

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 11 MAR 1943

Date of writing Report 11th Mar 1943, When handed in at Local Office 17 MAR 1943 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 18th Nov 42 Last Survey 11th Mar 1943
Reg. Book. Suppt. (Number of Visits 10)

86344 on the S.S. "EMPIRE BARDOLPH" Tons { Gross 7015
Net 4752

Built at Sunderland By whom built Short Bros, Ltd. Yard No. 474 When built 1943

Owners Ministry of War Transport Port belonging to Sunderland

Electrical Installation fitted by The Sunderland Eng. & Eng. Co. Ltd. Contract No. 474 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.Stg. No

Have plans been submitted and approved Yes System of Distribution Two 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 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 on

main deck, 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 starboard side off

main gunning etc 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 'Wony Kinsamp' 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 Three pole double

throw knife switch (one pole for equaliser) and double pole circuit

breakers with overcurrent trip on each pole and reverse current trip

and for each outgoing circuit Double pole on 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 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 Elamps connected to E through over 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 300 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 30 A 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

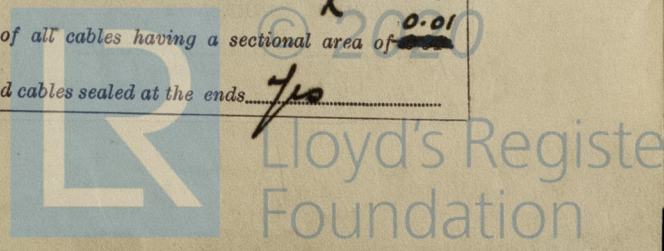
state maximum fall of pressure between bus bars and any point under maximum load 24.4 kV are the ends of all cables having a sectional area of 0.01

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

Some W.E. cables used

24.4 kV lighting power

Are paper insulated and varnished cambric insulated cables sealed at the ends Yes



Certs. are
rapid. Same
to follow.

GENERATOR CABLES.								
DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return test).	INSULA-TED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area of No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rate.			
MAIN GENERATORS ...	3 x 33	1	37/083	300	296	43/20/2	V.C.	L.C.
" " EQUALISER ...		1	19/018	—	191	21/17/1	V.C.	L.C.
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

[illegible]

WIRELESS
NAVIGATION LIGHTS (off saloon Hb.)	1	19/064	35	83	480	V.I.R.	In pipe & L.C.	
	1	7/029	2	15	90	V.I.R.	L.C.	
LIGHTING AND HEATING	all feed to main 24. 26 fitted from						Bridge 24. 26	
Saloon 24. 26	1	7/044	20	81	24	V.I.R.	L.C.	
Bridge 24. 26	1	7/029	9	15	90	V.I.R.	L.C.	
Forw. Comp. 24. 26	1	7/026	10	24	174	V.I.R.	In pipe	
Mid. Comp. Ch. Bd.	1	1/064	4	5	90	V.I.R.	L.C.	
Aft. Comp. Ch. Bd.	1	1/064	4	5	90	V.I.R.	L.C.	
Engin. Rm. Ch. Bd.	1	7/026	20	24	144	V.I.R.	L.C.	
Store 24. 26	1	7/026	17	24	240	V.I.R.	L.C.	
Aft. Comp. 24. 26	1	7/026	8	24	200	V.I.R.	In pipe	
Aft. 24. 26	1	7/064	20	46	400	V.I.R.	In pipe	
Engin. Rm. & Reprig. Comp. Rm. 24. 26	1	7/064	24+8	46	36+60	V.I.R.	In pipe	

[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.

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

Electrical Engineers.

Date 16.3.43

COMPASSES.

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

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

The nearest cables to the compasses are as follows:—

A cable carrying 114 Amperes on the feet from standard compass 7 feet from steering compass.

A cable carrying 114 Amperes 7 feet from standard compass on the feet from steering compass.

A cable carrying Amperes feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power 7/2

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted 7/2

The maximum deviation due to electric currents was found to be his degrees on every course in the case of the

standard compass; and his degrees on every course in the case of the steering compass.

FOR SHORP BROTHERS, LIMITED

Builder's Signature.

Date 16.3.43

Is this installation a duplicate of a previous case 7/2 If so, state name of vessel

Plans. Are approved plans forwarded herewith 7/2 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 7/2

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

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. 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 on my opinion suitable for a classed vessel.

Noted

L.F.

24/3/43

Total Capacity of Generators 99 Kilowatts.

The amount of Fee ... £ 440: 10: (Inst. Surveyor)

£ 440: 10:

When applied for.

13 MAR 1943

Travelling Expenses (if any) £ :

When received.

.....19.....

Santeron

Surveyor to Lloyd's Register of Shipping.

WED. 31 MAR 1943

Committee's Minute

Assigned

See Atd. 23. 33637



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