

Rpt. 13.

No. 20458

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

26 OCT 1950

Date of writing Report 12<sup>th</sup> Sept. 1950 When handed in at Local Office 19 Port of SouthamptonNo. in Survey held at Southampton Date, First Survey 20<sup>th</sup> May '48 Last Survey 16<sup>th</sup> Aug. 1950  
Reg. Book. (No. of Visits)

70354 on the T.E.V. "NEW AUSTRALIA"

Tons { Gross 224.24  
Net 128.76

Built at Newcastle By whom built Vickers-Armstrongs Ltd. Yard No. 665 When built 1931

Owners Ministry of Transport Port belonging to London

Installation fitted by John I. Thompson &amp; Co. Ltd, Southampton When fitted 1950

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

Plans, have they been submitted and approved Yes System of Distribution Two-wire insulated 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 Are turbine emergency governors fitted

with a trip switch Yes 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

Positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes Have certificates of

test for machines under 100 kw. been supplied Yes and the results found as per Rule Yes

Position of Generators Auxiliary engine room ('F' 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 Auxiliary engine

room ('F' Deck)

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 Slate, 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 Yes 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 3-pole circuit-breaker with ofc trip in

positive and negative poles, R/C trip and preference relay, the third

pole used for equaliser connection

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 2-pole circuit-breaker with ofc trip

on each pole, with or without shunt trip coil operated by preference relay

or 2-pole knife switch and fuse in each pole

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 27

ammeters 2 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 Earth

lamps coupled to earth with circuit and fuses

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

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

overload do they operate 10-15 secs, and at what current do the reversed current protective devices operate 4000

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 &lt; 6% 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 No, if so, are they

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

or of the "HR" type Yes State how the cables are supported or protected L.C.B. cable on H.R. cable

supported to surface on tray and protected as necessary: H.R. cable supported to

wood grounds or run in pipe: L.C.B. cable supported to wood grounds:

R.N. cable in wood casing and capping

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 Yes

Lloyd's Register  
Foundation



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule *Yes* Emergency Supply, state position *Emergency generator and battery in separate compartments on 'C' deck aft*  
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 *Yes* are they adequately ventilated *Yes* state battery capacity in ampere hours *300*

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

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 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 *Tranconi* location of transmitter *DB Tank Frames 15 1/2* and receiver *DB Tank Frames 15 1/2*

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* *See accompanying Booklet of Test Results (No. 9)*

#### PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT					PRIME MOVER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	
MAIN	4	G.E.C.	750	220	3400	750	Surging	Brass & Chalmers
EMERGENCY ROTARY TRANSFORMER	1	G.E.C.	45	220	204	900	Drill	Siac

#### 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 GENERATORS	4 x 750	6	9/103	3400	6 x 782	168	VC	LCB
" EQUALISER		3	9/103	-	3 x 782	84	VC	LCB
EMERGENCY GENERATOR	45	1	37/072	204	260	30	VC	LCB
ROTARY TRANSFORMER: MOTOR								
" GENERATOR								

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

DESCRIPTION								
From main switch to:-								
Propulsion S.D. Panel 1 S.D. S.W.	2	6/1093	800	2 x 492	420	VC	LCB	
Propulsion Port Panel 3 S.D. S.W.	2	6/1093	800	2 x 492	420	VC	LCB	
Propulsion Standby Panel 2 S.D. S.W.	2	6/1093	800	2 x 492	420	VC	LCB	
Emergency Switchboard	1	37/093	204	363	600	VC	LCB	
Aux. S.W. Supply Panel 8 S.D. S.W.	2	9/1093	1169	2 x 660	310	VC	LCB	
Aux. S.W. Supply Panel 9 S.D. S.W.	2	9/1093	731	2 x 660	310	VC	LCB	
'A' S.W. (Heating & Small Power)	2	6/1093	848	2 x 492	345	VC	LCB	(10' Deck)
'B' S.W. (Heating & Small Power)	2	6/1093	862	2 x 492	330	VC	LCB	(10' Deck)
'C' S.W. (Heating & Small Power)	2	6/1093	873	2 x 492	420	VC	LCB	(10' Deck)
Refrigeration Switchboard	2	6/1103	652	2 x 572	160	VC	LCB	(10' Deck)
Dining Saloon Htg. S.B. F.P.1	1	37/072	218	260	525	VC	LCB	(10' Deck)
Propulsion Htg. Htg. S.B. ERP2	1	19/064	135	143	80	VC	LCB	(10' Deck)

#### Main Distribution Cables (Continued)

#### 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.			
Swd. Ventilation S.W. VP1	1	37/103	417	408/668	405	VC	LCB (10' Deck)
Mid. Ventilation S.W. VP2	1	37/072	223	260	435	VC	LCB (10' Deck)
Aft Ventilation S.W. VP3	1	37/103	270	408	540	VC	LCB (10' Deck)
Captain's & Lifts S.W.	2	6/1103	773	2 x 572	636	VC	LCB (10' Deck)
Winch S.W.	2	9/1103	1474	2 x 782	1920	VC	LCB (10' Deck)
Boat Winch S.W. MPI	1	37/083	816	314	390	VC	LCB (10' Deck)
Midship Lift S.W.	1	19/064	35.5	143	800	VC	LCB (10' Deck)
Galley S.W.	2	9/1103	853	2 x 782	660	VC	LCB (10' Deck)
Swd. Galley Range	1	9/1103	468	782	720	VC	LCB (10' Deck)
Crews. Galley Range	1	37/093	227	363	1050	VC	LCB (10' Deck)
Mid. Galley Range	1	9/1103	468	782	720	VC	LCB (10' Deck)
Bakery S.W.	1	37/103	292	408	660	VC	LCB (10' Deck)
Lighting S.B. AJ1	1	37/072	152	260	345	VC	LCB (10' Deck)
Lighting S.B. BJ1	1	37/083	203	314	330	VC	LCB (10' Deck)
Lighting S.B. CJ1	1	37/083	219	314	420	VC	LCB (10' Deck)
Lighting S.B. WJ2	1	6/1103	223	572	345	VC	LCB (10' Deck)
Lighting S.B. DJ1	1	9/1103	339	782	690	VC	LCB (10' Deck)
Lighting S.B. TS1	1	19/083	71	202	330	VC	LCB (10' Deck)
Lighting S.B. KJ1	1	19/064	20	143	795	VC	LCB (Prom. Deck)
Lighting S.B. QS1	1	19/052	5.4	110	30	VC	LCB (10' Deck)
Lighting S.B. HS1	1	19/052	30.3	110	30	VC	LCB (10' Deck)
Engine Room Ltg. S.B. ERJ1	1	19/064	55.1	143	30	VC	LCB (10' Deck)
Engine Room Ltg. S.B. ERJ2	1	19/083	49.4	202	30	VC	LCB (10' Deck)
Oil Pumps & Water Pumps S.B. ERP1	1	7/064	34	46	9	VIR	LCB (10' Deck)
Heating Up S.W. & Boiler S.W. Aft	1	19/083	144	202		VC	LCB (10' Deck)
Boiler S.W. S.W. & Workshop S.W.	1	19/083	57	202		VC	LCB (10' Deck)
Emergency Boat Winch S.W. EP2	1	37/072	360	260	810	VC	LCB (10' Deck)

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.						
Main Air. Pumps	2	160	1	9/1093	600	660	VC	LCB	
Aux. Air. Pumps	3	65	1	37/083	248	314	VC	LCB	
Main Extraction Pumps	2	25	1	19/064	95	143	VC	LCB (Off S.W. S.W.)	
Aux. Extraction Pumps	3	7	1	7/064	29	46	VIR	LCB	
Bridge Pumps	2	24	1	19/064	94	143	VC	LCB (Off S.W. S.W.)	
Ballast Pump	1	24	1	19/064	94	143	VC	LCB (Off S.W. S.W.)	
General Service Pump	1	24	1	19/064	94	143	VC	LCB (Off S.W. S.W.)	
Drain S.W. Pumps	2	615	1	7/044	27	31	VIR	HR (Off S.W. S.W.)	
O. & S. Transfer Pumps	2	27	1	19/064	110	143	VC	LCB (Off S.W. S.W.)	
Drain Drains S.W.	8	17	1	19/064	69.5	143	VC	LCB (4 Off S.W. S.W.)	
Propeller Motor S.W.	4	21	1	19/064	82	143	VC	LCB	
Engine Room Vent. S.W.	8	14	1	19/052	56	110	VC	LCB (4 Off S.W. S.W.)	
Drinking S.W. S.W.	2	42	1	19/083	163	202	VC	LCB	
Secondary Drinking S.W.	1	7.5	1	7/064	20	46	VIR	HR (Off S.W. S.W.)	
Emergency Bridge Pump	1	16	1	19/064	63	143	VC	LCB (Off S.W. S.W.)	
Sprinkler Pump	1	56	1	37/072	213	260	VC	LCB	
Winches	1	150	1	9/1093	550	660	VC	LCB (Off S.W. S.W.)	
Captain's	4	75	1	37/103	244	408	VC	LCB (2 Off S.W. S.W.)	
Cargo Winches	4	24	1	19/083	92	202	VC	LCB (Off S.W. S.W.)	
Prop. Winches	4	6	1	7/044	26	31	VIR	LC	
Waterlight S.W. Pumps	2	5	1	7/044	21	31	VIR	HR (Off S.W. S.W.)	
Waterlight S.W. Compressor	1	7	1	7/044	28	31	VIR	HR (Off S.W. S.W.)	
Boat Winches	8	15	1	19/064	59	143	VC	LCB (Off S.W. S.W.)	
Aux. S.W. S.W.	4	7	1	7/064	24	46	VIR	HR (Off S.W. S.W.)	
Landing Pumps	2	24	1	19/064	92	143	VC	LCB (Off S.W. S.W.)	
Sewage Compressor	2	50	1	37/072	191	260	VC	LCB (Off S.W. S.W.)	
Drain Water Pumps	2	7	1	7/064	32	46	VIR	HR (Off S.W. S.W.)	
Emergency Boat Winches	6	12.5	1	19/064	50	143	VC	LCB (Off S.W. S.W.)	
Armament Vent. S.W. S.W. 3 x 3 1/4									
6 x 3 1/4, 2 x 3, 4 x 2 1/2, 1 x 2, 3 x 1 1/2, 5 x 1 1/4				7/036	9.8, 2.6,	24	VIR	HR	
8 x 1, 2 x 0.84, 6 x 0.4, 3 x 1/2, 1 x 1/4 (119)					5.2, 8.2				



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.



Electrical Contractors.

Date

#### COMPASSES.

Have the compasses been adjusted under working conditions. *Yes*

JOHN I. THORNYCROFT & CO. LIMITED,

*J. I. Thornycroft*

Builder's Signature.

Date *27th Sept 1950*

GENERAL MANAGER,  
SOUTHAMPTON.

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. *Concluded & have been supplied with original report in 1931*

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) *The new*

*electrical installation has been fitted under special survey in accordance with the approved plans and the drawings letters with minor departures from the former constituting acceptable equivalents thereto and according with the Rules. The materials used and the workmanship are good. For particulars of repairs effected to items of original installation retained in the vessel please see accompanying Rpt. 9.*

*The insulation resistance of all circuits and apparatus was measured on completion and found good and all equipment tried under working conditions at sea and found satisfactory. The electrical equipment of this vessel is now in our opinion suitable for a classed ship.*

NOTE. VESSEL FITTED WITH RADAR

Total Capacity of Generators *3045* Kilowatts.

The amount of Fee ... *4/6* ... £ *133* : *0* : When applied for,

19

Travelling Expenses (if any) £ *38* : *18* : When received,

19

*Samuelson and J.H. Tibbitt.*  
Surveyors to Lloyd's Register of Shipping.

FRI. 19 JAN 1951

Committee's Minute

Assigned