

28 OCT 1953

Rpt. 13.

No. 80920

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 29-9-1953 When handed in at Local Office 12.10.1953 Received at London Office

No. in Survey held at GREENOCK Date, First Survey 9th June 1953 Last Survey 15th Sept 1953

Reg. Book. 35195 on the M.V. "ALVA CAPE" (No. of Visits 7)

Built at GREENOCK By whom built GREENOCK DOCKYARD & LTD. Yard No. 480 When built 1953

Owners ALVA S.S. CO. LTD. Port belonging to MONROVIA

Installation fitted by MESSRS. ARCHD. WATSON & DUNDAS 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. — Radar YES

Plans, have they been submitted and approved Yes System of Distribution Two wire Voltage of Lighting 110

Heating 110 Power 110 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 except 25 kW. emergency set. 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 On flat, starboard side, forward end of engine room Emergency set in special compartment on boat deck, aft.

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, starboard side, forward bulkhead of engine room, adjacent to main generators.

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 Sinandgo

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 Triple pole circuit breaker with overload, reverse current and undervoltage trips, for main generators. Double pole circuit breaker with overload and undervoltage trips for emergency generator.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole circuit breaker with overcurrent trips for midship switchboard supply. Double pole knife switches with cartridge fuses for all other circuits.

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

ammeters 5 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 No, and tested —

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

make of fuses Siemens, 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 10-15% 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 under 6 1/2 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 Yes, if so, are they adequately protected Yes

State type of cables (if in conduit this should also be stated) in machinery spaces LC & LCAB, galleys LC

and laundries LC State how the cables are supported or protected Machinery spaces LC or LCAB cables clipped to steel plate or perforated tray. Main LCAB cables

clipped to steel plate or perforated tray. Accommodation LC 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 Refrig. only

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

Are the motors accessible for maintenance at all times —

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

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        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, except engine room floodlights which are drip-proof.

Searchlights, No. of Wing 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.        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 services been supplied and the results found as per Rule. Yes

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. Yes are all fuses of an Approved Cartridge Type. Yes make of fuse. Siemens Zed 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 #8/49

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.
MAIN	3	Sunderland Forge	40	110	364	640	Steam Sunderland Forge
EMERGENCY ROTARY TRANSFORMER	1	Sunderland Forge	25	110	228	1200	Oil Ruston Hornsby

## 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	40	1	37/102	364	408	60	VC	LC
" " EQUALISER	1		1	37/07	—	260	30	"	"
EMERGENCY GENERATOR	1	25	1	37/072	228	260	45	VC	LCAB
ROTARY TRANSFORMER MOTOR GENERATOR									

## MAIN DISTRIBUTION CABLES &amp; Auxiliary Switchboards, etc.).

DESCRIPTION.	No.	Kw.	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Emergency Gen Panel to Main Switchboard	1		37/072	228	260	150	VC	LCAB
Shore Comm. Box	1		1/083	200	202	120	"	"
Midship Switchboard	1		1/093	359	492	540	"	"
H.O. Purifiers	1		1/083	183	202	120	"	"

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

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.			
Aft Boat Winches	1	7/064	70	80	150	VC	LCAB
Galley & Aft Pantries	1	7/064	59	80	300	"	"
Aft Lighting, upper	1	19/052	62.3	110	150	"	"
Aft Lighting, lower	1	7/064	55.3	80	120	"	"
Engine Room Lighting	1	7/064	45.2	46	120	Rubber	"
Engine & Boiler Room Fans	1	19/064	103	143	240	VC	"
Workshop Machinery	1	7/064	33	80	240	"	"
Domestic Refrig. Gear	1	7/064	55	80	300	"	"
Aft Accom. Vent Fans	1	7/064	55	80	60	"	"
Pneum. System, Aft Laundry	1	19/064	120	143	120	"	LCAB
Midship Pantry	1	7/064	53	80	180	"	"
Hot Plate & Grill, Midship Pantry	1	7/036	8	24	120	Rubber	LC
Searchlight Comm.	1	7/044	27	31	60	"	"
Navigation Equip.	1	19/083	27.2	202	1020	VC	LCAB
Aft Lighting, lower	1	7/036	15	24	120	Rubber	LC
Aft Lighting, upper	1	7/064	66.8	80	60	VC	"
Pneum. System, Midship	1	7/064	56.1	80	60	"	"
Aft Accom. Vent Fans	1	7/044	30	31	30	Rubber	"
Aft Boat Winches	1	7/064	52	80	120	VC	"
Winches	1	7/064	70	80	120	"	"
Gyro Compass	1	7/064	15	46	210	Rubber	"
Radar	1	7/036	10	24	60	"	"
	1	7/064	15	46	120	"	"

## MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Turning Gear	1	9	7/064	74.4	80	210	VC	LCAB
Fuel Pumping Pump	1	1.5	7/036	13.2	24	120	Rubber	"
H.O. Purifiers	3	7.5	7/064	60.5	80	150	VC	"
H.O. Purifiers	1	3.5	7/044	28.7	31	140	Rubber	"
Engine Room Vent Fans	2	3.1	7/064	27	46	60	Rubber	"
Boiler Room Vent Fan	1	3.1	7/064	27	46	120	"	"

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.

*Amir Watson Thomson Ltd*  
*with kind (Director)*

Electrical Contractors.

Date *1/10/53*

#### COMPASSES.

Have the compasses been adjusted under working conditions.

**THE GREENOCK DOCKYARD CO. LTD.**

*James Brown*

Builder's Signature.

Date

*2/10/53*

SECRETARY.

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. *No* If not, state date of approval. *5-5-1953*

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 JH*  
*6/11/53*

Total Capacity of Generators. *145* Kilowatts.

The amount of Fee ... £ *63 : 15* :

When applied for,

*at Lrk* 19

When received,

19

Travelling Expenses (if any) £ */ : //* :

*Fred B. Mort*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute.

**GLASGOW**

**27 OCT 1953**

Assigned *See GRU FE Mochy Rpt. No 25002.*



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