

STEP  
1956  
DOWN

Rpt. 13.

No. 23944

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 23 MAY 1956

Date of writing Report 11. 5. 1956 When handed in at Local Office 14. 5. 1956 Port of ABERDEEN

No. in Survey held at ABERDEEN Date, First Survey 19. 1. 56 Last Survey 30. 4. 1956  
Reg. Book. (No. of Visits 6)

35519 on the M.V. "BONAVISTA" Tons { Gross 1174  
Net 575

Built at ABERDEEN By whom built HALL RUSSELL & CO. LD. Yard No. 852 When built 1956

Owners CANADIAN NATIONAL RAILWAY CO Port belonging to ST. JOHN'S - N.F.L.

Installation fitted by HALL RUSSELL & CO. LD. When fitted 1956

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 220

Heating 220 Power 220 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 YES 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 YES Have certificates of test for machines

under 100 kw. been supplied and the results found as per Rule YES Position of Generators 100KW AND 50KW GEN:-

ENGINE ROOM LOWER PLATFORM, P. S. SIDES. 20KW GEN:- IN EMERG. GEN RM - UPPER DEK. P.S.

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 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 DEAD FRONT - FITTING MTD ON INS. RODS, 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 construction as per Rule, including locking of screws and nuts. YES Description of Main Switchgear

for each generator and arrangement of equaliser switches 100KW GEN:- 500 AMP T.P. C/B. WITH O/L AND R.C. RELAY

50KW GEN:- 300 AMP T.P. C/B. WITH O/L AND R.C. RELAY 20KW GEN:- 150 AMP D.P. ROTARY

SWITCH WITH FUSES.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 1 - 500 AMP AND 2 - 200 AMP D.P. C/B. WITH

O/L AND T/L ON BOTH POLES 12 - 200 AMP D.P. ROTARY SWITCHES; 7 - 60 AMP AND 7 - 30 AMP

D.P. ROTARY SWITCHES; 1 - 10 AMP D.P. AND 1 - 10 AMP S.P. ROTARY SWITCHES. WITH FUSES.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. YES Instruments on main switchboard 3

ammeters 3 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. YES Earth Testing, state means provided

EARTH LAMPS & FUSES. Preference Tripping, state if provided YES, and tested YES

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

make of fuses G.E.C. are all fuses labelled YES If circuit breakers are provided for the generators, at what

overload do they operate 150% F.L. and at what current do the reverse current protective

devices operate 107% F.L. 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 12.5 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends.

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 PYROTEX, galleys PYROTEX

and laundries State how the cables are supported or protected

GENERATORS AND MACHINERY SPACES:- CLIPPED TO PERF. STEEL TRAYS

ACCOMMODATION ETC:- CLIPPED TO PERF. STEEL TRAY AND WOOD LINING.

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 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



23 MAY 1956

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

UPPER DECK PORT SIDE AMIDSHIPS.

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 YES state battery capacity in ampere hours 35 Where required to do so does it comply with 1948 International Convention YES

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 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 NONE

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

Lightning 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 MARCONI location of transmitter and receiver BETWEEN FR. 28-29 AND 72-73

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.	Amperes.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	CAMPBELL & ISHERWOOD.	100	220	455	600	DIESEL	RUSTON & HORNSBY
	1	"	50	220	227	1200	"	"
EMERGENCY ROTARY TRANSFORMER	1	"	20	220	91	1200	"	"

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 GENERATORS <u>N<sup>os</sup> 1 and 2.</u>	2	100	2	10	455	520	100	PYROTENAX	
" " EQUALISER	1	50	1	10	227	260	50	"	
" " <u>N<sup>o</sup> 3.</u>	1	50	1	15	227	330	100	"	
" " EQUALISER	1		1	06	-	200	50	"	
EMERGENCY GENERATOR	1	20	1	04	91	150	150	"	
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.
ESSENTIAL CIRCUITS	MAIN SUPPLY TO EMERG'Y S.B.	1	10	183	260	240	PYROTENAX	
	E.R. LIGHTING AND ALARMS.	1	0145	16.5	70	60	"	
	UPPER & LOWER DK. LIGHTING - AFT.	1	007	13	45	360	"	
	" " " " - FOR <sup>P</sup>	1	007	25.5	45	360	"	
	ENGINEER'S ACCOM. & AFT HOLD LGHTG.	1	007	10	45	150	"	
	LOWER DK MIDSHIP LGHTG. P. & S.	1	007	14	45	120	"	
	UPPER DK " " "	1	007	20	45	156	"	
	PROM. DK. LGHTG.	1	007	11	45	216	"	
	NAV. BRIDGE " "	1	007	6.5	45	342	"	
	NAV. AIDS DEGAUSSING	1	0145	21.5	70	342	"	
NON ESSENTIAL CIRCUITS	RADAR	1	0145	10	70	300	PYROTENAX	
	STEERING MOTOR	1	03	40	100	420	"	
	MECH. VENT.	1	0145	7.2	70	90	"	
	CAPSTAN	1	0225	54.0	110	390	"	

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

DESCRIPTION.	No. in Parallel per Pole.	CONDUCTORS. 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.			
N <sup>o</sup> 3 CARGO WINCH	1	04	115	150	210	PYROTENAX	
FOR <sup>P</sup> DECK POWER	1	10	149.5	260	288	"	
GALLEY & PANTRY POWER	1	06	165.5	200	90	"	
NON-ESSENTIAL E.R. POWER - STAR.	1	03	70.0	100	180	"	
" " " " - FOR <sup>P</sup>	1	0145	23.8	70	120	"	
REFRIG.	1	03	59.8	100	150	"	
ESSENTIAL E.R. POWER - AFT.	1	04	105	150	210	"	
" " " " - FOR <sup>P</sup>	1	10	135	260	120	"	
" " " " - PORT.	1	04	91.8	150	180	"	
AUTO SPRINKLER & FIRE ALARM SYS.	1	06	114	200	228	"	
S.O.S. BILGE PUMP	1	0145	32.8	70	228	"	
AIR COMPRESSORS	1	03	60	100	270	"	
WIRELESS & R.T. EQUIP <sup>T</sup>	1	0145	14	70	270	"	
FIRE ALARM INDICATOR	1	003	5	15.0	342	"	
E.R. EMERG'Y LGHTG.	1	"	4.3	"	216	"	
AFT " " "	1	"	5.3	"	360	"	
FOR <sup>P</sup> " " "	1	"	1.8	"	360	"	
LOWER DK M'SHIP " "	1	"	1.9	"	216	"	
UPPER DK " " "	1	"	3.8	"	156	"	
PROM DK LIGHTING.	1	"	5.3	"	216	"	
NAV. BRIDGE EMERG. " "	1	"	1.4	"	342	"	
NAV. LIGHTS INDICATOR	1	"	1.9	"	342	"	

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.
BILGE PUMP MOTOR	1	8	1	01	32.8	45	30	PYROTENAX
	1	15	1	0225	59	70	40	"
GS & FIRE " "	1	16	1	0225	64	70	35	"
ST BY LUB OIL " "	1	15	1	0225	59	70	40	"
ST BY S.W. COOL <sup>G</sup> PUMP	1	12	1	0225	49	70	35	"
ST BY F.W. " "	1	2.5	1	003	11.8	15	25	"
O.F. TRANS. PUMP	2	2x1.3	1	003	7.8	15	30	"
ER VENT FANS	3	3x.9	1	01	35	45	35	"
GEAR OIL PUMPS	2	2x6	1	01	26	45	25	"
CARGO REFRIG MOTORS	1	1.5	1	003	7.8	15	25	"
DOM REFRIG.	1	5	1	01	21	45	30	"
SEWAGE DISPOSAL PUMP	2	2x3	1	003	13	15	25	"
DOM. F.W. PUMP	1	2.5	1	003	11.8	15	30	"
M.E. PRE-LUB OIL PUMP	2	2x7.5	1	01	30	45	25	"
AIR COMPRESSORS	1	8	1	0225	32.8	70	50	"
S.O.S. BILGE PUMP	1	30	1	06	114	200	50	"
SPRINKLER PUMP	1	10	1	03	40	100	25	"
STEERING GEAR	1	14	1	0225	54	110	30	"
CAPSTAN	3	3x28	1	04	115	150	30	"
CARGO WINCHES	1	25	1	0225	95	110	30	"
WINDLASS								

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



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 11/ May/56

*H. H. H. H.*  
Director & General Manager

COMPASSES.

Have the compasses been adjusted under working conditions. Yes.  
For HALL RUSSELL & Co., Ltd.

*H. H. H. H.*  
Director & General Manager

Builder's Signature.

Date 11/ May/56

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. TO BE FORWARDED WHEN RECEIVED

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

This electrical installation has been constructed and installed under Special Survey in accordance with approved plans, Secretary's letters and Rules of the Society.

The workmanship and materials are good.

Upon completion, the installation was examined under full working conditions, insulation tests carried out and all parts found satisfactory.

The installation is, in my opinion, eligible for Classification.

Total Capacity of Generators. 270. Kilowatts.

The amount of Fee ... £ 82 : 10

LIV. 7/16-8-0 £16. 10-0. 28.

GLS. 32-16-0 33. 0. 0.

ABN 32-16-0 33. 0. 0.

When applied for,

14. 5-19 56

When received,

19

Travelling Expenses (if any) £ 3 : 10

Surveyor to Lloyd's Register of Shipping.

*T. Shonis*

Committee's Minute

GLASGOW 22 MAY 1956

Assigned



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Lloyd's Register  
Foundation