

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 14 AUG 1941

Date of writing Report 7th July 1941 When handed in at Local Office 19 Port of Middlesbrough

No. in Survey held at South Bank-on-Tees Date, First Survey 17th June Last Survey 21st July 1941
Reg. Book. (Number of Visits 7)

on the H.M.S. "STONECROP"

Built at South Bank-on-Tees By whom built Smiths Dock Ltd Yard No. 1096 When built 1941

Owners Admiralty Port belonging to

Electrical Installation fitted by R. Pickering & Sons Ltd Contract No. When fitted 1941

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

Equipment to Admiralty Plans Have plans been submitted and approved System of Distribution Two-Wire insulated Voltage of supply for Lighting 110

Heating 110 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 Positive 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 port and starboard aft on raised stools, 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 aft near starboard generating set.

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 Construction of Switchboard in accordance with Admiralty Electrical Specifications Nos. 3 & 4, 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 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 circuit breaker with overload, time lag, reverse current and 20-Volt tripping device, one pole used for equaliser and for each outgoing circuit double-pole quick break knife switch and double pole cartridge fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes 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 Yes Earth Testing, state means provided E. lamps coupled to E. through two fuses. Switches, Circuit Breakers and Fuses, are they as per Rule To Admiralty Standard Electrical Specifications, 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 195 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 25 A Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes To Admiralty Standard Electrical Specifications 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 7.44, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends None fitted

with insulating compound _____ or waterproof insulating tape _____ Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes, are cables laid under machines or floorplates No, if so, are they adequately protected _____ Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit _____ State how the cables are supported and protected all cables V.I.R. insulated lead covered clipped on metal perforated tray or to surface and protected where necessary by sheet iron guards.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Refrigerated chambers, are the cables and fittings as per Rule _____

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed Yes and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Accumulator fed emergency lanterns fitted and method of control contactor - operated on failure of ships main supply Navigation Lamps, are they separately wired Yes controlled by separate double pole switches Yes and fuses Yes Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted No Secondary Batteries, are they constructed and fitted as per Rule _____, are they adequately ventilated _____ what is the battery capacity in ampere hours _____

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present Yes, if so, how are they protected Settings in magazines, spirit store etc in accordance with Admiralty Specification and where are the controlling switches fitted outside dangerous spaces, are all fittings suitably ventilated Yes are all fittings and accessories constructed and installed as per Rule Yes Searchlight Lamps, No. of 2x10" 2x20", whether fixed or portable Portable with fitted socket, are their fittings as per Rule Yes Heating and Cooking, is the general construction as per Rule Yes Admiralty Standard Pattern are the frames effectually earthed Yes, are heaters in the accommodation of the convection type _____ Motors, are all motors constructed and installed as per Rule Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, if situated near unprotected combustible material state minimum distance from same horizontally _____ and vertically _____ Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment _____ Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing _____ Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule _____ Control Gear and Resistances, are they constructed and fitted as per Rule Yes Lightning Conductors, where required are they fitted as per Rule Yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with _____, are all fuses of the cartridge type _____ are they of an approved type _____ Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships _____ Are the cables lead covered as per Rule _____ Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes, are they suitably stored in dry situations Yes Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

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	2	15	110	131	500	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 GENERATOR - Main	15	1	37/072	151	152	46	V.I.R.	L.C.
" " EQUALISER		1	37/072	-	152	23	V.I.R.	L.C.
Main generator - Port.	15	1	37/072	131	152	84	V.I.R.	L.C.
Equaliser		1	37/072	-	152	42	V.I.R.	L.C.
Shore connection		1	19/083	-	118	100	V.I.R.	L.C.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
FWD. Lighting D.B.	1	7/044	9+16	31	252	V.I.R.	L.C. 6192A
AFT. Lighting D.B.	1	7/044	3+30	31	16	V.I.R.	L.C. 6192A
FWD. Heating D.B.	1	19/052	28	64	246	V.I.R.	L.C. 6190A
AFT. Heating D.B.	1	19/052	55	64	46	V.I.R.	L.C. 6190A

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/036	15	24	270	V.I.R.	L.C. 6193A
NAVIGATION LIGHTS	1	7/036	12	24	310	V.I.R.	L.C. 6193A
LIGHTING AND HEATING							
20" Searchlight	1	7/036	9-1	24	322	V.I.R.	L.C. 6193A
10" Searchlight Projector	1	7/036	19	24	322	V.I.R.	L.C. 6193A
R/S Supply	1	7/044		31	330	V.I.R.	L.C. 6192A
D/G	1	19/064	31	83	60	V.I.R.	L.C. 6189A
R.D.F. "	1	7/064		46	280	V.I.R.	L.C. 6191A

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
1 1/2" Ventilation Fan	1	3.5	1	7/044	25-20	31	100	V.I.R.	L.C. 6192A
12 1/2" " "	1	5	1	7/036	25-20	24	44	V.I.R.	L.C. 6193A
12 1/2" " "	1	5	1	7/029	12-10	15	160	V.I.R.	L.C. 6194A
7 1/2" " "	1	5	1	3/036	5-4	10	46	V.I.R.	L.C. 6195A
5" " "	1	1.18	1	3/036	2	10	36	V.I.R.	L.C. 6195A
2/nd. Gun Motor	1	6	1	19/052	-	64	-	V.I.R.	L.C. 6190A

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.

RICHARD PICKERSGILL & SONS, LTD.

Electrical Engineers.

Date 28/7/41

COMPASSES.

Minimum distance between electric generators or motors and standard compass 175 ft.

Minimum distance between electric generators or motors and steering compass 168 ft.

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 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.

Builder's Signature.

Date.

Is this installation a duplicate of a previous case. Yes If so, state name of vessel H.M.S. "SAMPHIRE"

Plans. Are approved plans forwarded herewith. No. If not, state date of approval. In Admiralty approval.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith. No.

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 and in accordance with the Admiralty plans and specifications and amendments thereto, and generally in accordance with the 1939-1940 Rules for Electrical Equipment. The materials used are of good quality and design, and the workmanship is good. On completion trials of the equipment were witnessed generally as required by Admiralty regulation O.V. 5332 and found satisfactory. This equipment is in my opinion suitable for a vessel bearing the Society's class A. "For Government Service"

Noted

18/8/41

Total Capacity of Generators (2x15) 30 Kilowatts.

The amount of Fee ... £15 :- When applied for, ... 13.8.19.41.

Travelling Expenses (if any) £ : : When received, ... 19.....

Surveyor to Lloyd's Register of Shipping.

Committee's Minute ... FRI. 22 AUG 1941

Assigned ... See Indb. J.E. 17079

5m. 4.39.—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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