

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

14 APR 1954

Received at London Office

Date of writing Report 31: 3: 19 54 When handed in at Local Office 6th Apr. 19 54 Port of Aberdeen

No. in Survey held at ABERDEEN Date, First Survey 12.11.52. Last Survey 31: 3: 19 54 (No. of Visits 26)

25869 on the Steam Twin Screw Tug "SAMSON" Tons { Gross 855 Net 184

Built at ABERDEEN By whom built A. Hall and Co. Ltd. Yard No. 741 When built 1954

Owners: The Admiralty Port belonging to -----

Installation fitted by Claude Hamilton and Co. Ltd. When fitted 1954

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

Plans, have they been submitted and approved yes System of Distribution Two wire Voltage of Lighting 220v

Heating 220 v Power 220v D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency ---

Prime Movers, has the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted with a trip switch --- Generators, are they compound wound yes, and level compounded under working conditions. yes

Are the generators arranged to run in parallel No Is the compound winding connected to the negative or positive pole Negative

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing none Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators Both at aft end of Engine

Room, 35 Kw Diesel on port side, 50 Kw Steam Driven at Stbd. side.

is the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil yes Switchboards, where are main switchboards placed at aft end of Engine room

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil yes, what insulation is used for the panels Sindanyo, 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 construction as per Rule, including locking of screws and nuts. yes Description of Main Switchgear

for each generator and arrangement of equaliser switches D.P. Circuit Breaker fitted with overload and Reverse Current rips.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit

D.P. Knife Switches with fuses

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 are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection. --- Earth Testing, state means provided Lamps.

Switch and fuse in each pole Preference Tripping, state if provided n one, and tested Yes, English Elec. Cartridge.

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type. yes make of fuses Admiralty supply, are all fuses labelled. yes If circuit breakers are provided for the generators, at what overload do they operate 150% full load current, and at what current do the reverse current protective devices operate 10% full load current

Cables, are they insulated and protected as per Rule. yes 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 8 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends. yes

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 any cables laid under machines or floorplates. No, if so, are they adequately protected. --- State type of cables (if in conduit this should also be stated) in machinery spaces Admiralty Pattern, galleys. ---

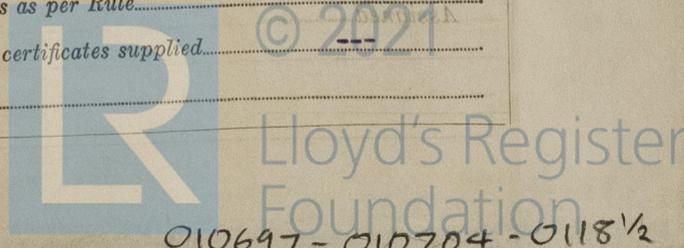
and laundries. --- State how the cables are supported or protected Mains and Machinery Spaces: ---

L.C. Cables clipped to perforated trays- Protected where necessary. Accommodation:- L.C. Cables clipped to woodwork.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. yes 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, with lead Refrigerated chambers, are the cables and fittings as per Rule. ---

Have refrigeration fan motors been constructed under survey. --- and test certificates supplied. ---

Are the motors accessible for maintenance at all times. ---



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position Admiralty Pattern automatic emergency lanterns.

Navigation Lamps, are they separately wired yes controlled by separate double pole switches and fuses yes Are the switches and fuses in a position accessible only to the officers on watch yes, is an automatic indicator fitted yes Is an alternative supply provided yes

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule ---, state battery capacity in ampere hours --- Where required to do so does it comply with 1948 International Convention ---

Lighting, is fluorescent lighting fitted no If so, state nominal lamp voltage --- and compartments where lamps are fitted ---

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes

Searchlights, No. of One, whether fixed or portable portable, are they of the carbon arc or of the filament type Filament

Heating and Cooking, is the general construction as per Rule yes, are the frames effectually earthed yes, are heaters in the accommodation of the convection type Admiralty pattern Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil yes

Are motors coupled to oil fuel transfer and 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 none

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule ---

Lighting Conductors, where required are they fitted as per Rule ---

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with ---, are all fuses of an Approved Cartridge Type ---, make of fuse --- Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships --- Are all cables lead covered as per Rule ---

E.S.D., if fitted state maker Admiralty pattern (Kelvin Hughes) location of transmitter and receiver Frame spaces 20-21 and 18-19

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and 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	MAKER.	RATED AT				PRIME MOVER.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	One	General Electric Co. Ld	50	220	227	500	Steam	Ashworth and Parker
	One	do	35	220	160	1,800	Diesel	Foden
EMERGENCY ... ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	One	50	1	37 .072	227	260 ✓	90	V. C.	L. C.
" " EQUALISER ...	One	35	1	19 .083	160	202 ✓	90	V. C.	L. C.
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER: MOTOR ...									
" " GENERATOR ...									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	
Heating	1	7 .064	45	46 ✓	420	V. I. R.	L. C.
Domestic Equip. and E. S. D.	1	7 .044	26	31 ✓	330	do	do
Salvage Pumps	1	19 .083	64	202 ✓	108	do	do
Shore Supply	1	19 .083	200	202 ✓	75	(do) V.C. from drawing	do

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Navigation	1	7 .029	7	15 ✓	378	V. I. R.	L. C.
Wireless	1	7 .064	38.5	46 ✓	396	do	do
Ford. Accom. Lighting D.B.	1	7 .044	11.3	31 ✓	360	do	do
Upper Deck do	1	7 .044	14	31 ✓	354	do	do
Aft Compartment do	1	7 .044	6	31 ✓	202	do	do
Engine Room do	1	7 .044	12.4	31 ✓	340	do	do
Forecastle Deck Heating D.B.	1	7 .064	45	46 ✓	420	do	do
Upper Deck Heating D.B.	1	7 .029	9	15 ✓	150	do	do
Engine Room Auxiliary D.B.	1	7 .044	8	31 ✓	180	do	do
Accommodation Vent. Fans	1	7 .044	13	31 ✓	340	do	do
Engine Room Vent Fans.	1	7 .064	27	46 ✓	111	do	do
Stokehold Vent Fans	1	7 .064	42	46 ✓	330	do	do
10" Signalling Projector	1	7 .044	19	31 ✓	426	do	do
Charging Boards	1	7 .044	15	31 ✓	186	do	do
Degaussing	1	19 .052	45	160 ✓	60	V. C.	do

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.		
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Portable Salvage Pumps	2	8	1	7 .064	32	46 ✓	195	V. I. R.	L. C.
Engine room Vent. Fans	2	3.15	1	7 .029	13.5	15 ✓	90	do	do
Boiler Room Vent Fans.	2	3	1	7 .029	12.5	15 ✓	120	do	do
Oil Fuel Pump	1	.75	1	3 .036	3.4	10 ✓	222	do	do
Accomm. Vent Fans	2	.52	1	3 .036	2.3	10 ✓	100	do	do
Accomm. Vent Fans	6	.2	1	3 .036	1.1	10 ✓	80	do	do

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

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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.

CLAUD HAMILTON (ABERDEEN) LTD

ELECTRICAL ENGINEERS

*J. Walker*

Electrical Contractors.

Date 6/4/54

COMPASSES.

Have the compasses been adjusted under working conditions Yes

for ALEXANDER HALL & CO. LTD.

*W. S. Smith*

Builder's Signature.

Date

Have the foregoing descriptions and schedules been verified and found correct Yes

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

Plans. Are approved plans forwarded herewith Yes If not, state date of approval ---

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith Yes

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The electrical installation of this vessel has been fitted on board under Special Survey, and in accordance with the Rules and the Approved Plans.

The materials and workmanship are good

The installation tried under working conditions and found satisfactory. In our opinion the installation is suitable for use on a classed vessel.

*Noted JS  
27/4/54*

Total Capacity of Generators 85  Kilowatts.

The amount of Fee ... £ 54 : 15  When applied for, 31:3:19.54.

Specification 60 : 0 When received,

Travelling Expenses (if any) £ : : 19

*For Self & Sm. Gardner  
& John Douglas  
Surveyors to Lloyd's Register of Shipping.*

Committee's Minute GLASGOW 13 APR 1954

Assigned ---

2m.3.50.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

*JS  
12/4/54  
1954*



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