

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

24 SEP 1942

Received at London Office

Date of writing Report... 11th Sept. 1942 When handed in at Local Office... 22 SEP 1942 Port of... Sunderland

No. in Survey held at... Sunderland Date, First Survey... 3/4 July Last Survey... 15th Sept. 1942
(Number of Visits... 8)

Reg. Book. Suppt. 86622 on the S.S. "FIREDOG" Tons { Gross... 1557 Net... 879

Built at... Sunderland By whom built... S.P. Austin & Co. Ltd. Yard No. 364 When built... 1942

Owners... S.S. Light & Coke Co. Ltd. Port belonging to... London

Electrical Installation fitted by... The Sunderland Engineering Co. Ltd. Contract No. 364 When fitted... 1942

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

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

Heating... Power... 110 Direct... Alternating Current, Lighting... Power... 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... Are turbine emergency governors fitted with a

trip switch as per Rule... Generators, are they compound wound... are they level compounded under working conditions...

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... are shunt field regulators provided... 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... and the results found as per rule... Are the lubricating arrangements and the construction

of the generators as per rule... Position of Generators... Engine room air intake side on

performs... is the ventilation in way of generators satisfactory... are they clear of inflammable material... 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... are the bedplates and frames earthed... and the prime movers and generators in metallic

contact... Switchboards, where are main switchboards placed... Engine room air intake side

beside upper generating set... are they in accessible positions, free from inflammable gases and acid fumes... are they protected from mechanical injury and damage from water, steam

and oil... if situated near unprotected combustible material state distance from same horizontally... and vertically... what insulation

material is used for the panels... "Economy Linings" if of synthetic insulating material is it an Approved Type... if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... Is the frame effectually earthed...

Is the construction as per Rule... including accessibility of parts... absence of fuses on the back of the board... individual fuses

to pilot and earth lamps, voltmeters, etc... locking of screws and nuts... labelling of apparatus and fuses... fuses on the "dead"

side of switches... Description of Main Switchgear for each generator and arrangement of equaliser switches... Double pole

and for each outgoing circuit... Double pole double throw knife switches and

double pole fuses.

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

ammeters... 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... Elamps connected to E through two fuses.

Switches, Circuit Breakers and Fuses, are they as per Rule... are the fuses an approved type... are all fuses labelled as

per Rule... 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...

Cables, are they insulated and protected as per the appropriate Tables of the Rules... 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... 4.44, are the ends of all cables having a sectional area of 0.04

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

PARTICULARS OF GENERATING PLANT.							WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
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	2	8	110	78	600	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 per No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATORS	2 x 8	1	19/064	72	135	24.60	V.C.	L.C.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS		NAVIGATION LIGHTS		LIGHTING AND HEATING		V.I.R.		L.C.	
(Radio Telephone) off to	1	3/036	5	10	20	50	50	50	50
a.b. (off a.b.)	1	3/036	3	10	60	50	50	50	50
Asst. Nav. Fed. (off a.b.)	1	3/036	3	10	60	50	50	50	50
Saloon Ltg. a.b. (off a.b.)	1	7/036	7	24	52	50	50	50	50
Crew & Engine Ltg. a.b.	1	7/036	4+3	24	116/110	50	50	50	50
Engine Room Ltg. a.b.	1	7/036	8	24	24	50	50	50	50
Shore Connection	1	7/044	-	31	40	50	50	50	50

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.

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

W. L. Gurney

Electrical Engineers.

Date *12-9-1942*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *no standard compass fitted*

Minimum distance between electric generators or motors and steering compass *13 feet*

The nearest cables to the compasses are as follows:—

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

A cable carrying *14* Ampères feet from standard compass *on the* ~~foot 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 S. P. AUSTIN & SONS, LIMITED.

W. Seadon

Builder's Signature.

Date *15 Sept 1942*

Is this installation a duplicate of a previous case. *Yes*

SECRETARY

If so, state name of vessel *"Capitol"*

Plans. Are approved plans forwarded herewith. *Yes*

If not, state date of approval. *10/2/41 & 18/3/41*

Certificates. Are certificates of test for ~~motors engaged on essential services~~ 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. 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 my opinion suitable for a classed vessel.

*Noted
L.S.
6/10/42*

Total Capacity of Generators. *16* Kilowatts.

The amount of Fee ... £ *15 : 10* : *2* SEP 1942

When applied for,

2 SEP 1942

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

.....19.....

G. Antinson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRL 19 OCT 1942*

Assigned *See Atd. 3E 33490*

5m. 4.30.—Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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