



Rpt. 13.

No. 23728

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 10 NOV 1954

Date of writing Report 25:10: 19 54 When handed in at Local Office 1: 11: 19 54 Port of ABERDEEN

No. in Survey held at Aberdeen Date, First Survey 17: 6: 54 Last Survey 14: 10: 19 54
Reg. Book. (No. of Visits 10)

90267.S. on the Motor Vessel "FOUNTAINS ABBEY" Tons { Gross 1197. Net 410

Built at Aberdeen By whom built Hall, Russell and Co. Ld Yard No. 839 When built 1954

Owners Associated Humber Lines Port belonging to Hull

Installation fitted by Messrs Hall, Russell and Co. Ld 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

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

if not compound wound state distance between generators --- and from switchboard --- Are the generators 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

Position of Generators Two 100Kw generators at forward end of Engine Room, port and starboard. 35 Kw Gen. at

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 On flat athwartships

at forward 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. One 500 amp T.P. air break circuit breaker with N/V, O/L and

R/C trips for 100Kw machines, One 200 amp D.P. air-break circuit breaker with N/V, O/L and R.C. trips

for 35 Kw machine. D.P.D.T knife/switch and fuses to 15 Kw motor generator and shore supply

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. D.P.D.T or D.P.ST knife switches and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. yes Instruments on main switchboard. 4

ammeters. 4 voltmeters. --- synchronising devices. For compound machines in parallel are the ammeters and reversed current

protection devices connected on the pole opposite to the equaliser connection. yes Earth Testing, state means provided.

Lamps, with switch and fuse in each pole

Switches, Circuit Breakers and Fuses, are they as per Rule. yes, are the fuses an Approved Type. yes

make of fuses. Artic, are all fuses labelled. yes If circuit breakers are provided for the generators, at what

overload do they operate. 150% N.P.L.C., and at what current do the reversed current protective devices operate. 150% N.P.L.C.

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. yes

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. 6v, are the ends of all cables having a sectional

area of 0.01 square inch and above provided with soldering sockets. yes 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. yes, if so, are they

adequately protected. yes Are cables in machinery spaces, galleys, laundries, etc., lead covered. yes or run in conduit. ---

or of the "HR" type. --- State how the cables are supported or protected. By brass clips on perforated steel

cable trays in machinery spaces. By galvanised steel clips on solid steel cable trays. By brass clips on wood

grounds under ceiling and panels in accommodation

Are all lead sheaths, armouring and conduits effectually bonded and earthed. yes Are all cables passing through decks and watertight

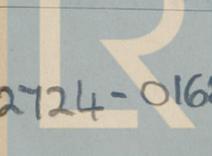
bulkheads provided with deck tubes or watertight glands. yes, where unarmoured cables pass through beams, etc., are the holes

effectively bushed. yes, with lead Refrigerated chambers, are the cables and fittings as per Rule. yes

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

none

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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 and fitted as per Rule **---**, are they adequately ventilated **---** state 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, weather proof **yes** Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present **no** if so, how are they protected **---** and where are the controlling switches fitted **---** Are all fittings suitably ventilated **yes**

Searchlight Lamps, No. of **None**, whether fixed or portable **---**, are they of the carbon arc or of the filament type **---**

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 **---** 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 **yes** 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 sea services been supplied and the results found as per Rule **yes**

Control Gear and Resistances, are they constructed and fitted as per Rule **Yes** Lightning Conductors, where required are they fitted as per Rule **---** 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 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 the cables lead covered as per Rule **---**

E.S.D., if fitted state maker **Kelvin Hughes** location of transmitter **Frames 82-3** and receiver **Frames 82-3**

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				TYPE.	PRIME MOVER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	Two	Sunderland Forge	100	220	455	600	Diesel	Rustán and Hornsby
	One	do	35	220	159	1,100	do	do
EMERGENCY ROTARY TRANSFORMER	One	Metro-Vick.	5	220	23	1,450	AC/DC	---

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	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	100	Two	37 .072	455	520	60	V.C.	L. C. A. B.
" EQUALISER		One	37 .072	-	260	30	do	do
AUXILIARY								
EMERGENCY GENERATOR	35	One	19 .083	159	202	150	V. C.	L. C. A. B.
ROTARY TRANSFORMER: MOTOR	8.5 HP.	One	7 .064	36	46	150	V. I. R.	do
" GENERATOR	5 HP.	One	7 .044	23	31	42	do	do

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

DESCRIPTION.	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Cargo winches. No. 3 Hold	One	19 .064	143	143	330	V. C.	L. C. A. B.
Radar	One	7 .036	12	24	75	V. I. R.	do
Radio	One	7 .064	5	46	75	do	do
Supply to low-power system	One	7 .036	5	24	90	do	do
Ventilation motors	One	7 .064	36	46	24	do	do
Saloon pantry accessories	One	7 .044	22	31	48	do	do
P.O.s Mess accessories	One	7 .044	18	31	48	do	do
Crews mess accessories	One	7 .044	30	31	120	do	do
Navigation aids	One	7 .044	7	31	150	do	do
Navigation Lights	One	7 .044	11	31	150	do	do
Boat deck accommodation lighting	One	7 .044	26	31	90	do	do
Upper deck accommodation lighting	One	7 .044	28	31	48	do	do
Lower deck accommodation lighting	One	7 .036	13	24	45	do	do
Engine room lighting	One	7 .044	20	31	30	do	do
Deck and cargo lighting	One	7 .036	18	24	24	do	do

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	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.			
Domestic F.W. and S.W. pumps	One	7 .044	23	31	120	V. I. R.	L. C. A. B.
Fuel and Lub Oil Heaters	One	7 .052	37	37	180	do	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.			
No 1 Hold Cargo winches	2	28	One	19 .052	113	110	210	V. C.	L. C. A. B.
No 2 Hold cargo winches	2	37	One	19 .064	141	143	198	do	do
No 3 Hold cargo winches	2	28	One	19 .052	113	110	40	do	do
Windlass	1	23	One	19 .052	89	110	330	do	do
Air compressors (M.E.)	2	20	One	19 .064	77	83	98	V. I. R.	do
Lub oil pumps	2	2 1/2	One	19 .044	81	92	96	V. C.	do
S.W. Circ. and Ballast Pps.	2	14	One	19 .052	56	64	72	V. I. R.	do
F.W. Circ. and G.S. pumps	2	14	One	19 .052	56	64	60	do	do
Bilge pump	1	7 1/2	One	7 .044	30	31	108	do	do
Aux. eng cooling water	1	5	One	7 .036	21	24	126	do	do
M.E. Turning gear	1	7	One	7 .044	28	31	220	do	do
Fuel and Lub. oil Purifiers	2	1 1/2	One	3 .036	8	10	192	do	do
Fuel oil transfer pump	1	1 1/2	One	3 .036	8	10	168	do	do
F.W. and S.W. domestic pumps	2	1 1/2	One	7 .029	10	15	50	do	do
Steering gear	1	7	One	7 .044	28	31	270	do	do
Domestic refriger.	1	1 1/2	One	3 .036	7	10	60	do	do

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.

For HALL RUSSELL & Co., Ltd.

Electrical Contractors. Date 25/ Oct / 54.

H. W. Day
 Director & General Manager.

COMPASSES.

Have the compasses been adjusted under working conditions. yes

For HALL RUSSELL & Co., Ltd.

Builder's Signature. Date 25/ Oct / 54.

H. W. Day
 Director & General Manager.

Have the foregoing descriptions and schedules been verified and found correct. yes

Is this installation a duplicate of a previous case. yes If so, state name of vessel M.V. Whitby Abbey

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, whether insulation tests, etc., have been made, 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 examined under working conditions, found satisfactory and in our opinion is suitable for use in a classed vessel.

*noted
 WDM 23-11-54*

Credit Glasgow £30-18-0 (40%)

Credit Sunderland 15-9-0 (20%) for construction

Credit Aberdeen £30-18-0

Total Capacity of Generators 235 Kw Kilowatts.

The amount of Fee ... £ 77 : 5 :
 When applied for, 1: 11: 19 54.

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

T. J. Harris & John Douglas
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9 NOV 1954

Assigned SEE ACCOMPANYING MACHINERY REPORT

Im. 11.45 Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

12. 11. 54



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