

Rpt. 13.

No. 9904

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 26<sup>th</sup> Oct. 1953 When handed in at Local Office 24. 11. 53 Port of GLASGOW

No. in Survey held at DUNDEE Date, First Survey 21<sup>st</sup> May Last Survey 26<sup>th</sup> October 1953  
Reg. Book. (No. of Visits 16)

35250 on the R.F.A. 'EDDYREEF' Tons { Gross 2219.49  
Net 900.40

Built at DUNDEE By whom built CALEDON S.B. & E. CO. LTD Yard No. 492 When built 1953

Owners THE ADMIRALTY Port belonging to LONDON.

Installation fitted by MESSRS TELFORD GRIER MACKAY & CO. LTD When fitted 1953

Is vessel equipped for carrying Petroleum in bulk YES Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES Sub.Sig. YES Radar YES

Plans, have they been submitted and approved YES System of Distribution TWO WIRE Voltage of Lighting 110

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 ONLY 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 ✓ Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule YES Position of Generators DIESEL SET ON FLAT PORT FORWARD

of Eng. RM. STEAM SETS SIMILAR FLAT ON STARBOARD SIDE 15KW SETS 1- IN ENGRM. AFT PORT 1- IN EN. GEN. RM. ON BOAT DECK.

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 220VOLT BOARD - ON PLATFORM

FWD BULKHEAD OF ENGINE ROOM; 110VOLT BOARD ON PLATFORM AFT BULKHEAD OF ENGINE ROOM ADJACENT TO M/G SET.

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 60KW SETS - 400 AMP TRIPLE POLE CIRCUITBREAKER FITTED WITH OVERLOAD AND REVERSE CURRENT TRIPS. 15KW SET - DOUBLE POLE DOUBLE THROW KNIFE PATTERN SWITCH WITH FUSES.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit DOUBLE POLE KNIFE PATTERN SWITCHES WITH FUSES.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard THREE ammeters THREE 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 Preference Tripping, state if provided ✓, and tested ✓

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

make of fuses ENGLISH ELECTRIC, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate 150% FULL LOAD., and at what current do the reverse current protective devices operate 10% - 15% FULL LOAD. 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 5 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 L.C., galleys L.C.

and laundries ✓ State how the cables are supported or protected MAINS. L.C.A.B. CABLES

CLIPPED TO STEEL PLATE MACHINERY SPACE. CABLES CLIPPED TO PERFORATED TRAY.

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 Refrigerated chambers, are the cables and fittings as per Rule (DOMESTIC) YES

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 TYPE 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 YES, state battery capacity in ampere hours YES 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 YES 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 YES, whether fixed or portable YES, are they of the carbon arc or of the filament type YES

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 YES 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 YES

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

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

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 YES, are all fuses of an Approved Cartridge Type YES, make of fuse ENGLISH ELECTRIC Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships YES Are all cables lead covered as per Rule YES

E.S.D., if fitted state maker MARCONI location of transmitter and receiver FRAME SPACE 28-29; 42-43

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.
			Kw. per Generator.	Volts.	Amps.	Revs. per Min.		
MAIN	2	GENERAL ELECTRIC CO.	60	225	267	500	STEAM	SISSON
	1	GENERAL ELECTRIC CO.	60	225	267	750	DIESEL	NATIONAL GAS.
EMERGENCY ROTARY TRANSFORMER	2	GENERAL ELECTRIC CO.	15	115	130	1300	EL. MOTOR	GENERAL ELECTRIC CO.

**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	3	60	2	19/064	267	286	60	V.C.	L.C.
" EQUALISE	1		1	19/064	-	143	30	V.C.	L.C.
EMERGENCY GENERATOR	2	234	1	19/052	90	110	192	V.C.	L.C.
ROTARY TRANSFORMER: MOTOR	2	15	1	19/064	130	143	330	V.C.	L.C.

**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.	
FORWARD LIGHTING SECT. BD.	2		2	19/064	624	143	420 V.C. LCA.
AFT LIGHTING SECT. BD.	1		1	7/064	731	80	60 V.C. LC.
ENG. RM. & BOILER RM. VENT FAN BOARD.	1		1	19/052	82.2	110	90 V.C. LC.
FORWARD BOAT WINCH BD.	1		1	7/064	24	46	396 RUBBER LCA.
AFT BOAT WINCH BD.	1		1	7/064	24	46	90 RUBBER LC.
DOMESTIC WATER PUMP BD.	1		1	7/064	38.6	80	162 V.C. LC.
HOSPITAL BD.	1		1	7/064	52.2	80	150 V.C. LC.
DOMESTIC REFRIG. BD.	1		1	7/044	27	31	180 RUBBER LC.
SHORE SUPPLY.	2		2	19/064	-	286	108 V.C. LC.

**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.			
WIRELESS NAVIGATION.	1	19/052	25.5	110	420	V.C.	LCA.
BRIDGE & UPPER DECK LT <sup>9</sup> D.B.	1	7/044	13	31	470	RUBBER	LCA.
BRIDGE DECK LT <sup>9</sup> D.B.	1	7/044	22.7	31	96	RUBBER	LC.
MID & FOR'D UPPER DECK LT <sup>9</sup> D.B.	1	7/036	24	24	6	RUBBER	LC.
AFT ACCOM. UPPER DECK PORT LT <sup>9</sup> D.B.	1	7/036	15.5	24	12	RUBBER	LC.
POOP DECK LT <sup>9</sup> D.B.	1	7/036	18.2	24	90	RUBBER	LC.
ENGINE ROOM & BOILER ROOM LT <sup>9</sup> D.B.	1	7/064	39.3	46	132	RUBBER	LC.
FLOODLIGHTING D.B.	1	7/064	40.7	46	144	RUBBER	LC.
RADAR.	1	7/036	13.6	24	468	RUBBER	LCA.
MIDSHIP VENTILATION BD.	1	7/044	22.6	31	360	RUBBER	LCA.
AFT VENTILATION BD.	1	7/064	60.8	80	102	V.C.	LC.
MID. DOMESTIC POWER BD.	1	7/064	28.3	46	360	RUBBER	LCA.
WORKSHOP POWER BD.	1	7/036	14	24	96	RUBBER	LC.
10" PROJECTOR	1	7/036	19	24	450	RUBBER	LCA.
SUEZ CANAL SEARCHLIGHT (WIRING ONLY)	1	19/052	27.3	64	750	RUBBER	LCA

**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.	
STANDBY LUB. OIL PUMP	1	4.5	1	7/044	18.3	31	42 RUBBER LC.
DOMESTIC F.W. PUMPS & SAN.	3	3	1	7/029	12	15	42 RUBBER LC.
DOMESTIC REFRIGERATOR	1	2.5	1	7/036	10.4	24	30 RUBBER LC.
L.O. PURIFIER	1	1.5	1	3/036	2.6	10	60 RUBBER LC.
BOAT WINCHES.	2	6	1	7/044	24	31	60 RUBBER LC.
ENGINE ROOM VENT FANS	2	4	1	7/036	16.5	24	120 RUBBER LC.
ACCUM. VENT FANS.	4	2.9	1	7/029	12.3	15	150 RUBBER LC.
ACCUM. VENT FANS.	4	3	1	7/029	13	15	120 RUBBER LC.
HOSPITAL AIR COND. UNIT.	1	4	1	7/036	16.3	24	30 RUBBER LC.

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.

TELFORD, GRIER, MACKAY & CO. LTD.

*J. Macfarlane*  
DIRECTOR

Electrical Contractors.

Date 27<sup>th</sup> Oct 53

COMPASSES.

FOR AND ON BEHALF OF  
THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.

Have the compasses been adjusted under working conditions?  YES

*J. Liddle*  
DIRECTOR

Builder's Signature.

Date 5<sup>th</sup> Nov 53

Have the foregoing descriptions and schedules been verified and found correct?  YES

Is this installation a duplicate of a previous case?  If so, state name of vessel

Plans. Are approved plans forwarded herewith?  No If not, state date of approval 8<sup>th</sup> July 1953.

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 tested under working conditions and found satisfactory. The quality of materials and workmanship is good.

Noted by  
3/12/53

Total Capacity of Generators 180 v Kilowatts.

The amount of Fee ... £ 69 : 0 : 0  
SPECIFICATION FEE. £ 69 : 0 : 0

When applied for,  
At DUNDEE 19

Travelling Expenses (if any) £ : : 19

When received,  
19

*J. M. Gardiner*  
Surveyor to Lloyd's Register of Shipping.

GLASGOW 24 NOV 1953

Committee's Minute

Assigned

SMM  
24/11/53

#  
1.12.53

2m. 8. 50.—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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