

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

7 OCT 1931

Date of writing Report 2.9.31 When handed in at Local Office 3.10.1931 Port of GLASSGOW

No. in Survey held at GLASSGOW Date, First Survey 18th May 1931 Last Survey 24th Sept. 1931
Reg. Book. (Number of Visits 20)

39703 on the T.S.S. "CORFU" Tons { Gross 14251
Net 7770

Built at GLASSGOW By whom built A. STEPHENS & SONS LTD Yard No. 534 When built 1931

Owners PENINSULAR & ORIENTAL STEAM NAV. CO. Port belonging to LONDON

Electric Light Installation fitted by A. STEPHENS & SONS LTD. Contract No. 534 When fitted 1931

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two wire

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting direct current Power direct current

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes, are they compound wound Yes

are they over-compounded 5 per cent. Yes, if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes

Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators On Dynamo Platform forward end of Engine Room

is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators Nil and Nil, are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axes of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes, direct coupled on one bed plate

Main Switch Boards, where placed on Switchboard Platform at forward end of Engine Rm. above Dynamos

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes

are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards

are they constructed wholly of durable, non-ignitable non-absorbent materials Slate, is all insulation of high dielectric strength and of permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes

and is the frame effectively earthed Yes Are the fittings as per Rule regarding:— spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches 3-2000 Amp. DP C/Bs fitted with the release & time lags each pole & reverse on neg. pole. Equalizer pole - non automatic which makes before & breaks after positive & negative poles (one for each dynamo). All circuits 200 Amp. and over have DP C/Bs. The C/Bs supplying Auxiliary Switchboards have shunt trips worked in conjunction with 3-way switches & special relays on main Generator Bks. Circuits under 200 Amp have DP switch & fuses

Instruments on main switchboard 3 ammeters 1 voltmeters 1 Voltmeter synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Earth testing Lamps

(positive to earth and negative to earth) with switches & fuses

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes



Cables: Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV or V of the Rules Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 5 volts for Lighting, 8.5 for Power

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes

Paper Insulated Cables, If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound Yes

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes

Support and Protection of Cables, state how the cables are supported and protected L.C. cables on Accom. clipped to perforated iron traps run on underside of beams in alleyways. Cables in Engine & Boiler Rms. where exposed to damage are L.C.A.B. clipped to perforated iron plate. V.I.R. in tubing in Public Rms.

If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap screws of brass Yes, are the cables run in separate grooves Yes. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements Yes

Joints in Cables, state if any, and how made, insulated, and protected none

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes state the material of which the bushes are made Lead bushes for L.C. cables, Fibre for L.C.A.B. cables.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas nil. except that all metallic sheathing of cables is bonded & welded as required. are their connections made as per Rule Yes

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven Emergency dynamo in separate compartment on Boat deck with Switchboard adjacent. Generator driven by Petrol Paraffin Engine direct coupled to Generator on one bed plate.

Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes, are the fuses double pole Yes are the switches and fuses grouped in a position accessible only to the officers on watch Yes has each navigation lamp an automatic indicator as per Rule Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yes are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected Fittings in cargo holds fitted with strong iron guards. are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none how are the cables led None

where are the controlling switches situated Cargo hold lights are controlled by switches at Hatches with a DP master switch in Chart Room.

Searchlight Lamps, No. of one whether fixed or portable Fixed are their fittings as per Rule Yes

Arc Lamps, other than searchlight lamps, No. of none are their live parts insulated from the frame or case Yes are their fittings as per Rule Yes

Motors, are their working parts readily accessible Yes are the coils self-contained and readily removable for replacement Yes are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yes are they protected from mechanical injury and damage from water, steam or oil Yes are their axes of rotation fore and aft Yes & vertical.

if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type Totally enclosed & Drip Proof, if not of this type, state distance of the combustible material horizontally or vertically above the motors and

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule Yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule none

Ships entering Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings Yes

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	350.	220.	1600.	1000	Steam Turbine		
AUXILIARY								
EMERGENCY	1	50.	220.	227.	700.	Petrol Paraffin Engine.		
ROTARY TRANSFORMER	2	1.64	220.	4.45	900.			
	2	8.	25.	32.	900.			

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	2	1.0376	127	.103	1600	1864.	52	PAPER	Lead covered
EQUALISER CONNECTIONS	1	1.0376	127	.103		932.	26	"	"
AUXILIARY SWITCHBOARD	1	0.4064	61	.093	300	464.	208	"	"
EMERGENCY GENERATOR SWITCHBOARD	1	0.1964	37	.083	227	296.	52	"	"
TRANSFORMER (AUX SWB)	1	0.1964	37	.083	268	296.	290	"	L.C.A.B.
ENGINE ROOM & BOILER RM. CREW ACCOM. FORWARD	1	0.0396	19	.052	75	104.	48	"	"
AUXILIARY SWITCHBOARD 'A'	1	1.0376	127	.103	175	31.	350	V.I.R.	Lead covered
" " 'B'	1	0.2465	37	.093	450	932.	384	PAPER	"
" " 'C'	1	1.0376	127	.103	800	932.	492	"	"
" " 'D'	1	0.1009	19	.083	185	191.	184	"	"
CREW ACCOM. AFT	1	0.0070	7	.036	171	24.	30	V.I.R.	"
OFFICERS' ACCOM. LTR	1	0.0045	4	.029	79	18.2	280	"	"
ACCOMMODATION 1st CL. FORWARD	1	0.0221	7	.064	66.8	75.	30	PAPER	"
" " 1st CL. MID.	1	0.0221	7	.064	53.4	75.	48	"	"
" " 2nd CL. AFT.	1	0.0221	7	.064	48.3	75.	30	"	"
ENGINEERS' ACCOM.	1	0.0070	7	.036	14.8	24.	128	V.I.R.	"
GALLEYS & PANTRIES	1	0.0105	7	.044	28	31.	88	"	L.C.A.B.
WIRELESS	1	0.0070	7	.036	15.5	24.	284.	"	Lead covered
SEARCHLIGHT	1	0.0600	19	.064	55	135.	140.	PAPER	"
MASTHEAD LIGHT	1	0.0045	4	.029	3	18.2	720	V.I.R.	"
SIDE LIGHTS	1	0.0019	3	.029	3	7.8	176.	"	"
COMPASS LIGHTS	1	0.0019	3	.029	1	7.8	130.	"	"
POOP LIGHTS	1	0.0045	7	.029	3	18.2	960.	"	"
CARGO LIGHTS FORWARD	1	0.0221	7	.064	58.8	75.	30.	PAPER	L.C. & L.C.A.B.
" " AFT	1	0.0221	7	.064	48.2	75.	26.	"	"
HEATERS PUBLIC RMs FORWARD	1	0.0396	19	.052	63.6	104.	180.	"	L.C.

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP	1	1	0.0759	19	.072	128	157.	80	PAPER	L.C.A.B.
MAIN BILGE LINE PUMP	1	1	0.0759	19	.072	128	157.	72	"	"
2-WATER EXTRACTION PUMPS	1	1	0.0600	19	.064	95	135.	152	"	"
EMERGENCY BILGE PUMP	1	1	0.0759	19	.072	130	157.	388	"	"
2-SANITARY PUMPS	1	1	0.0759	19	.072	128	157.	94	"	"
2-FRESH WATER PUMPS	1	1	0.0070	7	.036	21	24.	156	V.I.R.	"
GEN. FRESH WATER PUMPS	1	1	0.0105	7	.044	21	31.	248	"	"
2-AIR COMPRESSORS	1	1	0.2465	37	.093	318.5	343.	82	PAPER	"
DISTILLED WATER PUMP	1	1	0.0070	7	.036	21	24.	122	V.I.R.	"
2-ENGINE TURNING GEAR	1	1	0.0146	7	.052	32	57.	136	PAPER	"
2-AUX EXTRACTION PUMP	1	1	0.0105	7	.044	24.4	31.	68	V.I.R.	"
2-LUBRICATING OIL PUMPS	1	1	0.0030	3	.036	8	12.	70	"	"
2-CAPSTAN MOTORS	1	1	0.1478	37	.072	230.	246.	106	PAPER	"
2-WINDLASS MOTORS	1	1	0.3024	37	.103	375.	385.	112	"	L.C.
WINCHES, POWERED 20-TON	1	1	0.0600	19	.064	120.	135.	160	"	"
10 BOAT WINCHES 2-TON	1	1	0.1009	19	.083	184	191.	180	"	"
CIRCULATING PUMP	1	1	0.0146	7	.052	48	57.	200.	"	"
2-STEERING GEAR MOTORS	1	1	0.0105	7	.044	25	31.	50	V.I.R.	L.C.A.B.
3-BRINE CIRCULATING PUMPS	1	1	0.1168	37	.064	153	210.	748	PAPER.	L.C.
1-BRINE CIRCULATING PUMP	1	1	0.0146	7	.052	36	57.	92	"	L.C.A.B.
WORKSHOP MOTOR	1	1	0.0070	7	.036	16.4	24.	86	"	"
VENTILATING FAN'S FUSE BOX	(9)	1	0.0396	19	.052	76.3	104.	280	PAPER	L.C.
'MSI' F.D.	(2)	1	0.0146	7	.052	42.	57.	152	"	L.C.A.B.
'MSG' F.D.	(2)	1	0.1478	37	.072	212.	246.	204	"	"
'MS7' F.D.	(2)	1	0.1478	37	.072	212.	246.	200	"	"
BOILER RM. VENT	(4)	1	0.0396	19	.052	90.	104.	380	"	"
ENGINE RM.	(4)	1	0.1478	37	.072	222.	246.	306	"	"
'AEROTO & Sirocco'	(4)	1	0.0221	7	.064	59.	75.	100	"	"

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

ALEXANDER STEPHEN & SONS, LIMITED.

Electrical Engineers.

Date 1st October 1931

A. W. Stephen Director

COMPASSES.

Distance between electric generators or motors and standard compass 122 feet
 Distance between electric generators or motors and steering compass 120 "
 The nearest cables to the compasses are as follows:—
 A cable carrying .55 Amperes 10 feet from standard compass 14 feet from steering compass.
 A cable carrying 4.0 Amperes 10 feet from standard compass 5 feet from steering compass.
 A cable carrying .2 Amperes 10 feet from standard compass 5 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 No degrees on any course in the case of the standard compass, and no degrees on any course in the case of the steering compass.

ALEXANDER STEPHEN & SONS, LIMITED.

A. W. Stephen Director

Builder's Signature.

Date 1st October 1931

Is this installation a duplicate of a previous case No. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation has been fitted on board under special survey, tested under full working conditions and found satisfactory. The electrical spare gear for the refrigerating machinery has been checked and found correct. The materials and workmanship were found to be good and sound.

A.S.
3/10/31.

Elec. Light
J.P.
7/10/31

Total Capacity of Generators 1100 Kilowatts.

The amount of Fee £ 59: 0: 0 2/10/31

Travelling Expenses (if any) £ 30/10/31

W. Haffner
Surveyor to Lloyd's Register of Shipping.

Im. 530.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Committee's Minute GLASGOW 6 - OCT 1931

Assigned Elec. Light.

FRI. 30 OCT 1931

TUE. 16 FEB 1932



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