd. Contract No. 1147 When fitted 1943

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

Have plans been submitted and approved No System of Distribution Two wire insulated Voltage of supply for Lighting 110

Heating Power 110 Direct or Alternating Current, Lighting No Power No 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 No Are turbine emergency governors fitted with a

trip switch as per Rule Generators, are they compound wound No, are they level compounded under working conditions No

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 No 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 No and the results found as per rule No Are the lubricating arrangements and the construction

of the generators as per rule No Position of Generators Engine room starboard side aft

is the ventilation in way of generators satisfactory No are they clear of inflammable material No, 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 No are the bedplates and frames earthed No and the prime movers and generators in metallic

contact No Switchboards, where are main switchboards placed Engine room starboard side aft

on main platform above gunning site.

are they in accessible positions, free from inflammable gases and acid fumes No, are they protected from mechanical injury and damage from water, steam

and oil No, if situated near unprotected combustible material state distance from same horizontally and vertically, what insulation

material is used for the panels "Economy Linoleum", if of synthetic insulating material is it an Approved Type No, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Is the frame effectually earthed No

Is the construction as per Rule No, including accessibility of parts No, absence of fuses on the back of the board No, individual fuses

to pilot and earth lamps, voltmeters, etc. No locking of screws and nuts No, labelling of apparatus and fuses No, fuses on the "dead"

side of switches No Description of Main Switchgear for each generator and arrangement of equaliser switches Double pole

switch and double pole fuse

and for each outgoing circuit Double pole double throw knife switch and

double pole fuse

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule 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 one of fuses

Switches, Circuit Breakers and Fuses, are they as per Rule No, are the fuses an approved type No, are all fuses labelled as

per Rule No 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 No

Cables, are they insulated and protected as per the appropriate Tables of the Rules No, 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 4.5 lb, are the ends of all cables having a sectional area of 0.01

square inch and above provided with soldering sockets No Are paper insulated and varnished cambric insulated cables sealed at the ends



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.
MAIN ... ..	2	15	110	136	550	Single cylinder steam engine	
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 Per Pole.	Sectional Area or No and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATORS ... ..	2 x 15	2	19/064	136	2 x 83	20	V.I.R.	In conduit
" " EQUALISER ... ..								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
GENERATOR ... ..								

### MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

	No.	Date	Meters	Feet	V.I.R.	Remarks
WIRELESS & Emergency Wireless	1	7/064	13	46	384	In conduit + L.C.
NAVIGATION LIGHTS	1	7/064	10	46	440	In conduit + L.C.
LIGHTING AND HEATING						
Cabin + Capt's Log. etc.	1	7/064	12+5	46	380+30	In conduit + L.C.
Engineers' Accom. Log. etc.	1	7/064	18	46	80	In conduit
Aft Accom. Log. etc.	1	7/064	15	46	340	In conduit
Cargo Log. etc.	1	7/064	23	46	80	In conduit
Engine Room Log. etc.	1	7/044	18	31	36	In conduit

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

J. S. Simpson

GENERAL MANAGER

Electrical Engineers.

Date 18th May, 1943.

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 142 feet

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

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères on the feet from standard compass 7 feet from steering compass.

A cable carrying 14 Ampères 7 feet from standard compass on the 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 1/2 degrees on every course in the case of the standard compass, and 1/2 degrees on every course in the case of the steering compass.

FOR WILLIAM GRAY & CO. LIMITED.

Builder's Signature.

Date 18th May, 1943.

J. S. Simpson

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 17.12.42

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 with the specification. The materials used are of good quality and the workmanship is good. On completion the equipment was run under working conditions with satisfactory results and the insulation resistance of all circuits was measured and found good. This equipment is in our opinion suitable for a steam vessel.

Noted

J. S.

27/5/43.

Total Capacity of Generators 30 Kilowatts.

The amount of Fee £ 28 : 2/6 : When applied for, 22.5.19.43  
(incl. Specifn.)  
Travelling Expenses (if any) £ : : When received, 19.

Simpson for self and S. O. Brand.  
Surveyor to Lloyd's Register of Shipping.

FRI. 28 MAY 1943

Committee's Minute

Assigned See fe machy rpt