

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 OCT 1943

Received at London Office

Date of writing Report 18 Oct 43 When handed in at Local Office 26 OCT 1943 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 27th July Last Survey 27 Oct 1943
Reg. Book. Suppt. (Number of Visits 11)

37280 on the S.S. 'EMPIRE CAMP' Tons (Gross 7052 Net 4760)

Built at Sunderland By whom built Short Bros, Ltd Yard No. 477 When built 1943

Owners Ministry of War Transport Port belonging to Sunderland

Electrical Installation fitted by The Sunderland Engineering Co. Ltd Contract No. 477 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 wire main circuit Voltage of supply for Lighting 110

Heating — Power 110 Direct 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 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 surrounded aft on

amidships, 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 amidships

near generating 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 "Economy Lincomp" 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 Triple pole double

throw knife switch with one pole for equalisers and double pole

circuit breaker with overload trip on each pole and none circuit trip

and for each outgoing circuit Double pole or double pole double throw 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 Three

ammeters Three voltmeters — 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 Elamp connected to E through ear. of 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 350/50 A are the reversed current

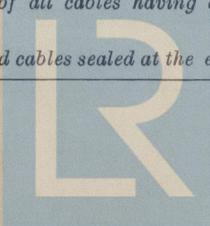
protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

did they operate Yes 350 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 Yes

state maximum fall of pressure between bus bars and any point under maximum load 4.4 V, are the ends of all cables having a sectional area of 0.01

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes



PARTICULARS OF GENERATING PLANT.							
DESCRIPTION OF GENERATOR.	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.		Revs. per Min.	Fuel Used.
MAIN ...	3	23	110	500	640	Single cylinder steam engine	
EMERGENCY ...							
ROTARY TRANSFORMER							

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 ...	3	43	110	500	640	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 For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATORS	3 x 33	1	87/083	300	296	✓ 43/30/42	V.C.	L.C.
" " EQUALISER		1	19/083	—	191	✓ 31/5/51	Do.	Do.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS		NAVIGATION LIGHTS		LIGHTING AND HEATING		WATER		FUEL		OTHER	
1	19.064	35	83	480	W.E.	In pipe & L.C.					
1	7.036	2	24	90	do.	L.C.					
Saloon & Cabin Ltg. 20		1	7.044	8+6	31	24+40	W.E.	L.C.			
Bridge Ltg. 20		1	7.036	9	24	90	do.	do.			
2nd. Comp. Ltg. 20		1	7.036	10	24	174	do.	In pipe			
3rd. Comp. Ltg. 20		1	7.036	6	24	24	do.	L.C.			
Bell Boat Ltg. 20		1	7.036	4	24	90	do.	do.			
Engine Room Ltg. 20		1	7.036	4	24	90	do.	do.			
Aft Ltg. 20		1	7.044	20	31	144	do.	do.			
Starboard Ltg. 20		1	7.044	17	31	240	do.	do.			
Aft Comp. Ltg. 20		1	7.036	8	24	200	do.	In pipe			
Forward Ltg. 20		1	7.044	10	31	120	do.	L.C.			
Aft Ltg. 20		1	7.064	20	46	400	do.	In pipe			
L.C. & Roping Comp. Room Ltg. 20		1	7.052	24+8	37	36+60	do.	do.			

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Explos. Fan No. 1 & 2	2	8 1/2	1	7/06/4	67	75	120/124	V.C.	L.C.
Explos. Fan No. 3 & 4	2	8 1/2	1	7/06/4	67	75	108/150	do.	do.
Explos. Fan No. 5 & 6	2	8 1/2	1	7/06/4	67	75	132/122	do.	do.
Explos. Cris. Pump	1	10	1	19/06/4	85	88	100	W.E.	In pipe
Domestic Explos.	1	5	1	19/06/4	41	83	44/48	do.	do.
Compressor Km. Fans	2	1 1/2	1	7/03/6	3	24	51/32	do.	L.C.

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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD

Electrical Engineers.

Date 19-10-1943

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 SHORT BROTHERS LIMITED

Builder's Signature.

Date 25.10.43

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

Plans. Are approved plans forwarded herewith *Yes* If not, state date of approval *15/7/42 & 25/9/42*

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. The materials used are of good quality and the workmanship is good. On completion the equipment was run under working conditions with satisfactory results, the protective devices of the circuit breakers were adjusted and operated and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a classed vessel.

Noted

L.P.

12/11/43

Total Capacity of Generators 99 Kilowatts.

The amount of Fee... £ 40: 10: (incl. stamp.)

When applied for, 25 OCT 1943

Travelling Expenses (if any) £ : :

When received.

19

D. Amerson

Surveyor to Lloyd's Register of Shipping.

TUES. 16 NOV 1943

Committee's Minute

Assigned

see minute on C.B. Rpt.



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